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**Infodemic During a Pandemic: Media Information Literacy and Other
Communication Factors Related to (Mis)Information Sharing on Covid 19
Among Graduate Students in an Open University**

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She also served as an intern at the Department of Interior and Local Government wherein she immersed herself with informal settler families (ISFs) in Rizal. She aims to help in creating an inclusive educational platform for everyone, especially those in marginalized communities.

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ABSTRACT

INFODEMIC DURING A PANDEMIC: MEDIA INFORMATION LITERACY AND OTHER COMMUNICATION FACTORS RELATED TO (MIS)INFORMATION SHARING ON COVID 19 AMONG GRADUATE STUDENTS IN AN OPEN UNIVERSITY

Underpinned by the Theory of Reasoned Action (TRA) by Ajzen and Fishbein, an online survey was conducted from October 25, 2021, to February 28, 2022, through Google Forms with 107 online students. Data were analyzed using descriptive statistics and Spearman's correlation for the relationship of variables.

The prevalent social media used by the respondents is Facebook, mostly for 6-15 hours a day. They used social media to seek information/news, entertain themselves, share information/news, gain knowledge, and also pass time.

While the students perceive themselves to have high online skills, favorable beliefs and attitude toward information verification, high media literacy, perceived self-efficacy in verifying information, and likely intention to not share fake information, they have actually shared fake information on Covid 19 on social media. In the past months, they have shared the news on social media without verifying the source, and they have 'very frequently' been told by their networks that they have shared fake news. They have shared fake news because it was easy to retrieve and share information online, they were motivated to influence others' opinions, they desired to establish connections, they were dealing with social media fatigue, and they wanted to join the bandwagon.

Behavior of sharing misinformation on Covid 19 was correlated with media and information literacy such as the literacy in access and retrieval and the literacy in evaluation and understanding. Only the media literacy variables are correlated with behavior. Hence, overall, media and information literacy can be considered to be associated with fake news sharing on social media. To prevent or minimize the spread of misinformation on Covid 19, these should be strengthened: media information literacy, education on fake news sharing, and media messages that will educate people on the accuracy of information.

Keywords: Theory of Reasoned Action, fake news sharing, Covid 19, misinformation, media, and information literacy

CHAPTER I

INTRODUCTION

Rationale of the Study

“We’re not just fighting an epidemic; we’re fighting an infodemic.”

Tedros Adhanom Ghebreyesus, Director-general WHO, 2020

In December 2019, China informed the World Health Organization (WHO) that an unusual case of a pneumonia-like disease has occurred in Wuhan. On January 7, 2020, the news about the novel coronavirus spread throughout the sites confirming that it had already infected some residents from the port province of China. It was named 2019-nCoV (currently COVID-19)¹ and identified as a part of the coronavirus family, similar to SARS and common colds.

After four days, the first death case in China was announced. On the last day of the month, Philippines health officials confirmed the first case of coronavirus in the country (Regencia, 2020). Since then, information regarding the coronavirus had spread in the Philippines through social media.

¹ Coronavirus Disease 2019 (COVID-19) is a novel coronavirus that has infected about 496 million people all over the world.

According to the Center for Disease Control and Prevention (CDC, 2019), the knowledge about this virus is based on similar viruses that have already been introduced such as Middle East Respiratory Syndrome Coronavirus (MERS-CoV) and severe acute respiratory syndrome (SARS). The World Health Organization (2020) confirmed that like the other coronaviruses, NCoV, officially recognized as severe acute respiratory syndrome coronavirus 2 (SARS-CoV-2), may be transmitted from animal to human. (ECDC, 2020). Exposure to this virus may lead to respiratory symptoms such as shortness of breath, fever, and cough and could also lead to pneumonia and kidney failure. This is transmitted through contact with an infected patient and being exposed to an infected environment.

Since the disease was first reported in Wuhan, China, it has rapidly spread throughout the country and other parts of the world. It has affected several businesses, including airlines, malls, and even small businesses. The information all over the Internet has caused a worldwide fear, drastically cutting down the number of people visiting public places. As of April 2021, the number of active cases has reached 1.02 million in the Philippines.²

Infodemia and the Spread of Disinformation Amidst the Pandemic

Aside from the fact that the virus can easily be spread by contact, WHO also determined another cause of the rapid increase of the victims. They called it *infodemic*. Infodemic signifies the propagation of false information about the disease, especially through social media (WHO, 2020).

² In 2020, the Philippine's Department of Tourism has announced a nationwide month-long sale in all shopping malls throughout the country to encourage tourists to visit: however, it was cancelled due to the COVID-19 scare (Aguilar, 2020).

Richtel (2020) believes that the spread of incorrect medical information is caused by people who lack trust in science and those who tend to take advantage and capitalize on the rise of the disease. The rise of social media has greatly influenced information dissemination, specifically health communication. These media have made information, even the false ones, more accessible for people to consume. In this context, social media have made the propagation of false beliefs on COVID-19 easier, making it more complicated to control.

The World Health Organization warned the public to avoid consuming, sharing, and engaging with interactions that may facilitate the spread of information that is not backed up by science and can cause public confusion. *Infodemia*, or the “overabundance of information,” regarding the issue is posing a challenge in the prevention of the spread of the disease (Gordon, 2020).

The director-general of the World Health Organization, Tedros Adhanom Ghebreyesus, emphasized that “we’re not just fighting an epidemic; we’re fighting an infodemic.” What are some of these infodemics? There are myths and conspiracy theories about the virus. For instance, US Senator Tom Cotton spread the information that the virus has been concocted in the lab and did not happen naturally. Since then, people have been queuing to purchase masks and disinfectants in stores (Peckham, 2020). There was also an event where a group of Chinese evacuees in Ukraine had been attacked due to fake email that had been sent by the country’s security service that claimed the evacuees were infected by the disease. Moreover, fliers that spread fear of Asian businesses in California had led to a loss of sales in the industry. Recently, while different vaccines have been developed for COVID-19 in different countries, news had circulated that the vaccine

contained microchips that would be injected into people (Reuters, 2020). Other false reports on social media included messages that the coronavirus vaccines contained pork, which was against the Muslims' religious beliefs (Kotecha, 2021).

In Metro Manila, Philippines, information spread that the city would be locked down, hence many Filipinos stocked up on necessities such as canned goods, sanitizers, alcohol, and tissues leaving supermarkets empty with those supplies (Garcia, 2020).

Like the virus, information about COVID-19 or 'infodemic' has spread mainly through the power of social media. While these media are often used by people to build connections with each other and fill the gaps created by distance, "the second most popular activity in social networks is accessing news (Masip et al. 2015). Digital citizens fill the need for information through the news posted online as much as they use social networks to access information."

In the Philippines, an estimated percentage of 58% of Filipinos are users of social media. By 2023, it is predicted that 62.5 million Filipinos will be using social media platforms (Kemp, 2022). The Philippines is considered as the "social media capital of the world" because of the number of users and the approximately four (4) hours spent on social media, which is considered a high average. It is also noted that 81 percent of the population are aged 18 to 24 years old.

With the amount of information spread on the Internet about the COVID-19 pandemic, information that cannot easily be verified are taken advantage of by those who spread disinformation, "If more speculation of misinformation exists around these terms than credible facts, then search engines often present these to people who, amid the pandemic, maybe in a desperate moment. This can lead to confusion, conspiracy theories, self-medication, stockpiling, and overdoses (Shane, 2020)."

The most popular social media company Facebook has already taken action to prevent its users from disseminating myths about the novel coronavirus to avoid misinformation. The company promised to take down posts “with false claims or conspiracy theories that have been flagged by leading global health organizations and local health authorities,” emphasizing that this information may cause harm to the public (Reuters, 2020).

Need for Media Literacy

The infodemic created by Covid 19 shows the need to evaluate and verify information related to the coronavirus before using it (Hernandez-Garcia and Gimenez-Julvez, 2020; Cuan-Baltazar et. al. 2020). Media and information literacy competencies can do this – they allow people to filter, assess, and judge the information (Shehata, 2020).

The users and sharers of information on social media should learn critical thinking in spreading and using information. They should have the ability to process the messages spreading across the platform and determine the credibility of the sources. Hence, media literacy becomes a vital competency among media consumers, especially during crises or pandemics that cause social panic³.

Media literacy, according to Potter (2005),

is “a set of perspectives that we actively use to expose ourselves to the media to interpret the meaning of the messages we encounter.” We build our perspectives from knowledge structures. To build our knowledge structures, we need tools and raw materials. These tools are our skills. The raw material

³ Social panic is a state where the community becomes concerned, hostile, and volatile as there are unprecedented changes in the social status quo. Stanley Cohen. *Folk devils and moral panics the creation of the mods and the rockers*. (London: Routledge, 2002)

is information from the media and from the real world. Active use means that we are aware of the messages and are consciously interacting with them.”

The Center for Media Literacy (CML) said that media literacy “provides a framework to access, analyze, evaluate and create messages in a variety of forms - from print to video to the Internet.”

The organization has argued that media literacy and information literacy are interdependent and interrelated. As they explain, information literacy is having the skills to access and evaluate the information accessed. Media literacy, on the other hand, “emphasizes the ability to understand, evaluate and use media as a leading purveyor and processor, if not producer, of information (UNESCO, 2010).”

According to the United Nations Educational, Scientific and Cultural Organization (UNESCO), there is no clear definition of media literacy, However, they have introduced the concept of media and information literacy (MIL) defined as:

“Knowledge and understanding of how the media operate, how they construct meaning, how they can be used, and how to evaluate the information they present. This also implies knowledge and understanding of personal and social values, responsibilities relating to the ethical use of technology and information, as well as participation in democratic and cultural dialogue (UNESCO, 2010).”

People tend to “program” how they use social media, with little control over the messages being delivered to the public. However, according to Potter (2005), an individual can have control over how to process or program that information. He emphasized that media literacy allows people to “shift control from the media to themselves.”

Media literacy, according to Hague and Williamson (2009), is “a social practice involving interpretation and production of shared meanings rather than an individual skillset.” It is also the ability to process the messages spreading across the platform and determine the credibility of the sources. Media literacy allows social media users to be empowered individuals to be able to control their media use and information processing.

Jenkins (2006) emphasized the need for media and information literacy education to encourage students to become responsible and ethical media users and communicators. They should have more awareness of how technology and media operate (Hague and Williamson, 2009).

However, most studies on infodemic focus on the uses and gratifications of the users of social media (Lee and Ma, 2012; Apuke and Omar, 2021); on the content analysis of the messages portrayed to determine the most searched terms related to COVID-19; and on the number of false news shared in social media (Zhiwen et al. 2020; Pulido et al. 2020). The factor of media and information literacy in the sharing or spread of misinformation especially on Covid 19 has just been done recently by Khan and Idris (2019). This study wants to build on this study in the Philippine context.

The Research Problem

Considering the pervasiveness of social media information and infodemics about Covid 19 in the Philippines, the major research question is how do online students exercise media and information literacy to discern infodemics about the pandemic – or the misinformation and disinformation in social media about COVID-19? And how do they use and share this information using their social media?

Specifically, this study aims to answer the questions:

1. What are the sociodemographic characteristics of the respondents?
2. How do the respondents use social media on COVID-19?
3. How do the respondents perceive their online skills in terms of Internet skills, online confidence, and verification skills?
4. What is the media and information literacy of the respondents in terms of UNESCO's Media and Information Literacy Assessment?
5. What are the beliefs and attitudes of the respondents in relation to misinformation in social media?
6. How do they perceive their self-efficacy in handling (mis)information?
7. How do they intend to or share misinformation or fake news about Covid-19; and
8. How are the variables, namely: perceived online skills, belief and attitude, media and information literacy, and perceived self-efficacy related to behavioral intention and actual behavior in sharing fake news on social media?

Objectives of the Study

The study aims to determine how the media and information literacy of online graduate students affect their consumption and sharing of (mis)information about COVID-19.

Specifically, it aims to achieve the following:

1. Determine the sociodemographic characteristics of the respondents;
2. Determine the respondents' use of social media on Covid 19;
3. Describe the perceived online skills of the respondents in terms of Internet skills, online confidence, and verification skills;
4. Discuss the beliefs and attitude of the respondents in relation to misinformation on social media;
5. Discuss the media and information literacy of the respondents in terms of UNESCO's Media and Information Literacy Assessment, namely: 1) access and retrieval; 2) evaluation and understanding, and 3) use, creation, and communication;
6. Discuss the respondents' perceived self-efficacy in recognizing (mis)information;
7. Discuss the intention to share misinformation or fake news about Covid-19; and
8. Analyze the relationship among the variables, namely: sociodemographic characteristics, perceived online skills, belief and attitude, media and information literacy, and perceived self-efficacy with behavioral intention and actual behavior of sharing fake news on social media.

Significance of the Study

From a communication standpoint, the data collected in this study can serve as a basis for crafting educational and developmental programs that are geared towards minimizing or controlling the spread of false information, specifically on social media.

This study adds to the body of knowledge and literature on social media for health communication. Although there have been studies focusing on health issues on social media, these are on the effects of the engagement of the users especially during a pandemic such as the Covid 19 pandemic.

This adds to the body of knowledge on media and information literacy on social media. Results can provide insights for different educational institutions and health organizations in establishing their media information literacy programs to fight the spread of infodemia.

Findings can also serve as input to media organizations and policymakers in developing media literacy policies in avoiding the spread of misinformation and managing an infodemic.

Results of the study can also be considered as a baseline for initiatives to empower communities through media and information literacy and in developing solutions to address mis- and disinformation.

Scope and Limitations of the Study

The study focuses on a single platform, Facebook, which is social media and does not tackle the intermedia aspect of media literacy.

As a framework is used for measuring media and information literacy, the quantitative method is used. A qualitative study on the processing, understanding, and accepting or rejecting of misinformation would be enlightening in the MIL model.

It tackles infodemia in the time of COVID-19 virus only and not some other pandemics.

It is expected that online graduate communication students have a higher level of media and information literacy that allows them to filter the messages that they post on social media and determine credible messages from those that are false. They are also assumed to be using media, especially social media often. Hence, their media and information literacy may be different from non-students or those out of school. Their responses cannot be generalized to the other students in the university or the country for that matter, and even to other Filipino youths.

CHAPTER II

REVIEW OF RELATED LITERATURE

This chapter covers four sections. The first section discusses the rise of Covid 19 infodemia on social media. The second section presents ways of recognizing misinformation and fake news sharing. The third section discusses media and information literacy. The last section includes the theoretical and conceptual frameworks of the study.

Rise of Covid 19 Infodemia on Social Media

The Covid 19 pandemic changed the way people communicate with each other. It had made digital platforms, such as social media more popular. Casero-Ripollés (2020) noted that during the lockdown, the use of social media in several countries had increased by 65%-75%.

Shearer and Gottfried (2017) discovered that individuals rely more on online sites such as Facebook, YouTube, and Twitter to consume news. The popularity of the use of social media for information sharing has led its users to engage actively and passively (Khan, 2017). Today, social media users had become not just consumers, but also producers and sharers of content. This provides them with the means and ability to disseminate information, including misinformation (Kovach and Rosentiels,

2014). Khan and Idris (2019) pointed out that the ease of sharing information through social media gives its users the tendency to share both facts and fake news.

With the rapid spread of misinformation, it is difficult to discern the truth from false information (Warner-Soderholm et al. 2018). In 2018, Gallup revealed that information posted on social media is viewed as false by Americans. They mistrusted information on these platforms. This was not helped by the fact that the information can spread and become viral immediately on social media (Alhabash and McAlister, 2015).

Pulido et al. (2020) examined how much false information was spread throughout the social media platform, Twitter, compared to science-based information. This is in line with determining how the COVID-19 infodemic is spreading throughout the Internet. The researchers used communicative content analysis between scientists and lay people, and they discovered that more fact-checking tweets and evidence-based tweets were retweeted and spread throughout the medium than tweets containing false information. This challenge studies that present false information as being rampant in social media.

Information Seeking and Avoidance

Usman (2015) emphasized the power of social media in providing accessibility and power to the masses by making the information available with just a click. Social media also facilitates collaboration among the users through interactive features. This media provides the audience an opportunity to become “an active part of

society in dealing with public affairs, which was perceived to be limited in traditional forms of media.”

In a book chapter, Usman and Okafor (2019) revealed that online interactions are complex and can lead to three different types of interactions, namely: social influence compliance, internalization, and identity. These interactions greatly influence the users’ intentions towards the behavior being advertised.

Siebenhaar, Kother, and Alpers (2020) examined whether the feeling of distress by the information predicts higher avoidance of information about COVID-19 (avoidance hypothesis) and if this affects the compliance of the people to the preventive measures from COVID-19 (compliance hypothesis). An online survey showed that distress by the COVID-19 information influences people’s compliance. Distress leads to information avoidance, and therefore, lessens compliance.

A similar study conducted by Kim and Kim (2020) investigated the belief structures of the people about the fake news on COVID-19 and analyzed the risk perception and communication factors. They discovered that risk perception and risk communication have an impact on people’s belief in fake news. The researchers also found that men and older respondents have higher confidence in false information than others and that the degree of confidence in false news increases as these people age.

Shu et al. (2019), thus, emphasized the need to recognize misinformation so that the users will consume reliable and truthful information.

Recognizing Misinformation and Fake News Sharing

Fake news, according to McGonagle (2017) is “deliberately fabricated information that is circulated to misinform and deceive individuals into accepting lies or uncertain verifiable facts.” It is also categorized by Duffy et al (2019) as a piece of information that imitates truthful news stories but has misleading messages. In this study, fake news is considered as myths and misleading information about Covid 19 on social media.

To avoid the spread of fake news, Fallis (2004) identified four areas that should be considered in verifying online information: 1) authority (who is posting the information), 2) independent corroboration (how many support the information and who has the same mindset), 3) plausibility and support (facts presented to support the information), and 4) presentation (how the information is presented). Despite having the skills in verifying information that is posted online, it was still observed that people do not practice these in seeking information (Connaway et al. 2011). Hassan (2020) argued that the spread of false information is due to the users’ lack of knowledge in the interpretation of messages. This had led to several research studies on media and information literacy in relation to information seeking and sharing.

Kohout-Taylor (2018) studied the effect of an information literacy intervention on the information-seeking behavior of sixth-grade students. The researcher used Carol Kuhlthau’s Information Search Process (ISP)⁴ as its theoretical framework. Results

⁴ Kuhlthau’s Information Search Process (ISP) presents a holistic view of information seeking from the user’s perspective in six stages: task initiation, selection, exploration, focus formulation, collection, and presentation.

Kuhlthau, C. (2018). *Information Search Process*. Rutgers School of Communication and Information. <https://wp.comminfo.rutgers.edu/ckuhlthau/information-search-process/>

showed that after teaching the information literacy intervention, the Simple Four Model⁵, the self-efficacy and confidence levels in information seeking of the students significantly increased.

A similar study by Shehata (2020) investigated Egyptian library information science (LIS) undergraduate students' information behavior and information literacy skills on COVID-19. The author discovered that these students primarily obtain their information on social media, and they have medium-level health information literacy. The research emphasized the need to provide literacy interventions for the people to search and share information ethically and to avoid the spread of misinformation.

In addition, the issue of misinformation on COVID-19 has prompted studies on fake news sharing. Some have explored the connection between social media and misinformation amidst the pandemic (Hou et al. 2020; Huynh, 2020; Frenkel, et. al., 2020; Russonello, 2020).

Yang and Zhuang (2020) defined information sharing “as individuals’ contribution of information to a collective pool of knowledge, either through interpersonal channels or on social media.” Social media has taken over the information landscape (Bialik and Matsu, 2017).

Pennycook et al. (2020) also discovered that the pandemic had produced a numerous amount of fake news shared. A similar study in the US setting also found that false information on the coronavirus is widely disseminated and shared by individuals because they cannot discern and verify the truthfulness and reliability of

⁵ Simple Four Model is an information literacy intervention that allows students to plan, act, organize, and reflect on their work.

Alewine, M. (2006). Overview of the Simple Four: An information problem-solving model. Retrieved June 4, 2016, from [http://ictssc.pbworks.com/w/page/10507141/The Simple Four](http://ictssc.pbworks.com/w/page/10507141/The%20Simple%20Four)

the information on social media. The study recommended that there is a need to verify the information before sharing it.

In a study conducted by Wasserman and Madrid-Morales (2018), they found out that the sub-Saharan African people have a low level of trust in media, which means that they have a high level of exposure to misinformation.

Despite the numerous amounts of false information on COVID-19 on social media, there are still a few studies on fake news sharing and its factors. Most studies focus on the virus itself, reports on the media, and how to fight the virus (Sohrabi et al. 2020; Sahu et al. 2020; Zhou et al. 2020; Lampos et al. 2021). Apuke and Omar (2021) pointed out that there is little research on fake news sharing that use a theoretical framework or model that increases our knowledge on the topic (Talwar et al. 2019). This led them to design a predictive model on fake news sharing.

One of the studies that investigated fake news sharing with a theoretical framework was that of Khan and Idris (2019). In their research, they explored the relationship between attitudes and beliefs of online users with the behavior of recognizing misinformation and sharing information without verification on social media using the Theory of Reasoned Action by Fishbein and Ajzen. Their study revealed that social background, information seeking and verification, and attitude predict their respondents' behavior in recognizing misinformation. Moreover, it was revealed that the attitude, beliefs, and skills of their respondents affect their sharing of information without verification.

Media and Information Literacy

The development of the Internet has brought about challenges in digital inclusion (Frau-Meigs, 2012). This has introduced the digital divide. It “describes a gap in terms of access to and usage of information and communication technology” (Pennsylvania State University, 2021). With the digital divide, the need to have the knowledge and ability to access, evaluate, use, and share information is emphasized (UNESCO, 2015). The continuous innovations of platforms such as social media increase the demand for the development of Internet skills (Anderson and Jiang, 2018).

UNESCO believes that media and information literacy (MIL) reflects the “symbiosis between information and the media generated by the new technology” and serves as a dynamic response to the innovations in technology. The organization regards MIL as an essential tool to empower the people to know about their human rights and assert their freedom to engage in an educated social discourse.

In line with the Sustainable Development Goal (SDG) 16, which is to ‘Promote peaceful and inclusive societies for sustainable development, provide access to justice for all and build effective, accountable, and inclusive institutions at all levels’, MIL allows the people to make an ethical judgment about their use of information and technologies and demand for an inclusive space to use and share information (UNESCO, 2015).

The amount of information in different forms of media has been continuously increasing through time, especially with social media. This has allowed information

and communication technologies (ICTs) to develop innovations to address the information overload.

The people have been exposed to all kinds of messages that have been causing them to reach the saturation point. Access to information has been a problem before and now it has shifted to needing to keep up with the aggressive attention-seeking techniques of the media. With this comes the tendency of individuals to have their brains on “automatic pilot” so the information can easily be filtered, this system is called *automaticity*.

People tend to “program” how they use social media, with little control over the messages being delivered to the public. However, according to Potter, an individual can have control over how to process or program that information. He emphasized that media literacy allows people to “shift control from the media to themselves.”

In one of the recent studies on media literacy, Alam, Cho, and Kim (2019) explored the effect of news media literacy (NML) on news personalization and news engagement in an online environment. The media literacy variables were based on Mihailidis’ 5A model of media literacy (2014), which includes access to media, awareness of media’s power, assessment of how media cover international and supranational events and issues, appreciation for media’s role in creating civil societies, and action to encourage better communication across cultural, social, and political divides. These factors were analyzed in relation to the news curation, news selection preferences, and online news engagement among its respondents. It was discovered that news consumers’ perceived appreciation and their self-perceived media literacy (SPML) have a high connection with the dependent variables. It was

also noted that the perceived importance of accessibility to news media and the SPML is positively associated with news engagement.

Another research on the media literacy effect is Tetep and Suparman's (2019) study on how the media literacy skills of students influence their social characters. Social characters in this study are defined as students' "humanity strength." Having good social character would mean that the individual knows that social media should not be used in negative activities. The researcher found out that the media literacy of the students significantly affected their social character. This implied that a higher media literacy level would mean a higher level of social character.

Geraee et al (2015) explored the effects of media literacy training programs on the knowledge and behavioral intention of female students. The content of the training materials focused on increasing the awareness of the students regarding the effects of media on adolescent health, appropriate reactions to the media content, and the outcomes of having active, critical reactions to the media messages. They discussed in their study that media literacy education has a positive impact on the knowledge and behavioral intention of teenagers in dealing with media messages, including how to appropriately react to them.

Moreover, Guess et al. (2020) studied whether the promotion of digital media literacy could improve the respondents' evaluation of the credibility and reliability of online information sources. Results showed that the use of Facebook media literacy intervention reduced the respondents' belief in false information.

Bontcheva et al. (2020) identified in their executive report disinformation responses UNESCO specified, which include: 1) identification responses; b) responses aimed at producers and distributors; c) responses aimed at the production and distribution

mechanisms; and d) responses aimed at the target audiences of disinformation campaigns. The media and information literacy is a sub-classification of the fourth response. The educational response aims to promote MIL and the verification of online information to fight disinformation on the web.

Most of the studies are focused on digital and media literacy and are qualitative or focused on a specific group/issue (Vraga and Tully, 2019; Jones-Jang et al. 2019) and controlled trials (Huguet et al. 2019).

Some studies also explored different techniques and approaches in fighting misinformation. There are a few approaches that provide warnings, correct false information, and determine techniques to promote these alerts. These techniques have been proven effective to reduce the pervasiveness of misinformation on different platforms (Banas and Miller, 2013; Braddock, 2019; Cook, Lewandowsky and Ecker, 2017; Leiserowitz et al. 2017; Roozenbeek and vander Linden, 2019). Moreover, other studies have focused on evaluating the effectiveness of providing caution against misinformation (Pennycook et al, 2020; Clayton et al, 2019).

Aside from these approaches, prior research has also found that media literacy interventions can help people critically evaluate the media content they consume (Austin, et al. 2002).

Alagaran (2015) presented the Explore, Engage, Empower Model of Media and Information Literacy of Triple Es of MIL to provide support for the UNESCO's post-2015 development agenda in the communication education curriculum. This model "recognizes the need for communication educators and school administrators to understand, appreciate, and implement MIL across the curriculum as we navigate

the digital age.” The model emphasizes the need to develop the students’ media and information literacy skills for societal development.

In the country, Talusan (2019) studied the media and information literacy of senior high school students in Metro Manila. She determined the media and information literacy levels of the students and the implications for the development and implementation of media education using Potter’s Cognitive Theory of Media Literacy and Alagaran’s Explore, Engage, Empower Model. The researcher conducted a survey and focus group discussion. Results of the study showed that the millennials are highly social-media biased, highly motivated than knowledgeable, experience-based than factual-based, and suggestive than reflective. The participants of the study were seen to be more critical media users than competent producers on social media.

Ornopia (2019) also studied the level of media and information literacy of the staff of the Philippine Information Agency (PIA) and Philippine News Agency (PNA) according to a self-assessment survey based on Alagaran II’s (2015) Explore, Engage, Empower Model of MIL. The researcher surveyed a quota sample of 100 respondents of PIA and purposive sampling PNA. It was determined that the employees of the information and news agencies have an advanced level of MIL.

Pennycook et al. (2020) also conducted two experiments to determine if encouraging people to think about the accuracy of their messages could improve their decisions about what is shared on social media. In both studies, participants who were not asked to think about accuracy before sharing are far more likely to distinguish between true and fake content when deciding what to share on social media. However, those who were encouraged or reminded of accuracy nearly tripled the

level of true discernment and the resulting common intent. This indicates that people familiar with the media and information are more likely to be aware of the accuracy of the information before sharing it.

The literature shows that past research has focused on media and information literacy education. Hence, there is a need for studies on media and information literacy and its relation to the spread of fake news, especially about COVID-19.

Theoretical Framework of the Study

The study is based on the Theory of Reasoned Action (TRA) by Fishbein and Ajzen (2010). This theory suggests that the behavior of an individual is determined by their behavioral intention. The intention, in turn, is influenced by the person's attitude and subjective norms which are influenced by their beliefs.

In other words, the behavioral intention of a person is based on two aspects: their attitude towards performing the behavior and their perception of the social pressures for them to perform the behavior called 'subjective norms.' The attitudes of an individual are determined by the beliefs about the outcomes of performing the behavior and the evaluation of these outcomes. The subjective norms, on the other hand, are then influenced by the individual's beliefs and motivation to comply with the behavior.

Moreover, the behavioral intention of individual measures the "relative strength of a person's likelihood to perform a behavior" (Otieno et al. 2016).

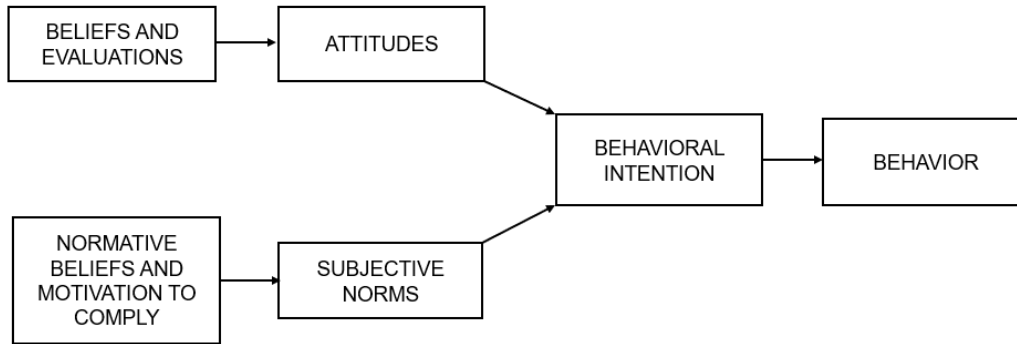


Figure 1. Theory of Reasoned Action (Ajzen and Fishbein, 2010)

Conceptual Framework of the Study

The study assumes that the sociodemographic characteristics, perceived online skills, beliefs and attitude, MIL of the respondents, and perceived self-efficacy would have a positive association with their fake news sharing on COVID-19.

Figure 2 presents the conceptual framework of the study. The researcher identified six (6) independent variables namely: sociodemographic characteristics; perceived online skills; belief in the reliability of information; attitude in verifying online information; media and information literacy; and perceived self-efficacy in recognizing misinformation to be related to sharing fake news.

To note, the perceived online skills, media and information literacy skills, and perceived self-efficacy are added variables to the original variables in the Theory of Reasoned Action to determine how they affect behavior. This is to validate the revised TRA framework proposed by Ajzen and Fishbein (2010).

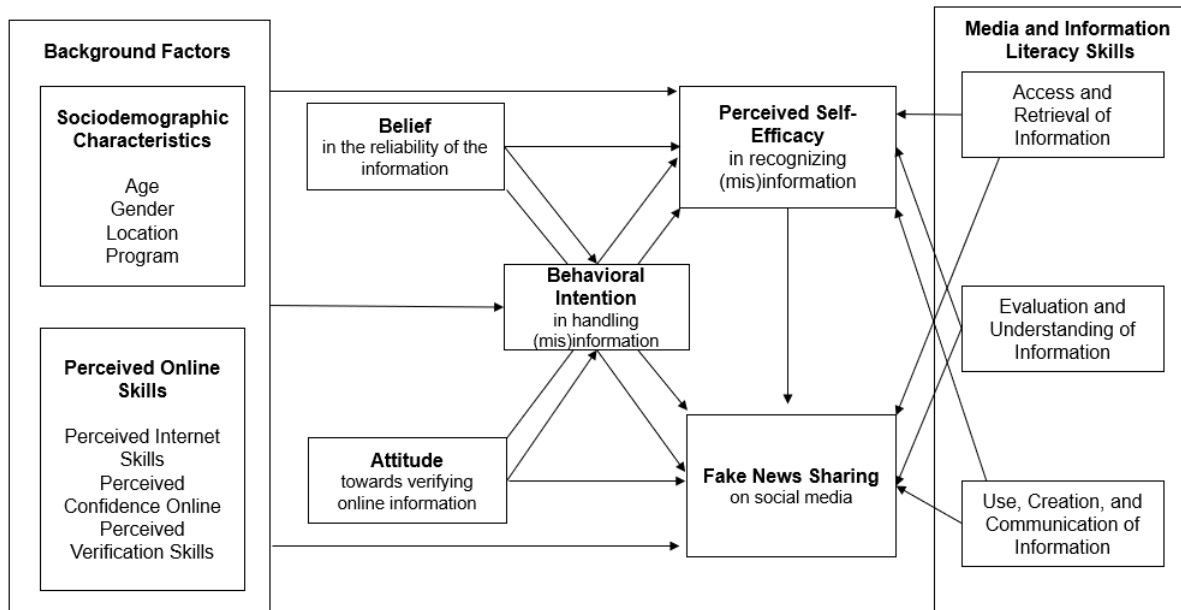


Figure 2. Conceptual framework of the study

The variables used in this study were adapted according to different studies such as the general TRA constructs (Ajzen and Fishbein, 2010), TRA constructs in relation to sharing without verification and perceived internet skills (Khan and Idris, 2019), perceived self-efficacy (Bandura, 1977), and MIL (UNESCO, 2013).

To expound, these are the variables considered to be associated with the behavior of sharing fake information:

It is assumed that students with higher **perceived online skills** such as Internet skills, confidence online as a graduate student and verifications skills would not share misinformation on social media. Perceived confidence as an online graduate student is added in this study to determine if it affects fake news sharing by the respondents. Their perceived verification skills were also measured.

Belief and attitude are common concepts in the Theory of Reasoned Action. In the theory, it is suggested that the behavior of a person can be determined by an

individual's behavioral intention and that intention is influenced by the person's beliefs and attitude.

It is assumed that if the student's **belief in the reliability of the information (BRI)** on Covid 19 on social media is high, the more s/he would share the message to his/her network. And if the **attitude toward verifying online information (AVI)** is positive, they are expected to avoid sharing false information on social media.

In other words, if the student believes in the reliability of the information, s/he would most likely share it, and s/he has a positive attitude in verifying information, then most likely s/he will not share misinformation

It is assumed that students with higher **media and information literacy (MIL)** will not share misinformation with others online. MIL refers to the individual's competencies in maximizing the benefits and minimizing the risk in the digital and communication landscapes. In this study, it refers to UNESCO's MIL assessment framework-tier two.

It is believed that the MIL skills are vital for the students and Internet users in the ever-changing media and communication environment to have the ability to retrieve, evaluate, and communicate or share the information that they consume. Many studies have only explored media literacy, information literacy, and digital literacy separately.

The **behavioral intention in handling misinformation (BIH)**, which is also one of the TRA constructs, refers to the students' likelihood to process information that they consume on social media. Otieno et al. (2016) refer to intention as "the cognitive representation of a person's likelihood to perform an anticipated behavior." In this

research study, it is believed that the respondents' behavioral intention in handling misinformation would be negatively associated with fake news sharing. This means that the person's preparedness to handle misinformation will give them the tendency to not share fake news on social media. This was not included in Khan and Idris' (2019) framework. However, in this study, it is important to determine whether the respondents had the behavioral intention in handling misinformation in the future.

Perceived self-efficacy in recognizing misinformation (PSERM) refers to the students' recognizing misinformation that leads to the prevention of sharing fake news. Ajzen and Fishbein (2005) argue that an individual with a higher self-efficacy believe that they possess the ability to implement a behavior. In the Theory of Planned Behavior (TPB) which is developed from TRA, self-efficacy is coined as perceived behavioral control.

Fake news sharing (FNS) is the behavior analyzed in this study. The construct was based on the studies of Chadwick and Vaccari (2019), Talwar et al (2019), and Khan and Idris (2019). The research followed the logic stated in TRA that both beliefs and attitude will influence fake news sharing on social media. This behavior would be associated with all the above factors of perceived online skills, beliefs and attitude, media information literacy, and perceived self-efficacy.

To present the relationship of variables analyzed in the study, below is the table summarizing the variables correlated.

Table 1. Summary of the variables correlated

VARIABLES	Behavioral intention	Fake news sharing
<i>Sociodemographic Characteristics</i>		
• Age	X	X
• Gender	X	X
• Location	X	X
• Program	X	X
<i>Perceived online skills</i>		
• Perceived Internet skills	X	X
• Perceived skill online	X	X
• Perceived verification skills	X	X
<i>Belief and attitude</i>		
• Belief in the reliability of the information	X	X
• Attitude towards verifying information	X	X
<i>Media and Information Literacy</i>		
• Access and retrieval	X	X
• Evaluation and understanding	X	X
• Use, creativity, and communication	X	X
<i>Perceived self-efficacy in recognizing misinformation</i>	X	X

Operational Definition of Terms

Age	This refers to the age of the respondent at the time the survey was conducted.
Gender	This refers to the gender of the respondent. They are given three options: male, female, and others (please specify).
Location	This refers to the current location of the respondent at the time the survey was conducted. It was either local, meaning they currently reside in the Philippines, or offshore, meaning they currently

reside outside of the country.

Program

This refers to the program the respondents are currently taking. It was either Master of Development Communication (MDC) or Doctor of Communication (DCOMM).

Perceived online skills and confidence

This refers to how the respondents view their Internet use skills, their online skills, and information verification skills. The students answered a question rating themselves through a 5-point rating system: (1) poor; (2) moderately good; (3) good; (4) very good; and (5) excellent.

Perceived Internet Skills (PIS)

This refers to how the respondents view their skills in using the Internet to seek, consume, and share information as measured by a question through a 5-point rating system: (1) poor; (2) moderately good; (3) good; (4) very good; and (5) excellent.

Perceived Confidence Online

This refers to how the respondents view their skills online as graduate students. It is determined by rating themselves through a 5-point rating system: (1) poor; (2) moderately good; (3) good; (4) very good; and (5) excellent.

Perceived Verification Skills (PVS)

This refers to how the students view their skills in using online sites and tools in verifying online

information. Two statements were included in the questionnaire under this variable. Answers were measured using a 5-point rating system: (1) strongly disagree; (2) disagree; (3) neutral; (4) agree; and (5) strongly agree.

Belief in the Reliability of Information (BRI)

This refers to the respondents' belief in the credibility and reliability of the information that they obtain about Covid 19 from social media. It also measures how they trust the information from these platforms. Answers were measured using a 5-point rating system: (1) strongly disagree; (2) disagree; (3) neutral; (4) agree; and (5) strongly agree.

Attitude in Verifying Online Information (AVI)

This variable refers to the students' attitude in taking action to determine whether the information is false or truthful. This is related to the students' belief in the consequences of their actions when they perform the behavior. Answers were measured using a 5-point rating system: (1) strongly disagree; (2) disagree; (3) neutral; (4) agree; and (5) strongly agree.

Perceived Self-Efficacy in Recognizing (Mis)information (PSERM)

This refers to how the respondents perceive their skills in detecting false information on social media. Answers were measured using a 5-point rating system: (1) strongly disagree; (2) disagree; (3)

neutral; (4) agree; and (5) strongly agree.

Media and Information Literacy (MIL)

This refers to the competencies of the students to 1) access and retrieve, 2) evaluate and understand, and 3) use, create, and communicate information on social media. Answers were measured using a 5-point rating system: (1) strongly disagree; (2) disagree; (3) neutral; (4) agree; and (5) strongly agree.

Access and Retrieval of Information (ARI)

This is one of the competencies emphasized in MIL involving the information-seeking skills of an individual that allows them to identify the information and media sources that are necessary and appropriate. Answers were measured using a 5-point rating system: (1) strongly disagree; (2) disagree; (3) neutral; (4) agree; and (5) strongly agree.

Evaluation and Understanding of Information (EUI)

This MIL competency refers to how the respondents distinguish if the information is factual or fictional, evaluate the relevance, and synthesize the information they consume. Answers were measured using a 5-point rating system: (1) strongly disagree; (2) disagree; (3) neutral; (4) agree; and (5) strongly agree.

Use, Creation, and Communication of Information (UCC)

This MIL competency refers to the production and

development of information that will fit different audiences and formats. It also recognizes the ethical use of information, protection of data, and acknowledgment of intellectual property. Answers were measured using a 5-point rating system: (1) strongly disagree; (2) disagree; (3) neutral; (4) agree; and (5) strongly agree.

Behavioral Intention in Handling (Mis)information (BIH)

This refers to the intention of the respondents to verify and evaluate information about Covid 19 and to correct others who share fake news online. Answers were measured using a 5-point rating system: (1) strongly disagree; (2) disagree; (3) neutral; (4) agree; and (5) strongly agree.

Fake News Sharing (FNS)

This refers to the respondents' behavior of sharing news without verification that leads to intentional or unintentional dissemination of false information or fake news. The students are asked to try to recall any incidence when they have shared some (mis)information on Covid 19. Answers were measured using a 5-point rating system: (1) very frequently; (2) always; (3) sometimes; (4) rarely; (5) never.

CHAPTER III

METHODOLOGY

This chapter discusses the research design, locale of the study, respondents of the study and sampling, data gathering instrument and procedure, and data analysis.

Research Design

The study employed a survey research design. It aims to describe the characteristics of the population and obtain the data to test the hypothesis of the study. A survey is “a research method used for collecting data from a predefined group of respondents to gain information and insights into various topics of interest (QuestionPro, 2021).” It is used to “question individuals on a topic or topics and then describe their responses (Jackson, 2011).

Instead of a paper-and-pencil survey, the researcher used an online survey to facilitate data gathering because of the pandemic and the nature of the respondents who are online graduate students. An online survey is a structured questionnaire that is filled out by respondents online through Web forms (Techopedia, 2021).

Locale of the Study

The study was conducted in Los Banos, Laguna where UPOU is located and where courses in Development Communication are available. But since the students are in practically all parts of the Philippines, then the locale is multi-locational.

Respondents and Sampling

The respondents of this study are Master of Development Communication (MDC) and Doctor of Communication (DCOMM) students in an open university in Los Banos, Laguna. The sample size is based on the number of enrolled students under the program for the second semester 2020-2021.

To determine the respondents of the survey, the researcher used systematic random sampling. Systematic random sampling is used when there is a provided list of the whole population (Stempell III and Westley, 1981). Hence, it involves “a probability sampling method where the researcher chooses elements from a target population by selecting a random starting point and selects sample members after a fixed ‘sampling interval (QuestionPro, 2021).”

A list of the students was first obtained from the faculty office. The sample size was then determined by identifying the total population (MDC and DCOMM students enrolled in the second semester of 2020-2021). With a 95 percent confidence level, and a 5 percent margin of error, the sample size of this study was 207 respondents.

This was calculated through an online sample size calculator, SurveyMonkey.com (<https://www.surveymonkey.com/mp/sample-size-calculator/>).

However, the response rate for the survey was only 51%, with only 107 respondents participating. This may have been because it was an online survey that may be easily ignored, and it was also done during the pandemic time.

The final sample consisted of 80 MDC students and 27 DCOMM students or a total of 107 respondents with ages ranging from 21 years old to 50 years old.

Data Gathering Instrument and Procedure

The data was gathered through an online survey questionnaire. The survey was conducted from October 25, 2021, to February 28, 2022. The questionnaire was in English and composed of five parts: 1) background factors including sociodemographic, individual, and information; 2) beliefs and attitudes; 3) perceived self-efficacy in recognizing misinformation; 4) media and information literacy skills; 5) intention to do the behavior; and 6) sharing of Covid 19 (mis)information.

The questions for media and information literacy were derived from UNESCO's Global Media and Information Literacy Assessment Framework: Country Readiness and Competencies (2013). Specifically, they were based on the UNESCO's MIL Assessment Competency Matrix (Tier Two). The researcher determined the appropriate criteria based on this matrix. Answers were measured using a 5-point rating system: (1) strongly disagree; (2) disagree; (3) neutral; (4) agree; and (5) strongly agree.

The fake news sharing statements, on the other hand, were based on the studies of Chadwick and Vaccari (2019); Khan and Idris (2019); and Talwar et al. (2019), which focused on fake news sharing, specifically on COVID-19.

The respondents were asked to answer an online survey through Google Forms, which was sent through electronic mail.

Research Ethics

Ethical considerations were followed by the researcher throughout the study. The online survey questionnaire included a consent form indicating that the researcher ensures anonymity and confidentiality of the data that will be collected. It is also indicated that the respondent is free to withdraw their participation anytime during the conduct of the survey should they feel uncomfortable answering some questions.

To protect the respondents' privacy, the data collected remains confidential. The information that was collected is used solely in this study and not for other purposes. It is also indicated in the email sent to the respondents that the data will only be stored 3 to 5 years after it has been collected and will be deleted after this duration.

To adhere to the Data Privacy Act of 2012, an informed consent form was sent to the respondents and after they have expressed their interest in participating in the study, they were allowed to proceed in answering the survey through Google Form.

Data Analysis

The data obtained from the online survey were analyzed using Microsoft Excel and IBM's Statistical Package for Social Sciences (SPSS).

All the data obtained from the survey were analyzed using descriptive statistics such as frequencies, percentages, and means plus standard deviations. Mean was used to interpret the Likert scale since the data gathered were scores (1-5).

For the analysis of the correlation among the variables, Spearman's correlation was used. It is the nonparametric counterpart of Pearson's Correlation. It was used since the variables analyzed were ordinal.

Ho: There is no association between variables

Ha: There is an association between variables

Test statistic:

$$r_s = 1 - \frac{6D}{n(n^2 - 1)}, \text{ where } D = \sum d_i^2$$

Decision rule: Reject Ho if p-value < $\alpha = 0.05$.

The direction of association can be either direct (positive value) or inverse (negative value). A value of 0 indicates that there is no association while a value of 1 indicates that there is a perfect association. Other values are interpreted as follows:

Value	Interpretation
0.01 to 0.19	Very weak
0.2 to 0.39	Weak
0.4 to 0.59	Moderate
0.6 to 0.79	Strong
0.8 to 0.99	Very strong

The variables related are summarized in Table 1.

CHAPTER IV

RESULTS AND DISCUSSIONS

This chapter presents the findings of the quantitative study conducted to determine the graduate students' perceived online skills, beliefs and attitudes, perceived self-efficacy, media and information literacy, intention to share or not to share fake news as well as the actual behavior of sharing fake news about COVID-19.

The sample consisted of 80 MDC students and 27 DCOMM students or a total of 107 respondents.

Background of the Respondents

Sociodemographic Profile

Table 2 presents the sociodemographic profile of the respondents, which includes their age, gender, location, graduate program, and employment status.

More than half of them are female (68.57%) and are aged 26-30 (24.76%). The university facilitates open and distance eLearning, which explains why 89.52% of the students are based offshore. Moreover, 85 (80.95%) of the graduate students who answered the survey were employed full-time.

Table 2. Profile of the respondents

Characteristics	Frequency	Percentage
Age		
21-25	19	18.10
26-30	26	24.76
31-35	23	21.90
36-40	18	17.14
41-45	10	9.52
46-50	4	3.81
51-55	3	2.86
56-50	2	1.90
Gender		
Female	72	68.57
Male	33	31.43
Location		
Offshore	94	89.52
Local	11	10.48
Graduate program		
MDC	80	76.19
DCOMM	25	23.81
Employment status		
Employed full time	85	80.95
Employed part-time	12	11.43
Self-employed	6	5.71
Student	9	8.57
Unemployed	1	0.95
Freelance	1	0.95
Freelance for multiple organizations	1	0.95

Use of Media

Social Media Platform Used

From 0-5 hours

The respondents were asked which social media platforms they use and how often (in terms of hours) they use them to obtain information about Covid-19 (Table 3). The results show that majority usually use YouTube (67.31%) for around 0-5 hours. According to Khan, et al (2019), YouTube is 'one of the social media mixes that also serves as one of the world's largest search engines.' It allows its users to interact with other users and obtain knowledge while watching videos. This makes this platform a popular choice among the respondents.

The second social media platform that the respondents use for 0-5 hours is Instagram (54.81%). In 2021, Degenhard estimated that there are 14.04 million Filipino Instagram users and reach 18.65 million users in 2022. This is usually utilized by businesses to target the audiences with their advertisements. It is also notable that Instagram restricts its use to audiences that are 13 years old and below.

And the third is Twitter (52.88%). As of January 2022, there are 10.5 million Filipino users of Twitter. Like Instagram, it is also restricted to 13 years old and below. It is also noted by Ong and Cabañes (2016) that Twitter, aside from Facebook, is widely used to disseminate false information on social media.

From 6-10 hours

Facebook, including Facebook Messenger, is also one of the most used social media by the respondents. Almost a third of them (33%) use it for 6-10 hours and

10% of them use it for 11-15 hours a day. The application is considered one of the most popular in the country. Facebook is one of the most used social media since it is accessible to the Filipino public because of its free-of-charge service where the users can consume content without mobile data or the Internet, although with limited features (Statista Research Department, 2022).

The next highest number of users for 6-10 hours is YouTube, which is used mostly for 0-5 hours. This means that the users really spend a lot of their time browsing on YouTube, ranging from 0-10 hours a day.

The third is Instagram, which is the second most used media for 0-5 hours.

It is observed that the respondents use Facebook, including Facebook Messenger, for the highest number of hours per day. The least used social media is WhatsApp, with only 44 respondents (42.31%) for 0-5 hours and 4 respondents (3.85%) using it. This is expected because, in the Philippines, WhatsApp only places fourth in terms of popularity and number of its users. This is quite alarming since the action against misinformation and disinformation was done at a slower pace on Facebook Messenger than on WhatsApp.

In 2018, WhatsApp provided labels in forwarded messages that limited the number of users forwarding information to five groups or individuals at a time. A year later, the Messenger app adopted this as part of the initiative to curb misinformation, but the Philippines was not a part of the 8 countries (US, New Zealand, Croatia, Sri Lanka, Chile, Tunisia, Australia, and Myanmar) where the feature is available (Tantuco, 2021). Hence, this still allows false information to spread through instant messaging and social media.

Table 3. Social media use on Covid-19 of the respondents

SOCIAL MEDIA	0-5 hours		6-10 hours		11-15 hours		16-20 hours		21-24 hours		Not Applicable	
	N	%	N	%	N	%	N	%	N	%	N	%
Facebook	53	50.96	33	31.73	10	9.62	5	4.81	2	1.92	1	0.96
Twitter	55	52.88	8	7.69	3	2.88	1	0.96	1	0.96	36	34.62
Instagram	57	54.81	12	11.54	4	3.85	0	0.00	0	0.00	31	29.81
YouTube	70	67.31	15	14.42	5	4.81	3	2.88	1	0.96	10	9.62
WhatsApp	44	42.31	4	3.85	0	0.00	1	0.96	1	0.96	54	51.92
Others	45	43.27	6	5.77	1	0.96	2	1.92	1	0.96	49	47.12

Reasons for Use of Social Media

The graduate students primarily used social media to seek information/news (90.48%), followed by entertainment (70.48%), then to share information/news (63.81%), gain knowledge (60.95%), socialization (60.95%), and to pass time (54.29%).

Aside from seeking information/news, many of the graduate students also use social media for entertainment and passing time. Entertainment is the second most answered reason next to seeking information/news and the sixth is passing time. With the popularity of the so-called “influencers” nowadays, the content of social media messages had transformed leaning into a more entertaining part, setting aside

the truthfulness of the information that they present. During the pandemic, the people also looked for ways to relieve their stress from the fear of contracting the virus and following health protocols, so they turned to social media for entertainment (Whiting and Williams, 2013).

If the audience sees the information as a form of entertainment, it will be hard for them to take the facts seriously enough and will not believe in its reliability. In addition, there will be a tendency that the users will share the information easily without checking the factuality of its content only taking into consideration the entertainment it provides.

It is also discovered that the respondents use social media to gain knowledge on different topics. According to the results in the most used social media platform, YouTube is one of the most popular among them. This medium is usually used to obtain information on how to do things, from paying taxes to cooking their favorite meals. Ansari and Khan (2020) emphasized the advantages of using social media in sharing knowledge. They pointed out that using this medium when used in collaborative learning, has a positive influence on their interaction with peers and teachers and on their overall knowledge sharing behavior.

According to the report of GWI during the third quarter of 2021 in the Philippines, the primary reason the users use the internet is to seek information. The next reason is to keep in touch with their loved ones and to research how to do things that are mostly done through YouTube. Entertainment is only fourth according to the survey. However, the survey results also showed that the users consume content from social media firstly to exchange messages with their family and friends, find content, and be updated on the current news and events.

Social media is considered a platform that harnesses collaboration between people. This also promotes the exchange and distribution of content which leads to a discussion and shared understanding (Westerman, Spence, and Van Der Heide, 2013). Organizations and professions have also seen the benefits of using this platform to promote health content since it is considered as an “information equalizer”, which means that it allows access to people who do not have access to healthcare initially (McNab, 2009). For these reasons, the use of social media has evolved from being an entertainment platform to an information-seeking and sharing medium.

Table 4. Reasons for social media use of the respondents

REASONS	FREQUENCY	%
Seek information/ news	95	90.48
For entertainment	74	70.48
Share information/news	67	63.81
For socialization	64	60.95
Gain knowledge	64	60.95
Pass time	57	54.29
Gain status or social influence	10	9.52
For work	1	0.95
To stay updated	1	0.95
Work	1	0.95

In summary, the social media most used by the respondents is Facebook with most of them using it for 6-15 hours a day. The second is YouTube with 0-10 hours a day and the least used is WhatsApp. Moreover, the respondents mostly use social media in this order: to seek information/news, entertain themselves, share information/news, gain knowledge, and pass the time.

Perceived Online Skills

Perceived Internet Skills

In terms of their perceived skills in Internet use, a total of 53 students (50.48%) answered that they are excellent, 41 students perceive themselves as very good (39.05%), while some perceive themselves as moderately good (10.48%) (Table 5).

With their exposure to eLearning at the online open university, the students' skills in the use of the Internet are expected to be high. The students are exposed to eLearning since they study in an open university. It is completely online, which allows graduate students to study at their own pace and even while working full time, hence they are exposed to the Internet all the time.

Table 5. Perceived skills in Internet use

	FREQUENCY	%
Excellent	53	50.48
Very Good	41	39.05
Moderately Good	11	10.48

Good	0	0.00
Poor	0	0.00

Perceived Confidence Online

When asked about their confidence level in their skills online as graduate students (Table 6) on a scale of 1 to 5 (5 being the highest), most of the respondents answered that their skills are excellent (40%) and very good (55.24%).

It is a requirement in the university that the students have the know-how in using the Internet, especially in using Moodle, which is the primary application used in online classes.

A study conducted by Ozuorcun and Tabak (2012) emphasized in their results that finishing online or computer-based courses in online learning promotes self-knowledge and self-confidence among the students. It also helps motivate the learners to personalize and improve their learning experience, while increasing their knowledge of ICT skills.

Table 6. Perceived confidence as an online graduate student

	FREQUENCY	%
Excellent	42	40.00
Very Good	58	55.24
Moderately Good	4	3.81
Good	0	0.00
Poor	1	0.95

Perceived Verification Skills

The respondents strongly agreed that they can use online sites or tools in verifying the information that they consume on social media (Mean=4.22), and they also strongly agreed that they know the use of search engines (Mean=4.79).

Table 7. Perceived verification skills of the students

VERIFICATION SKILLS	MEAN	INTERPRETATION
1. I use online sites or tools to verify social media information.	4.22	Strongly Agree
2. I understand what a search engine is for.	4.79	Strongly Agree

Rating: Strongly agree (4.21-5.00); Agree (3.41-4.20); Neither agree nor disagree (2.61-3.40); Disagree (1.81-2.60); Strongly disagree (1.00-1.80)

In summary, the respondents perceive themselves as excellent in terms of their Internet skills and confidence as online graduate students. Moreover, they are also confident that they have the skills to verify information on social media.

Beliefs and Attitude

To determine values for the constructs under the Theory of Reasoned Action (TRA) such as belief, attitudes, and perceived self-efficacy, the respondents answered questions with Likert scale ratings ranging from 1-5 (1-strongly disagree, 5-strongly agree).

Belief

Belief in the reliability of the information can affect the correlation between behavioral intention and fake news sharing. As shown in Table 8, the respondents mostly answered 'neither agree nor disagree' or were neutral about the reliability and credibility of information on social media.

The neutrality might be because their trust on different social media platforms is different. Pew Research Center (2019) discovered in their survey that people have either positive or negative feelings on the information they consume on social media depending on the content they read or see. Some of the content that they obtain are useful in learning new skills, while some are false or untrue.

When asked if they trusted the information they read and see on social media, most of the respondents answered 'disagree' (Mean=1.96). In a survey conducted by Taral and Bharathi (2021), people trust COVID-19 information if it is posted by a healthcare professional. However, if the information is posted by agencies such as WHO, they do not find it trustworthy.

Hsieh-Yee (2021) also found five reasons against trusting information on social media, and these are: false information, uneven quality of information, bias, manipulation, and insufficient control of disinformation and misinformation.

The information on social media usually does not have professional gatekeepers to regulate and monitor the content being shared. This leads to the flooding of false information on the platform (Li and Suh, 2015). Social media, for instance, allows people to create content and share it with others. The role of the consumers had evolved from content reviewers to content creators. This leads to the users viewing

the information on social media with skepticism (Wathen and Burkell, 2002). It had become more difficult to discern whether the messages on social media are falsified or not.

Khan and Idris (2019) imply in their study that the more a person believes in the reliability and credibility of information, the more they are likely to share these with their peers on social media. This ironically indicates that the students are not likely to share information that they consume on social media because they are skeptical about the messages.

Table 8. Belief in the reliability of information on social media

BELIEFS	MEAN INTERPRETATION	
1. I believe that information from social media is credible, so I need not check the source.	3.02	Neither Agree nor Disagree
2. I believe that information from social media is reliable.	2.61	Neither Agree nor Disagree
3. I can trust information from social media.	1.96	Disagree

Rating: Strongly agree (4.21-5.00); Agree (3.41-4.20); Neither agree nor disagree (2.61-3.40); Disagree (1.81-2.60); Strongly disagree (1.00-1.80)

Attitude

To be able to easily recognize and mitigate the spread of false information it is important to determine the respondents' attitudes toward fact-checking and verifying information (Lewandowsky et al. 2012). The more favorable the attitude, the more likely the individual will verify online information.

Table 9 shows that the respondents strongly agreed with all the statements including the checking of the original source (Mean=4.95), the uploader (Mean=4.75), and the date when the information was first created (Mean=4.87). This is heartening amidst the rampant spread of misinformation and disinformation on Covid 19 on social media.

Online information, unlike the newspapers and television messages, lacks quality control and verification before posting. Ensuring that the source of the information posted on social media is vital in establishing the user's own credibility. The credibility of the source and the attitude in verifying online information had become increasingly important, especially with the additional gatekeeping role that the consumers must assume (Westerman et al. 2014).

Moreover, the respondents 'strongly agreed' that there is a need to verify the information (Mean=4.92) and it is important to countercheck the information (Mean=4.87) that they consume through social media. This means that they have a positive attitude towards verifying information and can see the importance of evaluating the messages that they consume from social media.

Table 9. Attitude towards verifying online information

ATTITUDE	MEAN INTERPRETATION	
1. It is important to check the original source of information.	4.95	Strongly Agree
2. It is important to check who first uploaded the information.	4.79	Strongly Agree
3. It is important to check when the information was first	4.87	Strongly Agree

created.

4. There is a need to verify the information that I consume.	4.92	Strongly Agree
5. There is a need to countercheck all information from different social media sources.	4.94	Strongly Agree

Rating: Strongly agree (4.21-5.00); Agree (3.41-4.20); Neither agree nor disagree (2.61-3.40); Disagree (1.81-2.60); Strongly disagree (1.00-1.80)

In summary, the students did not agree that social media messages can be trusted, and they are neutral in terms of the credibility and reliability of the information that they consume in this platform. This can be due to the fact that almost anyone can create content and share messages through social media. Moreover, they have a positive attitude toward verifying the sources and the contents of social media.

Media and Information Literacy Skills

The MIL skills of the respondents were determined according to the UNESCO's assessment, which is divided into three categories: 1) access and retrieval of information; 2) evaluation and understanding of information; and 3) use, creation, and communication of information.

Access and Retrieval of Information

As shown in Table 10, the respondents 'strongly agreed' with the statements that evaluated their ability to access and retrieve information.

For instance, they 'strongly agreed' that they can identify the media and information for a particular purpose and define the necessary content (Mean=4.23). They also

'strongly agreed' that they could evaluate potential sources to look for media and information (Mean=4.47) and choose appropriate media and information sources (Mean=4.69). They also 'strongly agreed' that they can select and retrieved media and information (Mean=4.42).

However, in the first statement indicating that they can develop search strategies and search processes to find media and information, the majority of the students answered 'agree' only. This indicates that they believed in their information searching skills less than the other skills under this competency.

According to UNESCO (2013), an individual recognizes the need for information and content from various sources when they have access and retrieval competency. They can distinguish useful information from that which is not. With this ability, the students are expected to know the importance of validating the sources of information that they consume on social media before retrieving it and sharing it with their networks.

Table 10. Media and information literacy skills: Access and retrieval of information

SKILLS	MEAN INTERPRETATION	
1. I can develop search strategies and search processes to find media and information.	4.16	Agree
2. I can Identify the media and information for a particular purpose and define the necessary content.	4.23	Strongly Agree
3. I can evaluate potential sources to look for media and information	4.47	Strongly Agree
4. I can choose appropriate media and information sources	4.69	Strongly Agree

5. I can select and retrieve the located media and information.

4.42 Strongly Agree

Rating: Strongly agree (4.21-5.00); Agree (3.41-4.20); Neither agree nor disagree (2.61-3.40); Disagree (1.81-2.60); Strongly disagree (1.00-1.80)

Evaluation and Understanding of Information

Again, the respondents perceive themselves as highly knowledgeable in evaluating and understanding the information that they read. They 'strongly agreed' to all the statements given. They believe that they can distinguish the difference between factual and fictional information (Mean=4.51) and understand and question the facts about the messages (Mean=4.29). Moreover, they perceive themselves as skillful in terms of evaluating (Mean=4.44), selecting and synthesizing (Mean=4.43), and saving, preserving, and deleting (Mean=4.34) information (Table 11).

This competency includes "comparing facts, distinguishing facts from opinion, being aware of timing (new/news/obsolete), identifying underlining ideologies and values, and questioning how social, economic, political, professional, and technological forces shape media and information content" (UNESCO, 2013).

With the rise of infodemia on Covid 19, the online graduate students should be able to acknowledge the role of media in a larger perspective, particularly in promoting freedom of expression and accessibility of information. In the context of sharing fake news, having these competencies allows individuals to understand their roles in promoting a sustainable and reliable digital environment, particularly on social media.

Table 11. Media and information literacy skills: Evaluation and understanding of information

SKILLS	MEAN INTERPRETATION	
1. I can distinguish editorial from commercial or factual from fictional information.	4.51	Strongly Agree
2. I can understand and question facts about the information (e.g., context, ownership, regulation, audiences, and economic, legal, privacy, and security issues).	4.29	Strongly Agree
3. I can evaluate retrieved information (e.g., its relevance, accuracy, and quality).	4.44	Strongly Agree
4. I can select and synthesize information.	4.43	Strongly Agree
5. I can save or preserve as well as delete information.	4.34	Strongly Agree

Rating: Strongly agree (4.21-5.00); Agree (3.41-4.20); Neither agree nor disagree (2.61-3.40); Disagree (1.81-2.60); Strongly disagree (1.00-1.80)

Use, Creation, and Communication of Information

With regards to the use, creation, and communication of information, the respondents also ‘strongly agreed’ with all the statements under this category. They believe that they can develop information for a particular message (Mean=4.31) and particular audience (Mean=4.44) for different platforms. The respondents also consider themselves as knowledgeable in the ethical use of information (Mean=4.58), securing personal data (Mean=4.67), and acknowledging intellectual property (Mean=4.60) (Table 12).

This is one of the most important competencies in terms of sharing information on social media. Since the respondents know that they have the responsibility to share

ethically, they are expected to post only information that is truthful and will not influence other people negatively. This requires an individual to have the right attitude and values in observing ethical considerations in communicating information. With the rise of innovations in sharing and creating content for media, everyone can easily produce information. A media and information literate person will most likely not create or share content that do not follow ethical principles.

Table 12. Media and information literacy skills: Use, creation, and communication of information

SKILLS	MEAN INTERPRETATION	
1. I can develop information for a particular message in different formats.	4.31	Strongly Agree
2. I know how to demonstrate ethical use of information.	4.58	Strongly Agree
3. I know how to protect personal data.	4.67	Strongly Agree
4. I know how to acknowledge intellectual property.	4.60	Strongly Agree
5. I can develop information for a particular audience in different formats.	4.44	Strongly Agree

Rating: Strongly agree (4.21-5.00); Agree (3.41-4.20); Neither agree nor disagree (2.61-3.40); Disagree (1.81-2.60); Strongly disagree (1.00-1.80)

Results shown in Table 13 indicate that the respondents have very high overall media and information literacy scores. In terms of the access and retrieval of information (Mean=4.39), the respondents' self-evaluation of these skills was considered very high. This is similar to their evaluation and understanding of information (Mean=4.40), and their use, creation, and communication of information (Mean=4.52).

Overall, they perceive themselves as highly skillful in terms of media and information literacy. This is expected of online communication graduate students since they are educated using online platforms.

Table 13. Overall media and information literacy score

MIL SKILLS	MEAN INTERPRETATION	
Access and Retrieval of Information	4.39	Very High
Evaluation and Understanding of Information	4.40	Very High
Use, Creation, and Communication of Information	4.52	Very High

Rating: Very high (4.21-5.00); Above Average (3.41-4.20); Average (2.61-3.40); Below Average (1.81-2.60); Very Low (1.00-1.80)

In summary, the respondents have a very high level of media and information literacy skills. They strongly believe that they can access and retrieve; evaluate and understand; and use, create, and communicate information effectively.

Perceived Self-efficacy in Recognizing Misinformation

The responders were also asked about their perceived self-efficacy in recognizing misinformation. Self-efficacy, according to Bandura (1977), is the individual's belief in their capacity to execute a certain task or behavior successfully. According to Ajzen and Fishbein (2005), individuals who have a high self-efficacy tend to have the ability to implement the behavior. In this study, it is hypothesized that perceived self-efficacy has an association with fake news sharing.

Results in Table 14 show that students ‘strongly agree’ with the statement that they can easily distinguish the difference between an endorsement post and a factual one (Mean=4.45). With the popularity of the so-called influencers or buzzers on social media, it is imperative that they really countercheck the contents of the posts that they view especially if these are for endorsements only.

The majority of them also agreed that they can detect false information (Mean=4.03) and can identify someone who is posting fake news on social media (Mean=4.08). They also perceive themselves as individuals who check information directly to the source (m=3.99) and can use online tools to verify information (Mean=4.11).

These results may be because being online students, they are exposed to social media more and feel they could discern what is false and credible information.

Table 14. Perceived self-efficacy in recognizing misinformation

PERCEPTION	MEAN INTERPRETATION	
1. I feel that I can easily detect false information in social media.	4.03	Agree
2. I feel that I can easily identify someone who is giving false information on social media.	4.08	Agree
3. I feel that I can easily identify an endorsement compared to a factual post on social media.	4.45	Strongly Agree
4. Whenever I get interesting information from social media, I feel that I can check if it is true directly to the source.	3.99	Agree
5. I feel that I can use online sites or tools to verify social media information.	4.11	Agree

Rating: Strongly agree (4.21-5.00); Agree (3.41-4.20); Neither agree nor disagree (2.61-3.40); Disagree (1.81-2.60); Strongly disagree (1.00-1.80)

In summary, graduate students believe that they can distinguish an endorsement from a factual post on social media. They also perceive themselves as efficient in using online tools in verifying information and can directly point out false news that they consume through the medium.

Behavioral Intention of Handling (Mis)information on Social Media

Table 15 shows the behavioral intention of the students in handling any misinformation on social media. They have a positive intention of handling the information in the future by strongly agreeing with the statements. This includes verifying and evaluating the online news (Mean=4.79) and correcting others in sharing fake news online (Mean=4.47).

Overall, the respondents had a positive behavioral intention in handling (mis)information on social media. These are positive results as they show that the students are willing to exert efforts to verify or 'read before clicking or sharing' and that they are ready to correct those who share misinformation on Covid 19. This indicates their perceived social consciousness that complements their online information skills, beliefs, and attitude.

Table 15. The intention of handling (mis)information on social media

BEHAVIORAL INTENTION	MEAN	INTERPRETATION
1. I will verify and evaluate more online news on Covid 19 for accuracy.	4.79	Strongly Agree
2. I will correct others who share misinformation or fake news about Covid 19 online.	4.47	Strongly Agree

Rating: Strongly agree (4.21-5.00); Agree (3.41-4.20); Neither agree nor disagree (2.61-3.40); Disagree (1.81-2.60); Strongly disagree (1.00-1.80)

Exposure to COVID-19 (Mis)information

In terms of the frequency of reading or seeing information on COVID-19 on social media, the majority of the respondents (53.85%) claim to sometimes see inaccurate news, while 31.73% often saw inaccurate news. This means that for most of them, fake news does really exist (Table 16).

Table 16. Read/seen information on COVID-19 on social media

	FREQUENCY	%
Often saw inaccurate news	33	31.73
Sometimes saw inaccurate news	56	53.85
Hardly ever saw inaccurate news	9	8.65
Never saw inaccurate news	6	5.77

The researcher also asked the students what inaccurate news topics on COVID-19 they have seen on social media. Table 16 shows the 11 topics they mentioned.

The misinformation topic that was read by many respondents (32.38%) was the vaccine efficacy misconceptions. This includes the extreme side effects of the vaccine such as death and infertility.

Based on a report by Johns Hopkins Medicine, the confusion that the vaccine causes infertility among women was influenced by a post on social media that a spike protein in the virus is like another spike protein called *syncytin-1* that is involved during pregnancy. The post then emphasized that once a woman gets jabbed by the vaccine, the body would fight the spike protein for pregnancy, mistaking it for Covid 19 (Baclig, 2021). This was then debunked by Dr. Akiko Iwasaki and immunobiologist Waldemar von Zedtwitz saying that there are no scientific reports regarding infertility among women after Covid 19 vaccination.

Vaccine hesitancy in the Philippines increased after the *Dengvaxia* controversy⁶ in 2016. Because of the misinformation on the negative effects of the vaccine on social media and the ensuing political debates about it, the dengue vaccine was discontinued in the country. Reports showed that in 2015, the majority (93%) of the Filipinos understood the importance of vaccines for their health. But because of the *Dengvaxia* controversy, this number decreased in 2018, resulting in only 32% of the Filipinos believing in the efficacy of vaccines (Alfonso, 2021). Apparently, many individuals believed in the false information against the efficacy of the vaccine and shared it with others.

⁶ The pharmaceutical company, Sanofi, which produced the dengue vaccine released a statement that *Dengvaxia* caused an increased risk of severe dengue for initially seronegative patients.

The second misinformation read by many respondents (24.76%) was the COVID-19 home remedies such as practicing *tuob/suob*, using Ivermectin, and drinking herbal juices to cure the disease.

In 2020, the Cebu governor Gwendolyn Garcia implemented a memorandum encouraging the use of *tuob/suob* or steam inhalation among her constituents to prevent people from contracting Covid 19 (Rappler.com, 2020). The World Health Organization (WHO) debunked this by counter information that steam inhalation does not prevent an individual from contracting Covid 19. In fact, it can be dangerous due to the risk of a burn injury, WHO pointed out.

The third misinformation read by about 20% of the respondents is on the statistics on COVID-19 such as the number of positive cases that are reported. The respondents believe that the statistics presented on social media by the government are not accurate.

The fourth misinformation read by 12% of the respondents is that 'Covid is not real'. In May 2020, a documentary called "Plandemic" created by a discredited scientist claimed that the virus is a hoax and there is no need to wear face masks outside. A Facebook post created on December 28, 2021, also claims that: "if we were in a real pandemic people would be dying in their homes by the thousands, hazmat teams would be removing bodies daily, mass grave sites would be everywhere." This claim was also disproved by the WHO.

Table 17. Inaccurate news topics on COVID-19 read on social media

	FREQUENCY	%
Vaccine efficacy misconceptions	34	32.38
COVID home remedies (e.g., practicing tuob)	26	24.76
Statistics on COVID-19	21	20.00
COVID is not real	13	12.38
COVID airborne transmission	4	3.81
Use of face shield	3	2.86
Efficacy of Ivermectin	2	1.90
Not needing to wear face mask after surviving COVID	1	0.95
RT-PCR is not accurate	1	0.95

The respondents were then asked how they knew that the information on COVID-19 that they saw in social media was a misinformation (Table 17).

Majority of the respondents (75.00%) answered that they did their own research in finding out if the information on Covid 19 that they have seen on social media was true. Rappler (2017) identified this as one of the practices that needs to be done to spot fake news on Facebook. They encourage the people to look closely at the source, URL, and evidence surrounding the information posted. This is a good indication that as online students, they are quite critical on the information they are processing and actually exert some efforts in fact checking.

Many of them said that they have seen the posts from a dubious source (53.85%) and a dubious social media account (49.04%), which makes the content unreliable. Users can easily see if the source or social media account is unreliable when it contains several misspelled words and unusual formatting (Rappler, 2017). These are usually suspicious since credible media outlets check the drafts of their articles first before publishing them in public platforms.

Some also considered the threads of the post (29.81%) and the comments of others on the post (31.73%) as their bases for knowing if the contents are misleading and untruthful.

It can be noted that only a few asked from the authorities such as healthcare professionals or relied on official FB pages of the WHO, CDC, DOH, and other legitimate social media accounts. This can be quite a problem since it implies that they do not fully trust the information that they get from professionals.

Table 18. Bases of knowing it is misinformation on COVID-19

BASES	FREQUENCY	%
I did my own research	78	75.00
Dubious source (or writer)	56	53.85
Dubious social media account	51	49.04
On the comments and reviews of others on the post	33	31.73
On the threads of the post	31	29.81

Attended COVID-19 webinars and meetings	3	2.88
Based on personal information and sharing of the people around me	1	0.96
Poor graphic design of art cards	1	0.96
Asking experts such as healthcare professionals	1	0.96
News	1	0.96
From WHO, CDC, DOH, and other legitimate government social media accounts	1	0.96
Political standings	1	0.96
Medical background	1	0.96
Personal knowledge	1	0.96
Others	1	0.96

In summary, most of the respondents believe that they sometimes saw inaccurate information or fake news on social media. This top false information on Covid 19 that they have encountered include 1) vaccine misconceptions, 2) home remedies including practicing *tuob* and using *Ivermectin*, 3) and also the number of Covid 19 patients that they believe are inaccurate.

To ascertain if what they consume contains false information, they usually do their own research. The students also investigate the comments on the posts, the threads of the original post, and the source of the social media account.

Fake News Sharing

Even if the respondents had good intentions of not sharing fake news on Covid-19, and even if they were critical enough in fact-checking, did these translate to the proper behavior of not sharing fake information?

The graduate students were asked to share an incidence when they have shared some (mis)information on COVID-19. This was scored by the students through the Likert scale (5-very frequently; 4-always; 3-sometimes; 2-rarely; 1-never) with interpretation below.

Results are interesting because they reveal otherwise. Many of the respondents are 'very frequently' told that they have shared some information about Covid-19 that was not fully accurate (Mean = 4.23) (Table 18).

Moreover, the students 'always' shared information on Covid 19 that was later found out to be a hoax (Mean = 4.11). They have also 'always' shared content related to the virus that was exaggerated (Mean = 4.02).

These results are supported by a study conducted by Gabielkov et al. (2016) showing that users share around 59% of content on Twitter without fact-checking. The same results were obtained by Kim, Sin, and Yoo-Lee (2014) who studied college students' use of social media as information sources. They found that the students paid attention more to the reactions (e.g., comments, likes, etc.) on social media and the author of the post to check if they have the same views.

Some studies have shown how social media users evaluate the information they consume. Flintham et al. (2018) pointed out that individuals evaluate the credibility of

information based on three factors: source, message, and their trust in the author who shared the content. Other research suggests that the users deem the individuals or organizations who share the information as more important than the content itself (Marwick and Lewis, 2017).

Table 19. Fake news sharing on COVID-19

BEHAVIOR	MEAN	INTERPRETATION
1. I have shared information on social media related to the COVID-19 virus that I later found out as a hoax.	4.11	Always
2. I have shared content on social media related to COVID-19 that was exaggerated but I was not aware it was exaggerated at the time of sharing.	4.02	Always
3. I have shared content on social media related to COVID-19 without checking facts through trusted sources.	3.97	Always
4. I have shared content on social media related to COVID-19 without reading the entire article.	4.00	Always
5. Someone on social media has told me that the news I have shared about Covid 19 was not fully accurate.	4.23	Very Frequently

Rating: Very frequently (4.21-5.00); Always (3.41-4.20); Sometimes (2.61-3.40); Rarely (1.81-2.60); Never (1.00-1.80)

Reasons for Sharing COVID-19 (Mis)information

The students were asked next why they share information on COVID-19 that was not accurate. Results are shown in Table 18.

The respondents cited the following top five reasons: 1) ease of use (Mean = 4.49), 2) establishing connection (Mean =4.19), 3) to influence others (Mean =4.15), 4)

bandwagon effect (Mean = 4.14), and 5) fatigue (Mean = 4.13). They also agreed with the other reasons such as altruism (Mean = 4.12), time (Mean = 4.10), and trust on online news (Mean = 4.12).

First, the respondents 'strongly agreed' that it was **easy to retrieve and share information** (Mean=4.49) in social media. Since the information on the social networking sites are readily available and can be shared with just one click, it becomes easier to share information on Covid 19 without verifying the message and the source.

Buchanan (2020) emphasized that individuals make 'rapid decisions based on heuristics and peripheral cues.' This means that people share information on social media rapidly and spontaneously, without having to spend time and deliberate over whether the message is factual or not. Moreover, a study by Hayes et al. (2016) indicated that Facebook users utilize the interactive features on social media in an automatic manner.

The second is the need for **connection**. During the lockdowns at the start of the Covid 19 pandemic in 2020, people felt the need to connect with other people to prevent the feeling of social isolation. Social media and other different platforms were used to conduct virtual gatherings, among other things (Pew Research Center, 2020). This had also led to sharing information on the platform that would solicit interactions with their social networks. They share information and stay active on social media to stay connected (Liu, 2021).

The third is to **influence** individuals to post information that would potentially influence the opinions of others about Covid 19. This can either have a positive or a negative impact on the overall dissemination of messages across the medium.

Fourth is joining the **bandwagon** to avoid missing out. Sundar et al. (2007) pointed out that the 'bandwagon heuristic' is prompted when an individual believes that the content is popular and there is a large group of people that agrees with it without verifying if the information is factual or not. They also have the tendency to believe that the source of the information is credible without actually checking (Sundar et al. 2008). Kim et al. (2014) also suggested that when people read positive comments or reviews of a post, the perceived credibility of information increases, which leads them to share the information to their network without fact-checking first.

With the amount of information that is shared on social media and the rise of *infodemia* on Covid 19, the people have the inclination to feel overwhelmed. This is also called **social media fatigue** or their fourth reason for sharing misinformation. Because of this, an individual tends to withdraw from verifying the information they consume and passively share it. When an individual reaches their 'human cognitive capacity' they tend to be fatigued (Maier et al., 2015; Whelan et al., 2020). Social media fatigue leads to their inability to recognize the truth from false news. They are also less likely to engage in verification of sources leading them to share contents that may be false (Whelan et al. 2020).

The students also mentioned being **altruistic** that is why they share information, or they share knowing that readers **have little time** to check the veracity of the online information. They also share because for them, people **trust** online news. This has implications because some studies suggest that high trust in online sources leads to sharing of fake news (Khan and Idris, 2019; Talwar et al. 2019).

Table 20. Reasons for sharing COVID-19 information on social media

REASONS	MEAN	INTERPRETATION
<i>Ease.</i> It is so easy nowadays to retrieve and share information.	4.49	Strongly Agree
<i>Connection.</i> To establish a connection with others facing the same pandemic.	4.19	Agree
<i>Influence.</i> To influence others' opinions about the disease.	4.15	Agree
<i>Bandwagon.</i> People fear 'missing out on the news bandwagon so they share the news.	4.14	Agree
<i>Fatigue.</i> People experience social media fatigue (too much news and information), so they are just too tired to check the accuracy of what they share online.	4.13	Agree
<i>Altruism.</i> To help others cope with the pandemic.	4.12	Agree
<i>Time.</i> People often don't have time to check the authenticity of the information from trusted sources.	4.10	Agree
<i>Trust.</i> People trust news shared online.	4.09	Agree

Rating: Strongly agree (4.21-5.00); Agree (3.41-4.20); Neither agree nor disagree (2.61-3.40); Disagree (1.81-2.60); Strongly disagree (1.00-1.80)

In summary, the respondents answered that they have 'always' posted Covid 19 information that was considered false in the past three months before the survey was conducted. They also admitted that they have shared the news on social media without actually verifying the source despite their positive attitude to do so. In addition, they have also 'very frequently' been told by their networks that they have shared fake news on their social media.

The students have shared information on the Covid 19 online primarily because of the ease of retrieving and sharing information; the motivation to influence others' opinions; the need to establish connections with others sharing the same pandemic; the fear of being left out so they join the bandwagon; and knowing that readers may no longer check the accuracy of information because of social media fatigue.

Correlation of Variables

This study investigated the relationship between fake news sharing (FNS) and 1) perceived online skills; 2) belief in the reliability of information (BRI) and attitude in verifying online information (AVI); 3) media and information literacy; 4) perceived self-efficacy in recognizing misinformation (PSERM); and behavioral intention in handling misinformation (BIH).

Spearman's correlation was used for the correlation analysis among the variables. The direction of association can be either direct (positive value) or inverse (negative value). A value of 0 indicates that there is no association while a value of 1 indicates that there is a perfect association. The summary of significant correlations is shown in Table 21. The non-significant correlations are no longer included.

Table 21. Summary of the significant correlations among variables

VARIABLES	Behavioral intention P-Value	Fake news sharing P-Value	Perceived self-efficacy P-Value
<i>Sociodemographic Characteristics</i>			
• Age			
• Gender			
• Location			

- Program

Perceived online skills

- Perceived internet skills 0.29**
Weak
- Perceived confidence online 0.46**
Moderate
- Perceived verification skills

Belief and attitude

- Belief in the reliability of information (BRI)
- Attitude toward verifying online information (AVI) 0.40**
Moderate 0.52**
Weak

Media and Information Literacy

- Access and retrieval 0.27**
Weak 0.54**
Moderate
- Evaluation and understanding 0.21*
Weak 0.56**
Moderate
- Use, creativity, and communication 0.29**
Weak 0.51**
Moderate

Behavioral Intention in Handling Misinformation

0.29**
Weak

Perceived self-efficacy in recognizing misinformation

0.29**
Weak

*. correlation is significant at 0.05 level (2-tailed)
 **. correlation is significant at 0.01 level (2-tailed)

Value	Interpretation
0.01 to 0.19	Very weak
0.2 to 0.39	Weak
0.4 to 0.59	Moderate
0.6 to 0.79	Strong
0.8 to 0.99	Very strong

Perceived Self-efficacy in Recognizing Misinformation

All the variables except sociodemographic characteristics, perceived Internet skills, and belief in the reliability of information was associated with perceived self-efficacy in recognizing misinformation. Perceived self-efficacy in verifying misinformation on Covid 19 is related weakly to perceived online confidence ($p=0.29$), attitude toward verifying online information ($p=0.52$), and behavioral intention in handling misinformation ($p=0.29$).

Moreover, it is moderately related to perceived verification skills ($p=0.46$) as well as media and information literacy variables such as access and retrieval of information (0.54), evaluation and understanding of information (0.56), and use, creation, and communication of information (0.51)

This means that as they become more skillful in verifying information, the more they can recognize misinformation posted on social media. Apparently, as their skill levels increase through online learning, the more they perceive themselves as efficacious in recognizing false information on social media. Having the MIL skills allows them to distinguish false information on social media.

Behavioral Intention

Behavioral intention is related to only three variables, namely: attitude ($p=0.40$), literacy in the use, creation, and communication of information ($p=0.29$), and perceived self-efficacy in verifying misinformation ($p=0.29$).

The respondents' behavioral intention in handling misinformation is moderately associated with the attitude toward verifying online information which supports the TRA claim that an individual's attitude affects his/her behavioral intention. In this

study, as the students' attitude toward verifying misinformation increases, the more likely they have the intention in handling misinformation positively.

It is also noted that BI is weakly associated with literacy in the use, creation, and communication of information which means that as their media and information literacy particularly in the use, creation, and sharing of information increases, the more likely they are to be intentional in proactively managing and verifying misinformation in the future.

It is also noted that behavioral intention is also weakly correlated with the students' perceived self-efficacy in recognizing misinformation.

Behavior or Misinformation Sharing

The actual behavior of sharing misinformation on Covid 19 was correlated albeit weakly with media and information literacy such as the literacy in access and retrieval ($p=0.27$) and literacy in evaluation and understanding ($p=0.21$).

As can be noted, only the media literacy variables are correlated with the behavior and not the other variables. According to the results, TRA variables (attitude, belief, and behavioral intention) cannot predict fake news sharing on social media, only MIL. To add, perceived self-efficacy in recognizing misinformation did not have an association with the behavior.

Media and information literacy can be associated with fake news sharing on social media. Strengthening the MIL interventions to enhance the MIL competencies of individuals is one step in preventing the spread of misinformation.

In summary, only media and information literacy competencies particularly access, retrieval, evaluation, and understanding of information predict fake news sharing among the respondents. Interestingly, MIL has a positive association with fake news sharing which means that as the MIL of the respondents increased, their tendency to share fake news also increases. This is justified by Pennycook and Rand's (2021) research. According to them, digitally literate individuals who have higher accuracy in recognizing misinformation did not necessarily translate to sharing information without verification. Sirlin et al (2021) argued that this is due to the individual's inability to consider the truthfulness of the news when sharing.

In Khan and Idris' (2019) study, it is also discovered that the more confident an individual is in using online tools, practicing competencies online, and contributing to online communities are more susceptible to sharing information without verification. These results are aligned with the results of this study.

Similarly, Adjin-Tettey (2022) also discovered that most of her respondents who were trained on media and information literacy were not able to identify fake news immediately and were likely to share false information. As she pointed out, it might be because of the lack of continuous education on this matter. To note, the training that she facilitated in the study was only conducted once.

It is also noted that PSERM has an association with all variables except sociodemographic characteristics, perceived Internet skills, and belief in the reliability of the information.

Moreover, the students' attitude towards verifying online information predicts their behavior in handling misinformation which is in line with the assertion of the Theory of Reasoned Action (TRA).

CHAPTER V

SUMMARY, CONCLUSION, IMPLICATIONS, AND RECOMMENDATIONS

Summary

With the pervasiveness of *infodemia* on social media, it had become more difficult to discern the truth from false information. This study determined how various factors such as demographics, perceived online skills, beliefs and attitude, media and information literacy, and perceived self-efficacy in verifying (mis) information are associated with the respondents' intention and actual consumption and sharing of information about COVID-19. Specifically, it aimed to: 1) Determine the sociodemographic characteristics of the respondents; 2) Determine the respondents' use of social media on Covid 19; 3) Describe the perceived online skills of the respondents in terms of Internet skills, online confidence, and verification skills; 4) Discuss the beliefs and attitude of the respondents in relation to misinformation on social media; 5) Discuss the media and information literacy of the respondents in terms of UNESCO's Media and Information Literacy Assessment; 6) Discuss the respondents' perceived self-efficacy in handling (mis)information; 7) Discuss the intention to share and to share misinformation or fake news about Covid-19; and 8) Analyze the relationship among the variables, namely: sociodemographic characteristics, perceived online skills, belief and attitude, media and information literacy, and perceived self-efficacy with behavioral intention and actual behavior of sharing fake news on social media.

The research study used the Theory of Reasoned Action (TRA) by Ajzen and Fishbein. An online survey was conducted through Google Forms with 107 MDC and DCOMM students from October 25, 2021, to February 28, 2022. Data were analyzed through the IBM SPSS to come up with descriptive statistics such as frequencies, percentages, and means. To assess the relationship of the variables, Spearman's correlation was used.

Highlights of the research include the following:

Background of the Respondents

More than half of them is female (68.57%) and are aged 26-30 (24.76%). The university facilitates open and distance eLearning, which explains why 89.52% of the students are based offshore. Moreover, there are 85 (80.95%) graduate students who answered the survey were employed full-time.

Use of Media

The social media most used by the respondents is Facebook with most of them using it for 6-15 hours a day. The second is YouTube with 0-10 hours a day and the least used is WhatsApp. Moreover, the respondents mostly use social media in this order: to seek information/news, entertain themselves, share information/news, gain knowledge, and pass the time.

Perceived Online Skills

The respondents perceive themselves as excellent in terms of their Internet skills and confidence as online graduate students. Moreover, they are also confident that they have the skills to verify information on social media.

Beliefs and Attitude

The students did not agree that social media messages can be trusted, and they are neutral in terms of the credibility and reliability of the information that they consume on this platform. This can be because anyone can create content and share messages through social media. Moreover, they have a positive attitude toward verifying the sources and the contents of the medium.

Media and Information Literacy

The respondents have a very high level of media and information literacy skills. They strongly believe that they can access and retrieve; evaluate and understand; and use, create, and communicate information effectively.

Perceived Self-Efficacy in Recognizing Misinformation

The graduate students believe that they can distinguish an endorsement from a factual post on social media. They also perceive themselves as efficient in using online tools in verifying information and can directly point out false news that they consume through the medium.

Behavioral Intention in Handling Misinformation

The respondents had a positive behavioral intention in handling (mis)information on social media. These are positive results as they show that the students are willing to exert efforts to verify or 'read before clicking or sharing' and that they are ready to correct those who share misinformation on Covid 19. This indicates their perceived social consciousness that complements their online information skills, beliefs, and attitude.

Exposure to Covid 19 Information

In summary, most of the respondents believe that they sometimes saw inaccurate information or fake news on social media. This top false information on Covid 19 that they have encountered include 1) vaccine misconceptions, 2) home remedies including practicing *tuob* and using *Ivermectin*, 3) and also the number of Covid 19 patients that they believe are inaccurate.

To ascertain if what they consume contains false information, they usually do their own research. The students also investigate the comments on the posts, the threads of the original post, and the source of the social media account.

Fake News Sharing

In summary, the respondents answered that they have 'always' posted Covid 19 information that was considered false in the past three months before the survey was conducted. They also admitted that they have shared the news on social media without actually verifying the source despite their positive attitude to do so. In addition, they have also 'very frequently' been told by their networks that they have shared fake news on their social media.

The students have shared information on the Covid 19 online primarily because of the ease of retrieving and sharing information; the motivation to influence others' opinions; the need to establish connections with others sharing the same pandemic; the fear of being left out so they join the bandwagon; and knowing that readers may no longer check the accuracy of information because of social media fatigue.

Correlation of Variables

Only media and information literacy competencies particularly access, retrieval, evaluation, and understanding of information predict fake news sharing among the respondents. Interestingly, MIL has a positive association with fake news sharing which means that as the MIL of the respondents increased, their tendency to share fake news also increases. This is justified by Pennycook and Rand's (2021) research. According to them, digitally literate individuals who have higher accuracy in recognizing misinformation did not necessarily translate to sharing information without verification. Sirlin et al (2021) argued that this is due to the individual's inability to consider the truthfulness of the news when sharing.

In Khan and Idris' (2019) study, it is also discovered that the more confident an individual is in using online tools, practicing competencies online, and contributing to online communities are more susceptible to sharing information without verification. These results are aligned with the results of this study.

Similarly, Adjin-Tettey (2022) also discovered that most of her respondents who were trained on media and information literacy were not able to identify fake news immediately and were likely to share false information. As she pointed out, it might be because of the lack of continuous education on this matter. To note, the training that she facilitated in the study was only conducted once.

It is also noted that PSERM has an association with all variables except sociodemographic characteristics, perceived Internet skills, and belief in the reliability of the information.

Moreover, the students' attitude towards verifying online information predicts their behavior in handling misinformation which is in line with the assertion of the Theory of Reasoned Action (TRA).

Conclusion

While the students perceive themselves to have high online skills, favorable belief and attitude toward information verification, high media literacy, perceived self-efficacy in verifying information, and likely intention to not share fake information, they have shared fake information on Covid 19 in social media. In the past months, they have shared the news on social media without verifying the source, and they have 'very frequently' been told by their networks that they have shared fake news. They have shared fake news because of the ease of retrieving and sharing information online, the motivation to influence others' opinions, desire to establish connections, dealing with social media fatigue, and joining the bandwagon.

The behavior of sharing misinformation on Covid 19 was correlated with media and information literacy such as the literacy in access and retrieval and the literacy in evaluation and understanding. Only the media literacy variables are correlated with the behavior. Media and information literacy can be associated with fake news sharing on social media. Hence, strengthening the MIL interventions to enhance MIL competencies of individuals and improving the media messages to educate the people on the accuracy of information can prevent or minimize the spread of misinformation on Covid 19.

Overall, the Theory of Reasoned Action (TRA) can be a useful framework for exploring social media use and recognizing misinformation.

Implications and Recommendations

Use of Media

The most used social media by the respondents is Facebook and YouTube. These are also the most popular social media used by Filipinos. The efforts to promote fact-checking and prevent the spread of misinformation should be strengthened.

They also mostly use the Internet to seek and share the news. Entertainment and passing time are also one of the reasons that they use the web. Contents that are entertaining on social media should also be educational. Labeling news as truthful or untrue is not enough, an alternative could be putting other reliable links for further reading of the media content. This will also give them an opportunity to educate themselves to the topic and avoid being misguided by different information.

Perceived Online Skills

As communication graduate students, the respondents have the obligation to promote the spread of truthful information. They should proactively train themselves in verifying the information first before sharing it to their networks. Having the attitude, confidence, and positive mindset in validating information may prove beneficial in preventing the spread of misinformation.

Educational institutions also have the obligation to include in their curriculum the improvement of online skills of the students for them to better understand the importance of verifying online information before sharing.

Beliefs and Attitude

Since the results showed that most respondents do not trust the information that they view on social media, it is imperative that media sources establish their reliability and credibility by sharing fact-checked information on their platforms to improve the trust of the people on their sites.

The researcher also noted that attitude in verifying online information is positively associated with behavioral intention in handling misinformation which reinforces the Theory of Reasoned Action's postulate that attitude influences behavioral intention.

The respondents' attitude is positively high, which signifies that they perceive counterchecking information as beneficial. With this, it is important to consider the accessibility of fact-checking tools to encourage people to verify before sharing since the students already have a positive attitude towards it.

Media and Information Literacy

Enhancing the media and information literacy education in universities and the country could lessen the tendency of the students to share false information on social media. Of all the three MIL skills, only access, retrieval, evaluation, and understanding were associated with fake news sharing. There is a need to focus on these two competencies, particularly on media and information literacy interventions.

It is also imperative that media organizations raise awareness on fake news or misinformation continuously and provide techniques on how to recognize false information. Media workers themselves must be media and information literate, so they do not become conduits of misinformation.

Perceived Self-Efficacy in Recognizing Misinformation

The respondents also had a positive perceived self-efficacy in identifying misinformation. This meant that they believe that they have the self-efficacy to distinguish facts from false information. Moreover, all the independent variables except BRI and PIS proved to be significant predictors of perceived self-efficacy in recognizing misinformation.

Further studies can investigate this concept and understand how it can affect the spread of misinformation on social media or other platforms. With this, Internet and social media users become accustomed to ways of identifying misinformation which will persuade them to verify the information first before sharing.

Behavioral Intention in Handling Misinformation

The respondents also had a positive behavioral intention to manage misinformation in the future. Media companies may consider providing more content on verifying information on social media will give individuals a chance to promote their intention in handling misinformation.

Exposure to Covid 19 Information

It is also noted that only a few asked from the authorities such as healthcare professionals or relied on official FB pages of the WHO, CDC, DOH, and other legitimate social media accounts. This can be quite a challenge since it implies that they do not trust the information that they get from professionals. Their overall distrust of the information that they obtain from social media may be one of the reasons. Another one is that of other health professionals spreading misleading information that can potentially harm people. Institutions should establish their

credibility by instituting health communication strategies to promote science-based facts to the general public. They may also have to increase their visibility on social media and other Internet sites. It may also be helpful that advertisements include health-related information that is fact-checked by professionals and health organizations.

Moreover, it is important for researchers to understand the reasons why people share fake news aside from strengthening the MIL competencies of students.

Fake News Sharing

Despite having a high level of MIL skills, the graduate students still experienced sharing fake news on social media. This is quite an intriguing finding. It may imply that there is a difference between how people think of their capacity to do an action versus how they do the behavior. This may be due to the overwhelming amount of information that they consume every day which can make them feel overwhelmed and eventually lead to social media fatigue. According to the results, this is exactly one of the reasons why they share fake news on social media. Since the emphasis is on the individuals, it is also important to make the verification process and tools more accessible and popularized. This would allow them to do easier information verification and will prevent fatigue.

Media organizations or educational institutions are recommended to do further interventions on filtering and verifying information. Individuals should not just rely on technology such as social media algorithms to countercheck the validity of the information. Furthermore, it is also important to keep in mind that there is not one way to determine the authenticity of the information found on social media so there is a need to understand different approaches that can be used.

For further studies, a wider reach of the audience could also be considered since the reasons include connecting with other people. Examining the social media networks of users can also be explored to determine how the information is disseminated. Moreover, further research can explore other fake news topics aside from Covid 19.

Recommendations for Further Studies

The researcher recommends further research in understanding the role of individuals in dealing with misinformation and disinformation. The findings of this study can serve as a basis for further theory development and research in understanding why people share fake news and how to understand the effects of misinformation in various aspects, not just health communication.

Respondents

Face-to-face surveys should also be considered to have a higher response rate. Increasing the number of respondents to obtain statistically significant results is also recommended. A wider reach of respondents such as other graduate programs in the open university or other state universities and colleges can also be studied.

Further studies on media and information literacy can also focus on measuring an individual's skills, instead of conducting self-assessment of their competencies.

Research Design

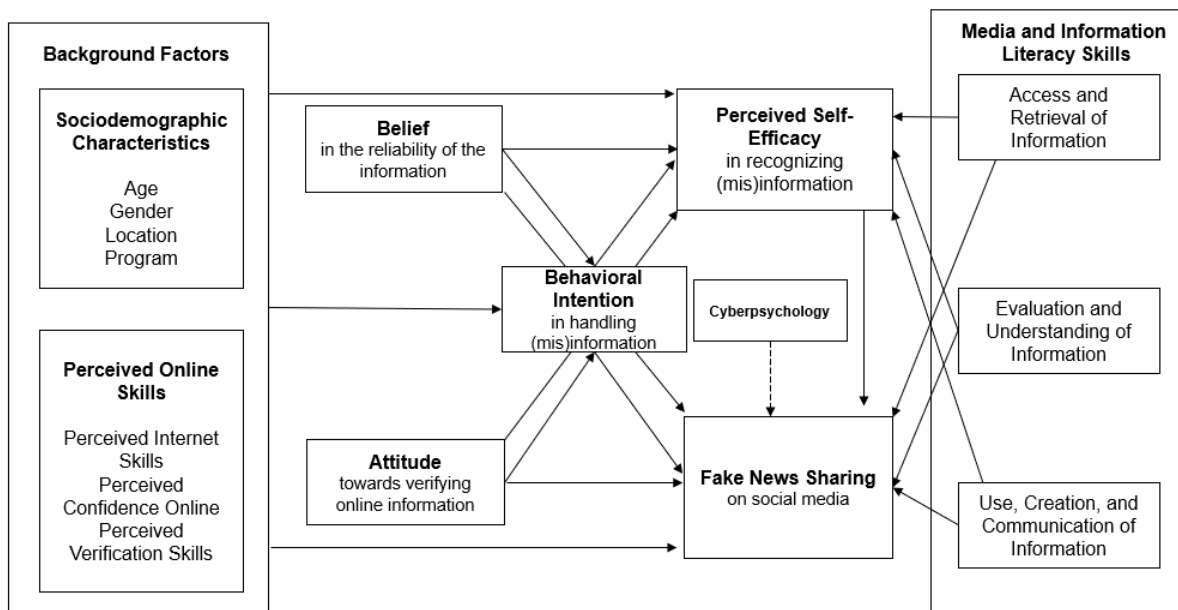
The researcher recommends a qualitative research design especially if they need an in-depth understanding of why people share fake news on social media and what are

their motivations for doing so. Lived experiences can also be explored in further studies.

Conceptual Framework

In this study, it was found that cyberpsychology can play as an intervening factor to fake news sharing. Cyberpsychology is defined as “a scientific inter-disciplinary domain that focuses on the psychological phenomena which emerge as a result of the human interaction with digital technology, particularly the Internet.”

It is recommended by the researcher to include this in the conceptual framework for further studies.



BIBLIOGRAPHY

- Adjin-Tettey, T. D. (2022). Combating fake news, disinformation, and misinformation: Experimental evidence for media literacy education. *Cogent Arts & Humanities*. 9 (1), 1-17. <https://doi.org/10.1080/23311983.2022.2037229>
- Afifi, W. A., & Weiner, J. L. (2004). Toward a theory of motivated information management. *Communication Theory*, 14(2), 167–190. <https://doi.org/10.1111/j.1468-2885.2004.tb00310.x>
- Aguilar, K. (2020, February 20). *Month-long nationwide mall sale in March aimed at boosting tourism*. INQUIRER.net. Retrieved July 18, 2021, from <https://newsinfo.inquirer.net/1231125/month-long-nationwide-sale-aimed-to-boost-tourism-set-for-march>
- Ajzen, I. and Fishbein, M. (2005). *The Influence of Attitudes on Behavior*. In *The Handbook of Attitudes*, edited by D. Albarracín, B. T. Johnson, and M. P. PeZanna, 173-221. Mahwah, NJ: Erlbaum.
- Alagaran II, J. R. (2015), *Discovering Media and Information Literacy*, Draft Lesson for Media and Information Literacy Class, Quezon City: Miriam College.
- Alam, A., Cho, N., and Kim, K. (2018). The role of news media literacy in predicting news personalization and news engagement. *Ewha Journal of Social Sciences*. 34(1), 73-109.
- Alfonso, C. (2021, March 9). *From dengvaxia to Sinovac: Vaccine hesitancy in the Philippines*. – The Diplomat. Retrieved April 18, 2022, from <https://thediplomat.com/2021/03/from-dengvaxia-to-sinovac-vaccine-hesitancy-in-the-philippines/>
- Alhabash, S., & McAlister, A. R. (2015). Redefining virality in less broad strokes: Predicting viral behavioral intentions from motivations and uses of Facebook and Twitter. *New Media & Society*, 17(8), 1317–1339. <https://doi.org/10.1177/1461444814523726>
- Anderson, M., & Jiang, J. (2021, May 27). *Teens, Social Media and Technology 2018*. Pew Research Center. Retrieved June 7, 2021, from <http://www.pewinternet.org/2018/05/31/teens-social-media-technology-2018/>.
- Ansari, J.A.N., Khan, N.A. (2020) Exploring the role of social media in collaborative learning the new domain of learning. *Smart Learn. Environ*. 7 (9), 1-16. DOI:10.1186/s40561-020-00118-7

- Apuke, O. D., & Omar, B. (2021). Fake news and COVID-19: modelling the predictors of fake news sharing among social media users. *Telematics and informatics*, 56, 101475. <https://doi.org/10.1016/j.tele.2020.101475>
- Austin, E. W. et al., (2002). The effects of increased cognitive involvement on college students' interpretations of magazine advertisements for alcohol. *Commun. Res.* 29 (2): 155–179. DOI:10.1177/0093650202029002003
- Aw, N. H. (2011). *A Study on the Cognitive Development of Media Literacy and its Influence in Limiting Media Effects*. Unpublished Undergraduate Thesis. Universiti Tunku Abdul Rahman, Malaysia.
- Azim, Syeda & Dey, Dipayan & Roy, Arindam. (2020). Assessing the Impacts of “Infodemic” on Social Well-Being and Health Preparedness of Indian Communities during COVID-19 Pandemic through WhatsApp groups study. [10.31235/osf.io/kgs42](https://doi.org/10.31235/osf.io/kgs42)
- Baclig, C. E. (2021, February 24). Explainer: Busting 9 covid-19 vaccine myths. INQUIRER.net. Retrieved March 24, 2021 from <https://newsinfo.inquirer.net/1399562/fwd-explainer-busting-9-covid-19-vaccine-myths>
- Banas, J.A., & Miller, G. (2013). Inducing resistance to conspiracy theory propaganda: Testing inoculation and metainoculation strategies. *Human Communication Research*, 39(2), 184-207. <https://doi.org/10.1111/hcre.12000>
- Bialik, K., & Matsa, K. E. (2020, August 27). Key trends in social and Digital News Media. Pew Research Center. Retrieved August 27, 2021 from <http://www.pewresearch.org/fact-tank/2017/10/04/key-trends-in-social-and-digital-news-media/>
- Blalock, H. (1960). *Social Statistics*. New York: McGraw-Hill Book Company.
- Bode, L., and Vraga, E. K. (2017). See something, say something: Correction of global health misinformation on social media. *Health Communication*. 33(9):1131-1140. doi: 10.1080/10410236.2017.1331312.
- Bontcheva, K., Posetti, J., Teyssou, D., et. al. (2020). *Balancing Act: Countering Digital Disinformation While Respecting Freedom of Expression Broadband Commission research report on ‘Freedom of Expression and Addressing Disinformation on the Internet’* International Telecommunication Union (ITU), Place des Nations, Geneva, Switzerland.
- Braddock, Kurt. (2019). Vaccinating Against Hate: Using Attitudinal Inoculation to Confer Resistance to Persuasion by Extremist Propaganda. *Terrorism and Political Violence*. 1-23. [10.1080/09546553.2019.1693370](https://doi.org/10.1080/09546553.2019.1693370).

- Briandana, R. and Dwityar, N. (2019). Media literacy: an analysis of social media usage among millennials. *International Journal of English Literature and Social Sciences*, 4(2), 488-486. DOI: 10.22161/ijels.4.2.44
- Buchanan T. (2020). Why do people spread false information online? The effects of message and viewer characteristics on self-reported likelihood of sharing social media disinformation. *PloS one*, 15(10), e0239666. <https://doi.org/10.1371/journal.pone.0239666>
- Cable News Network (2020, February 15). *US to evacuate Diamond Princess passengers, as global coronavirus cases top 69,000*. Retrieved 16 February 2020 from <https://edition.cnn.com/asia/live-news/coronavirus-outbreak-02-16-20-intl-hnk/index.html>.
- Campbell, Donald T. (1963). *From description to experimentation: interpreting trends as quasi-experiments*. In Chester W. Harris (ed.), *Problems in Measuring Change*. Madison: The University of Wisconsin Press.
- Caro, W. (2020). Infodemia and COVID-19: a text-mining analysis. *European Journal of Public Health*, 30. <https://doi.org/10.1093/eurpub/ckaa165.065>
- Casero-Ripollés, Andreu (2020). "Impact of Covid-19 on the media system. Communicative and democratic consequences of news consumption during the outbreak" *El profesional de la información*, 29 (2), e290223. <https://doi.org/10.3145/epi.2020.mar.23>
- Chadwick, A., & Vaccari, C. (2019). *News sharing on UK social media: misinformation, disinformation, and correction*. Loughborough: Online Civic Culture Centre, Loughborough University. Report. <https://hdl.handle.net/2134/37720>
- Cinelli, M., Quattrocioni, W., Galeazi, A., et al. (2020). The COVID-19 social media infodemic. *Scientific Reports*, 10, 16598. <https://doi.org/10.1038/s41598-020-73510-5>
- Clarke, A.. (2007) The future of e-learning. *Adult Learning*. 18, 14–15
- Clayton, K. et al. (2019). Real solutions for fake news? Measuring the effectiveness of general warnings and fact-check tags in reducing belief in false stories on social media. 42. *Polit. Behav.* doi:10.1007/s11109-019-09533-0.
- Cohen, Stanley (2002). *Folk devils and moral panics the creation of the mods and the rockers* (3rd ed.). London: Routledge.
- Conjoint.ly (2021). *Descriptive Statistics*. Retrieved 06 June 2021 from <https://conjointly.com/kb/descriptive-statistics/>.

- Connaway, L.S., Dickey, T.J., and Radford, M.L. (2011). "If it is too inconvenient I'm not going after it:" Convenience as a critical factor in information-seeking behaviors. *Library & Information Science Research* 33(3):179-190. 10.1016/j.lisr.2010.12.002.
- Cook, J., Lewandowsky, S., Ecker, U. K. (2017) Neutralizing misinformation through inoculation: Exposing misleading argumentation techniques reduces their influence. *PLoS ONE* 12(5): e0175799. <https://journals.plos.org/plosone/article?id=10.1371/journal.pone.0175799>
- Cuan-Baltazar, JY, Muñoz-Perez, MJ, Robledo-Vega, C, et al. (2020) Misinformation of COVID-19 on the Internet: Infodemiology study. *JMIR Public Health And Surveillance*. 6(2): e18444. doi: 10.2196/18444
- Degenhard, J. (2010, July 20). *Forecast of the number of Instagram users in the Philippines from 2017 to 2025*. <https://www.statista.com/forecasts/1138760/instagram-users-in-the-philippines>.
- Duffy, A., Tandoc, E., Ling, R. (2019) Too good to be true, too good not to share: The social utility of fake news. *Information, Communication & Society*, 23:13, 1965-1979. DOI: 10.1080/1369118X.2019.1623904
- European Center for Disease Prevention and Control (2020). *COVID-19*. Retrieved 14 February 2020 from <https://www.ecdc.europa.eu/en/novel-coronavirus-china>
- Fallis, D. (2004) On Verifying the Accuracy of Information: Philosophical perspectives. *Library Trends*, 52(3): 463-488. <https://ssrn.com/abstract=1509153>
- Fazio, L.K., Rand, D.G. & Pennycook, G. (2019). Repetition increases perceived truth equally for plausible and implausible statements. *Psychon Bull Rev*. 26, 1705–1710. <https://doi.org/10.3758/s13423-019-01651-4>
- Fishbein, M. and Ajzen, I. (1975) *Belief, Attitude, Intention, and Behavior: An Introduction to Theory and Research*. Reading, MA: Addison-Wesley Publishing Co.
- Fishbein, M. and Ajzen, I. (2010). *Predicting and Changing Behavior: The Reasoned Action Approach*. New York, NY: Psychology Press.
- Flintham, M., et. al. (2018). *Falling for fake news: Investigating the consumption of news via social media*. Conference on Human Factors in Computing Systems - Proceedings, April 1–10, Association for Computing Machinery, New York, NY, USA. 1-10. 10.1145/3173574.3173950.
- Foley, K., McNaughton, D., and Ward, P. (2020). Monitoring the "diabetes epidemic": A Framing Analysis of United Kingdom Print News 1993-2013. *PLOS ONE*, 15(1): e0225794. <https://doi.org/10.1371/journal.pone.0225794>

- Frau-Meigs, D. (2012). Transliteracy as the new research horizon for media and credibility of information, *J. Comput. -Med. Commun.* 19 (2), 171–183.
- Frenkel S., Alba D., Zhong R. (2020) *Surge of virus misinformation stumps Facebook and Twitter*. The New York Times. Retrieved 05 June 2020 from <https://www.nytimes.com/2020/03/08/technology/coronavirus-misinformation-social-media.html>
- Gabielkov, M., Ramachandran, A., Chaintreau, A., and Legout, A. (2016, April 13) *Social Clicks: What and Who Gets Read on Twitter? ACM SIGMETRICS/IFIP Performance 2016*. Retrieved from <https://hal.inria.fr/hal-01281190/document>
- Gallup, Inc. (2018, June 20) *Americans Views of Misinformation in the News and How to Counteract it*. Retrieved from: <https://knightfoundation.org/reports/americans-views-of-misinformation-in-the-news-and-how-to-counteract-it/>
- Gans, H. (1979). *Deciding what's news*. New York: Pantheon Books
- Garcia (2020, March 11). *Panic buying at Metro Manila stores over fears of covid-19 lockdown*. GMA News Online. Retrieved July 17 2021, from <https://www.gmanetwork.com/news/money/economy/729309/panic-buying-at-metro-manila-stores-over-fears-of-covid-19-lockdown/story/>
- Gehl, R. W. (2017). Review of the book, the age of sharing. *International Journal of Communication*. 11, 3587-3589.
- Geraee, N., Kaveh, M. H., Shojaeizadeh, D., & Tabatabaee, H. R. (2015). Impact of media literacy education on knowledge and behavioral intention of adolescents in dealing with media messages according to Stages of Change. *Journal of Advances in Medical Education & Professionalism*, 3(1), 9–14.
- Giles, D.C., and Shaw, R.L., (2009). The psychology of news influence and development of media framing analysis. *Social and Personality Psychology Compass*, 3(4), 375-393. 10.1111/j.1751-9004.2009.00180.x.
- Global Alliance for Partnerships on Media and Information Literacy (GAPMIL) Framework and Plan of Action, (2013), Paris: UNESCO. Retrieved from https://en.unesco.org/sites/default/files/gapmil_framework_and_plan_of_action_10092019.pdf
- Goffman, E. (1974). *Frame analysis: An essay on the organization of experience*. New York: Harper & Row.
- Griffin, E. A. (2012). *A first look at communication theory. (8 ed.)*. New York: McGraw-Hill.

- Grizzle, A., Moore, P., Dezuanni, M., Asthana, S., Wilson, C., Banda, F., Onumah, C., & Torras, M. (2013) *Media and information literacy: policy and strategy guidelines*. UNESCO - United Nations Educational, Scientific and Cultural Organization, France. ISBN: 978-92-3-001239-7, 978-92-3-600052-7
- Gordon, E. (2020, February 6). *What we know about the new, novel coronavirus: A timeline*. Retrieved 15 February 2020 from <https://theworld.org/stories/2020-02-06/what-we-know-about-new-novel-coronavirus-timeline>
- Guess, A., Lerner, M., Lyons, B., Montgomery, J., et. al. (2020) *A digital media literacy intervention increases discernment between mainstream and false news in United States and India*. Proceedings of the National Academy of Sciences of the United States of America. 117 (27), 15536-15545. <https://doi.org/10.1073/pnas.1920498117>
- Hague, C. and Williamson, B. (2009). *Digital Participation, Digital Literacy, and School Subjects: A Review of the Policies, Literature and Evidence*. Bristol: Futurelab.
- Hasan, S. (2013) *Mass Communication Principles and Concepts*. (2nd edition) .Mumbai: CBS Publishers and Distributors Put Ltd
- Hassan, I. (2020, March 27). COVID-19: The dual threat of a virus and a fake news epidemic. Premium Times. <https://headtopics.com/ng/covid-19-the-dual-threat-of-a-virus-and-a-fake-news-epidemic-by-idayat-hassan-premium-times-opin-12109663>.
- Hayes, R. A., Carr, C. T., and Wohn, D. Y. (2016). One click, many meanings: Interpreting paralinguistic digital affordances in social media. *Journal of Broadcasting & Electronic Media*. 60(1), 171-187. DOI: 10.1080/08838151.2015.1127248
- Henningsen, D. D., Henningsen, M. L. M. (2004). The effect of individual difference variables on information sharing in decision-making groups. *Human Communication Research*, 30, 540-555. doi:10.1093/hcr/30.4.540
- Hernández-García, I, Giménez-Júlvez, T. (2020) Assessment of health information about COVID-19 prevention on the internet: Infodemiological study. *JMIR Public Health and Surveillance*, 6 (2): e18717. DOI: 10.2196/18717
- Holton, A., Lee, N., and Coleman, R. (2014). Commenting on health: A framing analysis of user comments in response to health articles online. *Journal of Health Communication*. 10.1080/10810730.2013.837554.
- Hou, Z., Du, F., Jiang, H., Zhou, X., Lin, L., Assessment, T., & Commission, N. H. (2020). Assessment of public attention, risk perception, emotional and behavioural responses to the COVID-19 outbreak social media surveillance in China. Doi: 10.1101/2020.03.14.20035956

- Hsieh-Yee, I. (2021) Can we trust social media? *Internet Reference Services Quarterly*, 25:1-2, 9-23. <https://doi.org/10.1080/10875301.2021.1947433>
- Huguet, A., Kavanagh, J., Baker, G., Blumenthal, M. S. (2019). *Exploring media literacy education as a tool for mitigating truth decay*. Santa Monica, CA: RAND Corporation.
- Huynh T.L.D. The COVID-19 risk perception: A survey on socioeconomics and media attention. *Economics Bulletin*. 2020;40(1):758–764. <https://doi.org/10.1016/j.dib.2020.105530>
- Islam, M.S. (2020). COVID-19-related infodemic and its impact on public health: A global social media analysis. *The American Journal of Tropical Medicine and Hygiene*103, 1621-1629. DOI: 10.4269/ajtmh.20-0812
- Jackson, S.L. (2011) *Research Methods and Statistics: A Critical Approach*, 4th edition, Belmont, CA, USA: Cengage Learning.
- Jenkins, H. (2006). *Confronting the challenges of participatory culture: Media Education for the 21st century*. Chicago, IL: The MacArthur Foundation.
- John, T. & Ben Wedeman, C. (2020, March 8). *Italy prohibits travel and cancels all public events in its northern region to contain Coronavirus*. Retrieved May 2021 from <https://edition.cnn.com/2020/03/08/europe/italy-coronavirus-lockdown-europe-intl/index.html>
- Jones-Jang, S.M., Mortensen, T., and Liu, J. (2019). Does media literacy help in identification of fake news? Information literacy helps, but other literacies don't. *American Behavioral Scientist*, 65(2), 371-388. <https://doi.org/10.1177/0002764219869406>
- Kahlor, L. (2010). PRISM: A planned risk information seeking model. *Health Communication*, 25, 345-356. doi:10.1080/10410231003775172
- Kahneman, D. (2003). *Maps of bounded rationality: A perspective on intuitive judgment and choice*. 449–489 In T. Frøngsmyr (Ed.), *Les Prix Nobel: The Nobel Prizes 2002*. Stockholm: Nobel Foundation.
- Kahneman, D., & Tversky, A. (1979). Prospect theory—Analysis of decision under risk. *Econometrica*, 47, 263–291. <https://doi.org/10.2307/1914185>
- Kahneman, D., & Tversky, A. (1984). Choices, values, and frames. *American Psychologist*, 39 (4), 341–350. <https://doi.org/10.1037/0003-066X.39.4.341>
- Kemp, S. (2021, January 27). *Digital 2021: Global Overview Report*. Retrieved April 8, 2022 from <https://datareportal.com/reports/digital-2021-global-overview-report>

- Kemp, S. (2022, February 15). *Digital 2022: Philippines*. Retrieved April 8, 2022 from <https://datareportal.com/reports/digital-2022-philippines>
- Kemp, S. (2022, January 25). *Digital 2022: Global Overview Report - DataReportal – Global Digital Insights*. DataReportal. Retrieved April 8, 2022, from <https://datareportal.com/reports/digital-2022-global-overview-report>
- Khan, M. L. (2017) Social media engagement: What motivates user participation and consumption on Youtube? *Computers in Human Behavior*. 66: 236-247. <https://doi.org/10.1016/j.chb.2016.09.024>
- Khan, M.L., Idris, I.K. (2019). Recognise misinformation and verify before sharing: A Reasoned Action and information literacy perspective. *Behavior and Information Technology*. <https://doi.org/10.1080/0144929X.2019.1578828>.
- Kim, K. S., Sin, S. C. J., Yoo-Lee, E. Y. (2014) Undergraduates' use of social media as information sources. *College and Research Libraries*. 75 (4): 442-457. DOI: <https://doi.org/10.5860/crl.75.4.442>
- Kim, S. and Kim, S. (2020). The crisis of public health and infodemic: Analyzing belief structure of fake news about COVID-19 pandemic. *Sustainability*, 12 (23), 9904. <https://doi.org/10.3390/su12239904>
- Kim, Y (2015) Exploring the effects of source credibility and others' comments on online news evaluation. *Electronic News*, 9(3), 160-176. DOI:10.1177/1931243115593318
- Koetse, M. (2015, September 21). *An Introduction to Sina Weibo: Background and Status Quo*. Retrieved 06 February from <https://www.whatsonweibo.com/sinaweibo/>.
- Kohout-Tailor, J. (2018). *The Effects of Using an Information Literacy Model on the Information Seeking Behavior of Sixth-Grade Students*. Unpublished Doctoral dissertation. University of South Carolina-Columbia. Retrieved from <https://scholarcommons.sc.edu/etd/5026>
- Kotecha, S. (2021, January 15). Covid: Fake news 'causing UK South Asians to reject jab'. Retrieved 09 February 2021 from <https://www.bbc.com/news/uk-55666407>
- Kovach, B., and Rosentiels, T. (2014). *The Elements of Journalism: What News People Should Know and Public Should Expect*. 3rd Ed. New York: Three Rivers Press.
- Krippendorff, K. (2004). *Content Analysis: An Introduction to its Methodology*. Beverly Hills: Sage Publications.

- Labovitz, S. & Hagedorn, R. (1971). *Introduction to Social Research*. New York: McGraw-Hill Book Company.
- Lamos, V., Moura, S., Yom-Tov, E., Cox, I. J., McKendry, R., & Edelstein, M. (2021). Tracking COVID-19 using online search. *Nature Digital Medicine* 4, 17. <https://doi.org/10.48550/arXiv.2003.08086>
- Lau, H. Y. (2014). Cultivation effects of television broadcasting and online media. *New Media, Knowledge Practices and Multiliteracies*, 13–21. doi:10.1007/978-981-287-209-8_2
- Lee, C. and Ma, L. (2012). News sharing in social media: The effect of gratifications and prior experience. *Computers in Human Behavior*, 28(2), 331-339. <https://doi.org/10.1016/j.chb.2011.10.002>
- Lewandowsky, S., Ecker, U.K., Seifert, C.M., Schwarz, N. and Cook, J. (2012) Misinformation and its correction: Continued influence and successful debiasing. *Psychological Science in the Public Interest*. 13 (3): 106-131. <https://doi.org/10.1177/1529100612451018>
- Li, R. and Suh, A. (2015). Factors Influencing Information credibility on social media platforms: Evidence from Facebook pages, *Procedia Computer Science*, 72. 314-328. <https://doi.org/10.1016/j.procs.2015.12.146>
- Li, Z. (2018). *Social Media and Impacts of Frames o User Engagement in the Fashion Industry*. Unpublished Thesis. Master of Arts, Auburn University. Auburn, Alabama. Retrieved from <https://etd.auburn.edu/bitstream/handle/10415/6329/Zhiyuan%20Li%E2%80%9494Thesis.pdf?sequence=2&isAllowed=y>
- Liu, P. L. (2021). COVID-19 information on social media and preventive behaviors: Managing the pandemic through personal responsibility. *Soc. Sci. Med.* 277:113928. Doi: 10.1016/j.socscimed.2021.113928
- Livingstone, S. (2008). *Internet Literacy: Young People’s Negotiation of New Online Opportunities*. Digital Youth, Innovation, and the Unexpected. MacArthur Foundation Series on Digital Media and Learning. Cambridge, MA: The MIT Press.
- Lucyk, K. (2016). They are not my problem: A content and framing analysis of references to the social determinants of health within Canadian news media, 1993-2014. *Canadian Journal of Communication*. 41(4), 631-654. DOI:10.22230/cjc.2016v41n4a3034
- Lundy, L., Rogers-Randolph, T., and Lindsey, A. (2018). Analyzing media coverage of agricultural health and safety issues. *Journal of Applied Communications*. 102 (4). DOI:10.4148/1051-0834.2222

- Maier, C., Laumer, S., Eckhardt, A., and Weitzel, T. (2015) Giving too much social support: Social overload on social networking sites. *European Journal of Information Systems* 24(5): 447-464. <https://doi.org/10.1057/ejis.2014.3>
- Marwick, A. & Lewis, R. (2017). *Media manipulation and disinformation online*. Data & Society Research Institute. Retrieved from https://datasociety.net/pubs/oh/DataAndSociety_MediaManipulationAndDisinformationOnline.pdf
- Masip, et. al., (2015). News and social networks: Audience behavior. *El Profesional de la Informacion*, 24(4). DOI:10.3145/epi.2015.jul.02
- Matthes, J. (2011). Framing politics. *American Behavioral Scientist*, 56(3), 247–259. doi:10.1177/0002764211426324
- McGonagle, T. (2017). “Fake News”: False fears or real concerns? *Netherlands Quarterly of Human Rights*. 35(4), 203-209. <https://doi.org/10.1177/0924051917738685>
- McKnight, D. H., & Kacmar, C. J. (2007). Factors and effects of information credibility. In *Proceedings of the 9th International Conference on Electronic Commerce*. 423-432. <https://doi.org/10.1145/1282100.1282180>
- McKnight, H., & Kacmar, C. (2006). Factors of Information Credibility for an Internet Advice Site. *Proceedings of the Annual Hawaii International Conference on System Sciences*. 6. 113b- 113b. 10.1109/HICSS.2006.181
- McNab, C. (2009). What social media offers to health professionals and citizens? *Bulletin of the World Health Organization*, 87(8): 566. DOI: 10.2471/blt.09.066712
- McQuail, D. (1987) *McQuail's Mass Communication Theory*, 5th ed. London: Sage Publications.
- Mihailidis, P. (2012). *News literacy: Global perspective for the newsroom and the classroom*. (Ed.) New York: Peter Lang.
- Mihailidis, P. (2014). *Media literacy and the emerging citizen: Youth, engagement and participation in digital culture*. New York, NY: Peter Lang.
- Mihailidis, P., & Cohen, J. (2013). Exploring curation as a core competency in digital and media literacy education. *Journal of Interactive Media in Education*, 2013(1). doi:10.5334/2013-02
- Mosseri, A. (2017, April 6). A new educational tool against misinformation. Retrieved from <https://newsroom.fb.com/news/2017/04/a-new-educational-tool-against-misinformation/>

- Ngai, E. W. T., Tao, S. S. C., & Moon, K. K. L. (2015). Social media research: Theories, constructs, and conceptual frameworks. *International Journal of Information Management*, 35(1), 33–44. doi: 10.1016/j.ijinfomgt.2014.09.004
- Nimegeer, A., Patterson, C., and Hilton, S. (2019). Media framing of childhood obesity: A content analysis of UK newspapers from 1996-2014. *BMJ Open*. 9(4): 1-10. e025646 DOI:10.1136/bmjopen-2018-025646
- Ong J., & Cabañes J. (2018, February 11). Chief disinformation architects in the PH: Not exactly who you think. Retrieved from <https://www.rappler.com/voices/thought-leaders/195743-disinformation-architects-philippines/>
- Ornopia, M. (2019). *Self – Assessment on Media and Information Literacy Competencies Among Communication Professionals in Philippine Information Agency and Philippine News Agency*. The Asian Conference on Media, Communication & Film 2019. Retrieved from https://papers.iafor.org/wp-content/uploads/papers/mediasia2019/MediAsia2019_53106.pdf
- Otieno, O.C., Liyala, S., Benson C. O., Abeka, S. (2016). Theory of Reasoned Action as an underpinning to technological innovation adoption studies. *World Journal of Computer Application and Technology* 4(1): 1-7. DOI:10.13189/wjcat.2016.040101
- Ozuorcun, N.C., and Tabak, F. (2012). Is m-learning versus e-learning or are they supporting each other? *Procedia Soc. Behav. Sci.* 46, 299–305.
- Pan American Health Organization (2020). *Understanding the Infodemic and Misinformation in the Fight Against COVID-19*. Retrieved from https://iris.paho.org/bitstream/handle/10665.2/52052/Factsheet-infodemic_eng.pdf
- Park, J. (2017). *Media literacy, media competence and media policy in the digital age*. 2017 Arts, Humanities, Social Sciences and Education Conference. Retrieved from <https://huichawaii.org/wp-content/uploads/2017/02/Park-Jooyeun-2017-AHSE-HUIC.pdf>
- Peckham. (2020, March 4). *The covid-19 outbreak has shown we need strategies to manage panic during epidemics*. The BMJ. Retrieved July 17, 2021, from <https://blogs.bmj.com/bmj/2020/02/21/robert-peckham-covid-19-outbreak-need-strategies-manage-panic-epidemics/>
- Pennsylvania State University (2021). *The Digital Divide*. Retrieved from <https://psu.pb.unizin.org/ist110/chapter/9-3-the-digital-divide/>.
- Pennycook, G., McPhetres, J., Zhang, Y., Lu, J. G., & Rand, D. G. (2020). Fighting COVID-19 misinformation on social media: Experimental evidence for a

- scalable accuracy-nudge intervention. *Psychological Science*, 31(7), 770–780. <https://doi.org/10.1177/0956797620939054>
- Pennycook, G., Cannon, T. D., & Rand, D. G. (2018). Prior exposure increases perceived accuracy of fake news. *Journal of Experimental Psychology: General*, 147(12), 1865–1880. <https://doi.org/10.1037/xge0000465>
- Pennycook, G., & Rand, D. G. (2021). The psychology of fake news. *Trends in Cognitive Sciences*, 25(5), 388–402. <https://doi.org/10.1016/j.tics.2021.02.007>
- Pew Research Center (2019, May 13). *Publics in Emerging Economies Worry Social Media Sow Division, Even as They Offer New Chances for Political Engagement*. Retrieved from <https://www.pewresearch.org/internet/2019/05/13/publics-in-emerging-economies-worry-social-media-sow-division-even-as-they-offer-new-chances-for-political-engagement/>
- Pew Research Center (2020, April 30). From virtual parties to ordering food, how Americans are using the Internet during COVID-19. Retrieved from <https://www.pewresearch.org/fact-tank/2020/04/30/from-virtual-parties-to-ordering-food-how-americans-are-using-the-internet-during-covid-19/>
- Shane, T. (2020, August 10). *People are using Facebook and Instagram as search engines. During a pandemic, that's dangerous*. NiemanLab. Retrieved 05 August 2020 from <https://www.niemanlab.org/2020/08/people-are-using-facebook-and-instagram-as-search-engines-during-a-pandemic-thats-dangerous/>
- Sirlin, N. Epstein, Z., Arechar, A.A., and Rand, D.G. (2021). *Digital literacy is associated with news discerning accuracy judgments but not sharing intentions*. Harvard Kennedy School Misinformation Review. Retrieved from <https://misinforeview.hks.harvard.edu/article/digital-literacy-is-associated-with-more-discerning-accuracy-judgments-but-not-sharing-intentions/>
- Potter, J. (2005). *Media literacy*. 3rd edition. US: Sage Publications.
- Pulido, C., Villarejo-Carballido, B., Redondo-Sama, G., and Gomez, A. (2020). COVID-19 infodemic: More retweets for science-based information on coronavirus than for false information. *International Sociology*, 4:35. <https://doi.org/10.1177/0268580920914755>
- Qihao, J., Harlow, S., Cui D., and Wang, Z. (2018). Discussing environmental issues in Chinese social media: An analysis of Greenpeace China's Weibo Posts and audience responses. *Journal of Social Media in Society*. 7 (1), 37-60.
- QuestionPro (2021). *What is a Survey – Definition, templates, methods, characteristics, and examples*. Retrieved from <https://www.questionpro.com/blog/surveys/>

- Rappler (2017, April 7). *10 tips on how to spot fake news from Facebook*. Retrieved from <https://www.rappler.com/technology/social-media/166326-how-to-spot-fake-news-facebook/>
- Rappler.com. (2020, June 24). Cebu Province memo encourages employees to practice steam inhalation vs Covid-19. RAPPLER. Retrieved April 18, 2022, from <https://www.rappler.com/nation/264696-cebu-province-memo-steam-inhalation-coronavirus/>
- Redkite Internet Marketing and Web Designs. (2022). *Facebook Usage in the Philippines: The How's and Why's*. Retrieved from <https://redkite.com.ph/facebook-usage-philippines-hows-whys/>
- Regencia, T. (2020, February 3). Prayers, Fury after Philippines reports First Coronavirus Death. Coronavirus pandemic News | Al Jazeera. Retrieved July 18, 2021, from <https://www.aljazeera.com/news/2020/2/3/prayers-fury-after-philippines-reports-first-coronavirus-death>
- Reuben, J. Q. & Alagaran II., J. R. (2015). *Explore, Engage, Empower Model: Integrating Media and Information Literacy (MIL) for Sustainable Development in Communication Education Curriculum 31-38*. International Clearinghouse on Children, Youth and Media, Media and Information Literacy for the Sustainable Development Goals. MILID Yearbook 2015. Retrieved from https://www.amic.asia/images/2015_dubai_conference/Parallel_session/E/E2%20-%20Jose%20Reuben%20Q.%20Alagaran%20-%20Explore,%20Engage,%20Empower%20Model%20Integrating%20Media%20and%20Information.pdf
- Reuters (2020, May 15), False claim: A microchip implant will come with coronavirus vaccines. Retrieved 09 February 2021 from <https://www.reuters.com/article/uk-factcheck-video-microchip-coronavirus-idUSKBN22R2GS>
- Reuters (2020, February 1). As Coronavirus Misinformation Spreads on social media, Facebook Removes Posts. Reuters. Retrieved 03 February from <https://www.reuters.com/article/us-china-health-facebook-idUSKBN1ZV388>
- Richtel, M. (2020, February 6). *W.H.O. Fights a Pandemic Besides Coronavirus: An 'Infodemic'*. *The New York Times*. Retrieved 06 February 2020 from <https://www.nytimes.com/2020/02/06/health/coronavirus-misinformation-social-media.html>.
- Roozenbeek, J., van der Linden, S. (2019). Fake news game confers psychological resistance against online misinformation. *Palgrave Commun* 5, 65. DOI:10.1057/s41599-019-0279-9

- Russonello G. (2020, March 13). Afraid of Coronavirus? That might say something about your politics. *The New York Times*. Retrieved from <https://www.nytimes.com/2020/03/13/us/politics/coronavirus-trump-polling.html>
- Sahu K.K., Mishra A.K., Lal A. (2020). Comprehensive update on current outbreak of novel coronavirus infection (2019-nCoV). *Annals of Translational Medicine*.8(6): 393. doi: 10.21037/atm.2020.02.92.
- Shearer, E., and Gottfried, J. (2017, September 7). *News Use across Social Media Platforms 2017*. Retrieved from: <http://www.journalism.org/2017/09/07/news-use-across-social-media-platforms-2017/>
- Shehata, A. (2020). Health Information behaviour during COVID-19 outbreak among Egyptian library and information science undergraduate students. *Information Development*. 37(3), 417–430. <https://journals.sagepub.com/doi/10.1177/0266666920976181>
- Shrum, L. J. (2017). Cultivation theory: Effects and underlying processes. *The International Encyclopedia of Media Effects*, 1–12. doi:10.1002/9781118783764.wbieme0040
- Shu, K., Cui, L., Wang, S., Lee, D. & Liu, H. (2019). *dEFEND: Explainable Fake News Detection*. 10.1145/3292500.3330935.
- Siebenhaar, K., Kother, A., and Alpers, G. (2020). Dealing with the COVID-19 infodemic: distress by information, information avoidance, and compliance with preventive measures. *Frontiers in Psychology*. 11, 567905.
- Sohrabi C., Alsafi Z., O'Neill N., Khan M., Kerwan A., Al-Jabir A., Agha R. (2020). World Health Organization declares global emergency: A review of the 2019 novel coronavirus (COVID-19). *International Journal of Surgery*, 76, 71–76. doi: 10.1016/j.ijssu.2020.02.034
- Statista Research Department (2022, March 23). *Philippines: Most-used social media platforms 2021*. Statista. Retrieved March 30, 2022, from <https://www.statista.com/statistics/1127983/philippines-leading-social-media-platforms/>
- Stellefson, M., Paige, S., Apperson, A., & Spratt, S. (2019). Social media content analysis of public diabetes Facebook groups. *Journal of Diabetes Science and Technology*, 193229681983909. doi:10.1177/1932296819839099
- Stephen M. Croucher. (2011). Social networking and cultural adaptation: A theoretical model, *Journal of International and Intercultural Communication*, 4 (4), 259-264, DOI: 10.1080/17513057.2011.598046
- Sundar, S.S, Knobloch-Westerwick, S & Hastall, M.R. (2007), 'News cues: Information scent and cognitive heuristics', *Journal of the American Society for Information Science and Technology*, 58(3), 366-378. DOI:10.1002/asi.20511

- Sundar, S.S, Oeldorf-Hirsch, A & Xu, Q (2008), 'The bandwagon effect of collaborative filtering technology', CHI 2008, 26, 3453–3458.
- Talja, S., Hansen, P. (2006). Information sharing. Pp. 113-134 In Spink, A., Cole, C. (Eds.). *New directions in human information behavior*. Dordrecht, The Netherlands: Springer. <https://doi.org/10.1145/1358628.1358873>
- Talusan, I. (2019). *A Descriptive Study on Media and Information Literacy Levels of Metro Manila Senior High School Millennials: Expectations and Realities*. Master's Thesis. Munich, GRIN Verlag, <https://www.grin.com/document/947678>
- Talwar S., Dhir A., Kaur P., Zafar N., Alrasheedy M. (2019). Why do people share fake news? Associations between the dark side of social media use and fake news sharing behavior. *Journal of Retailing and Consumer Services*. 51: 72–82. DOI:10.1016/j.jretconser.2019.05.026
- Tantuco, V. (2021, February 13). Facebook policy gaps leave Messenger users vulnerable to false information. Retrieved from <https://www.rappler.com/newsbreak/in-depth/facebook-policy-gaps-leave-messenger-app-users-vulnerable-to-false-information/>
- Techopedia (2021, April 26). *Online survey*. Retrieved from <https://www.techopedia.com/definition/27866/online-survey>
- Tetep, T., and Suparman, A. (2019). Students' digital media literacy: Effects on social character. *International Journal of Recent Technology and Engineering*. 8, 394-399. DOI:10.35940/ijrte.B1091.0982S919
- Thompson, N., Wang, X., Daya, P., (2019). Determinants of news sharing behavior on social media. *Journal of Computer Information Systems*, 60(6): 593-601. <https://doi.org/10.1080/08874417.2019.1566803>
- UNESCO. (2010). *Towards Media and Information Literacy Indicators*. Background Document of the Expert Meeting. Bangkok, Thailand: UNESCO.
- UNESCO. (2011), *Media and Information Literacy Curriculum for Teachers*, Paris: UNESCO.
- UNESCO. (2013), *Global Media and Information Literacy Assessment Framework: Country Readiness and Competencies*, Paris: UNESCO
- Usman, A. and Okafor, S. (2019). *Exploring the relationship between social media and social influence*. Pp. 83-103 In: Bowen, Gordon and Ozuem, Wilson (Eds.). *Leveraging computer-mediated marketing environments*. Pennsylvania, US: IGI Global. DOI:10.4018/978-1-5225-7344-9.ch004

- Usman, M. and Usman, H. (2015). Social Media and the Dissemination of Information at the Grassroots: Power and Challenge. *International Conference on Media, Technology, and Design*. Dubai, United Arab Emirates.
- Valenzuela, S., Pina, M., and Ramirez, J. (2017). Behavioral effects of framing on social media users: How conflict, economic, human interest and morality frames drive news sharing. *Journal of Communication*. 67 (18), 803-826. DOI:10.1111/jcom.12325
- van der Linden, S., Maibach, E., Cook, J. Leiserowitz, A., Lewandowsky, S. (2017). Inoculating against misinformation. *Science*, 358, 1141–1142. <https://doi.org/10.1002/gch2.201600008>
- Vosoughi, S., Roy, D., and Aral, S. (2018) The spread of true and false news online. *Science*, 359 (6380), 1146-1151. DOI: 10.1126/science.aap9559
- Vraga, E.K., Tully, M. (2019). News literacy, social media behaviors, and skepticism toward information on social media. *Inf. Commun. Soc.* 24(2): 15-166. <https://doi.org/10.1080/1369118X.2019.1637445>
- Warner-Soderholm, G., Bertsch, A., Sawe, E., Lee, D., Wolfe, T., Meyer, J., and Fatilua, U.N. (2018). Who trusts social media? *Computers in Human Behavior*. 81: 303-315.
- Wasserman, H. & Madrid-Morales, D. (2018, November 21). 'Study sheds light on scourge of "fake" news in Africa'. *The Conversation*. Retrieved 05 August 2021 from <https://theconversation.com/study-sheds-light-on-scourge-of-fake-news-in-africa-106946>
- Wathen, C. N., & Burkell, J. (2002). Believe it or not: Factors influencing credibility on the Web. *Journal of the American Society for Information Science and Technology*, 53(2), 134-144. <https://doi.org/10.1002/asi.10016>
- Westerman, D. Spence, P.R., Van Der Heide, B. (2014). Social media as information source: recency of updates and credibility of information. *Journal of Computer Mediated Communication*. 19(2). 171-183. <https://doi.org/10.1111/jcc4.12041>
- Westley, B. H. & Stempel III, G. H. (1981). *The systematic study of mass communications*. Pp. 1-9 In G. H. Stempel III & B. H. Westley (Eds.). *Research Methods in Mass Communication*. NJ: Prentice-Hall.
- Whelan, E., Islam, A. N., & Brooks, S. (2020b). Is boredom proneness related to social media overload and fatigue? A stress–strain–outcome approach. *Internet Research*, 30(3), 869–887. DOI:10.1108/INTR-03-2019-0112
- Whiting, A., and Williams, D. (2013). Why people use social media: A uses and gratifications approach. *Qual. Market Res.* 16, 362–369. Doi: 10.1108/QMR-06-2013-0041

- WHO. (2020a, April 15). *Coronavirus disease 2019 (COVID-19) situation report – 85*. World Health Organization. Retrieved from https://www.who.int/docs/default-source/coronaviruse/situation-reports/20200415-sitrep-86-covid-19.pdf?sfvrsn=c615ea20_2
- Wilson T. D. (2000), Human information behavior. *Informing Science*.3(2):49–56. DOI:10.28945/576
- Wineburg, S. McGrew, S. (2019). Lateral reading and the nature of expertise: Reading less and learning more when evaluating digital information. *Teachers College Record*, 121(11), 1–40. <https://doi.org/10.1177/016146811912101102>
- Wittenbaum, G. M., Hollingshead, A. B., Botero, I. (2004). From cooperative to motivated information sharing in groups: Going beyond the hidden profile paradigm. *Communication Monographs*, 71, 286-310. doi:10.1080/0363452042000299894
- World Health Organization (2020). Coronavirus. Retrieved 04 February 2020 from https://www.who.int/health-topics/coronavirus#tab=tab_1
- Yang JZ, and Zhuang J. (2020). Information seeking and information sharing related to Hurricane Harvey. *Journalism & Mass Communication Quarterly*, 97(4):1054-1079. <https://doi.org/10.1177/1077699019887675>
- Zhiwen, H., Yang, Z., Li, Q., and Zhang, A. (2020). Infodemiological study on COVID-19 epidemic and COVID-19 infodemic. *The Journal of Medical Internet Research*. 22(11):e22639. doi: 10.2196/22639
- Zhou W., Wang A., Xia F., Xiao Y., Tang S. (2020). Effects of media reporting on mitigating spread of COVID-19 in the early phase of the outbreak. *Mathematical Biosciences and Engineering*. 17(3):2693–2707. DOI: 10.3934/mbe.2020147

APPENDICES

Appendix A Survey Questionnaire

Greetings!

I am a Yrelle Mae Lleba, a student from the University of the Philippines Open University (UPOU) conducting a study on how media literacy and other factors influence the sharing (intentionally or unintentionally) of fake news among communication graduate students in an online university.

Please take note that your participation is completely voluntary, and you may choose to decline or stop at any moment in the survey process. Rest assured that all data collected will remain confidential and will only be used for the purposes of this study. The response will also be aggregated; hence no student will be identified.

If you agree to participate, kindly sign the consent form below. Please answer the questions on the survey as completely and honestly as you can. It should take approximately _____ to complete.

Thank you very much!

Consent

I have read this form or had this form read to me about the purpose of the survey and its possible risks and benefits. I understand that I can refuse to participate in this survey, even after signing this form. I can also stop answering at any point if I feel uncomfortable with the questions.

I understand that:

- the purpose of the survey is to determine the influence of media literacy and other factors in fake news sharing (intentionally or unintentionally) on social media.
- my participation is voluntary; and
- only the researcher will know my responses as well as my identity and that they will be kept confidential in the results

Name of Participant: _____

Signature of Participant: _____

Date: ____/____/____
DAY MONTH YEAR

Background Factors

A. Social/ demographic

Name (Optional):

Age:

Gender: M, F, Other

Location (offshore/local):

Education – BS degree: field; MS degree (field)

Work

- Employed full time
- Employed part time
- Self-employed
- Student
- Unemployed
- Others

B. Individual

1. Kindly select which social media platforms you usually use to access information on COVID-19 and indicate frequency of use.

Social Media	Hours/Day
1. Facebook	
2. Twitter	
3. Instagram	
4. YouTube	
5. WhatsApp	
6. Others (please specify): _____	

2. Why do you use these social media? (Please check top 3 reasons).

- ___ Seek information/ news
- ___ Share information/news
- ___ For socialization
- ___ For entertainment
- ___ Pass time
- ___ Gain knowledge
- ___ Gain status or social influence
- ___ Others (Please specify): _____

3. How do you perceive your confidence as an online student? Rate yourself from 1 to 5 with 1 as the lowest and 5 as the highest.

Excellent (5)	Very Good (4)	Good (3)	Moderately good (2)	Poor (1)

C. Information/ Internet skills

How do you perceive your skills in Internet use (general)? Rate yourself from 1 to 5 with 1 as the lowest and 5 as the highest.

Excellent (5)	Very Good (4)	Good (3)	Moderately good (2)	Poor (1)

Please check those that best express your beliefs and attitude information on Covid 19 in social media.

VERIFICATION SKILLS	Strongly Agree	Agree	Neutral	Disagree	Strongly Disagree
1. I use online sites or tools to verify social media information.					
2. I understand what a search engine is for.					

Beliefs and Attitude

Please check those that best express your beliefs and attitude information on Covid 19 in social media.

BELIEFS & ATTITUDE	Strongly Agree	Agree	Neutral	Disagree	Strongly Disagree
Belief in reliability of information					

I believe that information from social media is credible, so I need not check the source.					
I believe that information from social media is reliable.					
I can trust information from social media.					
Attitude towards verifying online information					
It is important to check the original source of information.					
It is important to check who first uploaded the information.					
It is important to check when the information was first created.					
There is a need to verify the information that I consume.					
There is a need to countercheck all information from different social media sources.					

III Perceived self-efficacy in recognizing misinformation

Please check your perception on how you recognize misinformation in social media.

PERCEPTION	Strongly Agree	Agree	Neutral	Disagree	Strongly Disagree
1. I feel that I can easily detect false information in social media.					
2. I feel that I can easily identify someone who is giving false information in social media.					
3. I feel that I can easily identify an endorsement compared to a factual post in social media.					
4. Whenever I get interesting information from social media, I feel that I can check if it is true directly to the source.					
5. I feel that I can use online sites or tools to verify social media information.					

IV Media and Information Literacy Skills

To the best of your ability, please rate your skills in accessing, evaluating, creating, and using information. Check the appropriate box.

A. Access and Retrieval of Information					
	Strongly Agree	Agree	Neutral	Disagree	Strongly Disagree
1. I can develop search strategies to find information.					
2. I can identify the information for a particular purpose and define the necessary content.					
3. I can evaluate potential sources to look for information.					
4. I can choose appropriate media and information sources					
5. I can select and retrieve the located information.					
B. Evaluation and Understanding of Information					
	Strongly Agree	Agree	Neutral	Disagree	Strongly Disagree
1. I can distinguish editorial from commercial or factual from fictional information.					
2. I can understand and question facts about the information (e.g., context, ownership, regulation, audiences, and economic, legal, privacy and security issues).					
3. I can evaluate retrieved information (e.g., its relevance, accuracy and quality).					
4. I can select and synthesize information.					
5. I can save or preserve as well as delete information.					
C. Use, Creation, and Communication of Information					
	Strongly Agree	Agree	Neutral	Disagree	Strongly Disagree
1. I can develop information for a particular message in different formats.					

2. I can develop information for a particular audience in different formats.					
3. I know how to demonstrate ethical use of information.					
4. I know how protect personal data.					
5. I know how to acknowledge intellectual property.					

Note: Questions based on UNESCO, Tier 2 indicators. 2010

V. Sharing of COVID-19 (mis)information

1. Have you in the past month read/seen any information about Covid 19 in social media? Please check.

Often saw inaccurate news	Sometimes saw inaccurate news	Hardly ever saw inaccurate news	Never saw inaccurate news

If yes, what was it about? _____

2. What are your bases for knowing it is misinformation about Covid 19? Please check.

- I did my own research
- On the threads of the post
- Dubious social media account
- Dubious source (or writer)
- On the comments/ reviews of others on the post
- Others (specify)

3. Please try to recall any incidence when you have shared some (mis)information on Covid 19.

BEHAVIOR	Never	Some-times	Not sure
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1. I have shared information on social media related to COVID-19 virus that I later found out as a hoax.			
2. I have shared content on social media related to COVID-19 that was exaggerated but I was not aware it was exaggerated at the time of sharing.			
3. I have shared content on social media related to COVID-19 without checking facts through trusted sources.			
4. I have shared content on social media related to COVID-19 without reading the entire article.			
5. Someone on social media has told me that the news I have shared about Covid 19 was not fully accurate.			

4. Why do you think people share fake news on Covid 19?

REASONS FOR SHARING	Strongly Agree	Agree	Neutral	Disagree	Strongly Disagree
<i>Ease.</i> It is so easy nowadays to retrieve and share information.					
<i>Trust.</i> People trust news shared online.					
<i>Bandwagon.</i> People fear 'missing out' on the news bandwagon so they share news.					
<i>Fatigue.</i> People experience social media fatigue (too many news and information), so they are just too tired to check the accuracy of what they share online.					
<i>Time.</i> People often don't have time to check the authenticity of the information from trusted source.					
<i>Altruism.</i> To help others cope with the pandemic.					
<i>Connection.</i> To establish connection with others facing the same pandemic.					
<i>Influence.</i> To influence others' opinions about the disease.					
Other reasons? (Please state)					

5. How do you intend to handle (mis)information on Covid 19?

Behavioral Intention	Strongly Agree	Agree	Neutra l	Disagree	Strongly Disagree
1. I will verify and evaluate more online news on Covid 19 for accuracy.					
2. I will correct others who share misinformation or fake news about Covid 19 online.					

Appendix B

Tables of Variables

Belief in the reliability of information

	SD		D		NAD		A		SA	
	N	%	N	%	N	%	N	%	N	%
The information I get from social media is reliable.	7	6.48	22	20.37	44	40.74	32	29.63	2	1.85
I can trust information that I got from social media buzzer.	13	12.04	37	34.26	40	37.04	16	14.81	1	0.93
I trust information from my social networks; thus, I do not have to check it.	47	43.52	27	25.00	24	22.22	8	7.41	1	0.93

Attitudes towards verifying online information (AVI)

	SD		D		NAD		A		SA	
	N	%	N	%	N	%	N	%	N	%
It is important to check the original source of information.	0	0.00	0	0.00	1	0.93	3	2.78	10	95.3
It is important to check who first uploaded the information.	1	0.93	0	0.00	2	1.85	4	12.9	90	83.3
It is important to check when the information was first created.	0	0.00	0	0.00	0	0.00	4	12.9	93	86.1
It is my obligation to check the truth of information that I consume.	0	0.00	0	0.00	1	0.93	6	5.56	10	92.5

Perceived self-efficacy in recognizing misinformation (PSERM)

	SD		D		NAD		A		SA	
	N	%	N	%	N	%	N	%	N	%
I can easily detect false information when I read it on social media.	1	0.93	3	2.80	21	19.63	47	43.93	35	32.71
I can easily identify if someone is a social media buzzer.	0	0.00	8	7.48	17	15.89	40	37.38	42	39.25
I can easily identify an endorsement post on social media.	0	0.00	0	0.00	8	7.48	39	36.45	60	56.07
Whenever I get interesting information from social media, I am able to check it directly to the source.	0	0.00	6	5.61	24	22.43	40	37.38	37	34.58
Whenever I get information from social media, I am able to check directly to other source if the information is true.	0	0.00	2	1.87	24	22.43	41	38.32	40	37.38

Behavioral Intention

	SD		D		NAD		A		SA	
	N	%	N	%	N	%	N	%	N	%
1. I will verify and evaluate more online news on Covid 19 for accuracy.	1	0.93	0	0.00	1	0.93	17	15.89	17	15.89
2. I will correct others who share misinformation or fake news about Covid 19 online.	1	0.93	2	1.87	9	8.41	28	26.17	28	26.17

Fake News Sharing

	VF		A		S		R		N	
	N	%	N	%	N	%	N	%	N	%
1. I have shared information on social media related to COVID-19 virus that I later found out as a hoax.	12	11.21	4	3.74	7	6.54	21	19.63	63	58.88

2. I have shared content on social media related to COVID-19 that was exaggerated but I was not aware it was exaggerated at the time of sharing.	12	11.21	5	4.67	9	8.41	23	21.50	58	54.21
3. I have shared content on social media related to COVID-19 without checking facts through trusted sources.	14	13.08	4	3.74	9	8.41	22	20.56	57	53.27
4. I have shared content on social media related to COVID-19 without reading the entire article.	13	12.15	7	6.54	7	6.54	19	17.76	61	57.01
5. Someone on social media has told me that the news I have shared about Covid 19 was not fully accurate.	11	10.28	5	4.67	5	4.67	14	13.08	72	67.29

Perceived reasons for sharing fake news

	SD		D		NAD		A		SA	
	N	%	N	%	N	%	N	%	N	%
Ease. It is so easy nowadays to retrieve and share information.	1	0.93	5	4.67	4	3.74	31	28.97	66	61.68
Trust. People trust news shared online.	2	1.87	3	2.80	18	16.82	45	42.06	39	36.45
Bandwagon. People fear 'missing out' on the news bandwagon so they share news.	0	0.00	7	6.54	9	8.41	52	48.60	39	36.45
Fatigue. People experience social media fatigue (too many news and information), so they are just too tired to check the accuracy of what they share online.	3	2.80	6	5.61	11	10.28	44	41.12	43	40.19
Time. People often don't have time to check the authenticity of the information from trusted source.	5	4.67	6	5.61	10	9.35	41	38.32	44	41.12
Altruism. To help others cope with the pandemic.	1	0.93	7	6.54	13	12.15	45	42.06	41	38.32
Connection. To establish connection with others facing the same pandemic.	1	0.93	5	4.67	13	12.15	41	38.32	46	42.99

Influence. To influence others' opinions about the disease.	3	2.80	5	4.67	17	15.89	38	35.51	44	41.12
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Appendix C
Tables of MIL Variables

Access and Retrieval of Information

	SD		D		NAD		A		SA	
	N	%	N	%	N	%	N	%	N	%
1. I develop search strategies and search process to find media and information.	0	0.00	6	5.61	15	14.02	42	39.25	44	41.12
2. I identify the media and information for a particular purpose and define the necessary content.	0	0.00	2	1.87	14	13.08	47	43.93	44	41.12
3. I evaluate potential sources to look for media and information	0	0.00	1	0.93	5	4.67	44	41.12	57	53.27
4. I choose appropriate media and information sources	0	0.00	0	0.00	0	0.00	33	30.84	74	69.16
5. I select and retrieve the located media and information.	0	0.00	0	0.00	13	12.15	36	33.64	58	54.21

Evaluation and Understanding of Information

	SD		D		NAD		A		SA	
	N	%	N	%	N	%	N	%	N	%
1. I can distinguish editorial from commercial content / factual and fictional content of media and	0	0.00	2	1.87	4	3.74	37	34.58	64	59.81

information.										
2. I understand and question context, ownership, regulation, audiences, economic, legal, privacy and security issues of media and information.	0	0.00	3	2.80	13	12.15	39	36.45	52	48.60
3. I evaluate currency, relevance, accuracy and quality of the retrieved media and information.	0	0.00	2	1.87	6	5.61	41	38.32	58	54.21
4. I select and synthesize media and information.	0	0.00	0	0.00	10	9.35	40	37.38	57	53.27
5. I can Arrange/Save/Store/ Preserve/Delete media and information.	0	0.00	4	3.74	14	13.08	28	26.17	61	57.01

Use, Creation, and Communication of Information

	SD		D		NAD		A		SA	
	N	%	N	%	N	%	N	%	N	%
1. I communicate in media and information formats for a particular message for a particular audience.	1	0.93	2	1.87	13	12.15	37	34.58	54	50.47
2. I demonstrate ethical use of information.	1	0.93	2	1.87	5	4.67	25	23.36	74	69.16
3. I protect personal data.	3	2.80	1	0.93	0	0.00	19	17.76	84	78.50
4. I communicate the learning product with acknowledgement of intellectual property.	3	2.80	1	0.93	1	0.93	26	24.30	76	71.03
5. I use the relevant acknowledgement style standards.	1	0.93	2	1.87	7	6.54	37	34.58	60	56.07

Appendix D

Summary of Correlations

		Correlations											
		PCOGS	PIS	PVS	PSERM	FNS	BRI	AVI	ARI	EUI	UCC	BIS	
Spearman's rho	PCOGS	Correlation Coefficient	1.000	.821**	.157	.286**	-.012	-.074	.015	.243*	.196*	.164	.122
		Sig. (2-tailed)	.	<.001	.105	.003	.903	.446	.877	.012	.043	.092	.210
		N	107	107	107	107	107	107	107	107	107	107	107
	PIS	Correlation Coefficient	.821**	1.000	.031	.157	-.051	-.043	-.090	.166	.123	.083	-.015
		Sig. (2-tailed)	<.001	.	.750	.106	.604	.657	.357	.088	.206	.394	.879
		N	107	107	107	107	107	107	107	107	107	107	107
	PVS	Correlation Coefficient	.157	.031	1.000	.458**	.165	-.009	.261**	.557**	.496**	.468**	.331**
		Sig. (2-tailed)	.105	.750	.	<.001	.090	.926	.007	<.001	<.001	<.001	<.001
		N	107	107	107	107	107	107	107	107	107	107	107
	PSERM	Correlation Coefficient	.286**	.157	.458**	1.000	.067	.169	.324**	.538**	.561**	.508**	.294**
		Sig. (2-tailed)	.003	.106	<.001	.	.493	.082	<.001	<.001	<.001	<.001	.002
		N	107	107	107	107	107	107	107	107	107	107	107
FNS	Correlation Coefficient	-.012	-.051	.165	.067	1.000	-.070	.102	.270**	.206*	.138	.185	
	Sig. (2-tailed)	.903	.604	.090	.493	.	.472	.294	.005	.034	.156	.056	
	N	107	107	107	107	107	107	107	107	107	107	107	
BRI	Correlation Coefficient	-.074	-.043	-.009	.169	-.070	1.000	.067	-.037	.035	-.014	.092	
	Sig. (2-tailed)	.446	.657	.926	.082	.472	.	.490	.704	.718	.882	.348	
	N	107	107	107	107	107	107	107	107	107	107	107	
AVI	Correlation Coefficient	.015	-.090	.261**	.324**	.102	.067	1.000	.273**	.273**	.330**	.401**	
	Sig. (2-tailed)	.877	.357	.007	<.001	.294	.490	.	.005	.004	<.001	<.001	
	N	107	107	107	107	107	107	107	107	107	107	107	
ARI	Correlation Coefficient	.243*	.166	.557**	.538**	.270**	-.037	.273**	1.000	.708**	.710**	.218*	
	Sig. (2-tailed)	.012	.088	<.001	<.001	.005	.704	.005	.	<.001	<.001	.024	
	N	107	107	107	107	107	107	107	107	107	107	107	
EUI	Correlation Coefficient	.196*	.123	.496**	.561**	.206*	.035	.273**	.708**	1.000	.643**	.316**	
	Sig. (2-tailed)	.043	.206	<.001	<.001	.034	.718	.004	<.001	.	<.001	<.001	
	N	107	107	107	107	107	107	107	107	107	107	107	
UCC	Correlation Coefficient	.164	.083	.468**	.508**	.138	-.014	.330**	.710**	.643**	1.000	.305**	
	Sig. (2-tailed)	.092	.394	<.001	<.001	.156	.882	<.001	<.001	<.001	.	.001	
	N	107	107	107	107	107	107	107	107	107	107	107	
BIS	Correlation Coefficient	.122	-.015	.331**	.294**	.185	.092	.401**	.218*	.316**	.305**	1.000	
	Sig. (2-tailed)	.210	.879	<.001	.002	.056	.348	<.001	.024	<.001	.001	.	
	N	107	107	107	107	107	107	107	107	107	107	107	

** . Correlation is significant at the 0.01 level (2-tailed).

* . Correlation is significant at the 0.05 level (2-tailed).