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**Nheru B. Veraflor**

**Media and Information Literacy (MIL) for Senior High  
School Students: Responsiveness to Social  
Media Information Disorder**

Thesis Adviser:

**DR. MELINDA dP. BANDALARIA, PhD**  
**Faculty of Information and Communication Studies**

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## ACCEPTANCE PAGE

This Thesis titled *Media and Information Literacy (MIL) For Senior High School Students: Responsiveness to Social Media Information Disorder* is hereby accepted by the Faculty of Information and Communication Studies, U.P. Open University, in partial fulfillment of the requirements for the degree Master of Development Communication (MDC).

Dr. Melinda dP. Bandalaria, PhD  
Chair, Thesis Committee

\_\_\_\_\_  
(Date)

Grace G. Alfonso, PhD  
Member, Thesis Committee

\_\_\_\_\_  
(Date)

Alexander G. Flor, PhD  
Member, Thesis Committee

\_\_\_\_\_  
(Date)

ALEXANDER G. FLOR, PhD  
Dean,  
Faculty of Information and Communication Studies

\_\_\_\_\_  
(Date)

## **ABSTRACT**

This study investigated how Media and Information Literacy (MIL) education for senior high school responds to threats of information disorder in social media. Three aspects were viewed in the study which are the MIL skills of the students; the perceptions of teachers on MIL curriculum and the contents of MIL curriculum. Triangulation approach was employed using online survey, key informant interview and content analysis.

Findings showed that students have a high level of media and information prosumption skills. On the other hand, teachers viewed the MIL curriculum as misaligned, less relevant and just suggestive. Further analysis revealed that competencies in the MIL curriculum were less significant to development of MIL skills. Thus, the study concluded that MIL education is not fully responsive to social media information disorder. The revision and updating of the MIL curriculum is highly recommended.

## **BIOGRAPHICAL SKETCH**

Nheru Veraflor is an educator, writer, and graphic designer. He hails from Calbayog City in the island of Samar. He works as a teacher in Christ the King College, a private educational institution, where he is designated as the Senior High School Academic Coordinator. He is teaching literature, communication, research, and management subjects in three departments namely: junior high school, senior high school, and college level.

He finished his undergraduate degree in Bachelor of Arts in Mass Communication from the University of San Jose-Recoletos in Cebu City in 2015. He got his Diploma in Professional Education in the same university in 2016. In the same year, he passed the Board Examination for Teachers and earned his teaching license. Prior to entering the academe, he worked as an assistant content editor for SunStar Publishing which handles community-based newspapers.

Moreover, he works as a freelance graphic designer specializing in newspaper layout. As the school paper adviser of the student publication of the school, he is passionate in teaching students to become responsible content creators and producers.

## ACKNOWLEDGMENT PAGE

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## DEDICATION PAGE

***This paper is dedicated to the person who  
made sure that I will get best of this world,  
my late mother:***

***Maria Ruby Bonoan-Veraflor +***

## TABLE OF CONTENTS

Title Page.....	i
University Permission Page .....	ii
Acceptance Page .....	iii
Abstract .....	iv
Biographical Sketch .....	v
Acknowledgement .....	vi
Dedication .....	vii
Table of Contents.....	viii

### **Chapter 1 – Introduction**

Rationale of the Study.....	1
Research Problem .....	4
Objectives of the Study .....	5
Importance of the Study .....	6

### **Chapter 2 – Review of Related Literature and Study Framework**

Review of Related Literature.....	8
Theoretical Framework.....	41
Conceptual Framework.....	47
Operational Definition of Terms.....	51

### **Chapter 3 –Methodology of Research**

Research Design.....	58
Locale of the Study .....	59
Respondents of the Study .....	60
Sampling Scheme .....	62
Research Instrument .....	63
Data Gathering Procedure.....	69
Analysis of data .....	70

## **Chapter 4 –Results and Discussion**

Social Media Usage of the Students .....	77
Knowledge on Threats and Issues of Information Disorder .....	84
Media and Information Literacy Skills of Students .....	86
Perception of Teachers on MIL curriculum .....	93
Responsiveness of MIL Curriculum .....	102
Responsiveness of MIL Education to Information Disorder .....	109

## **Chapter 5 – Summary, Conclusion, and Recommendations**

Summary .....	111
Conclusion .....	112
Recommendations .....	113

<b>References</b> .....	<b>116</b>
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## **Annexes**

Annex A. MIL Survey Questionnaire.....	127
Annex B. Interview Schedule on Perception of Teachers .....	135
Annex C. Content Analysis Matrix .....	138

## List of Figures

Figure 1.	Functional Building Blocks of Social Media .....	10
Figure 2.	Classification of Information Disorders .....	14
Figure 3.	Ecology of MIL: Notions of MIL .....	20
Figure 4.	Media Literacy Competencies by EAVI .....	22
Figure 5.	New Media Literacy Framework .....	27
Figure 6.	Media Literacy Theory Framework .....	42
Figure 7.	Conceptual Framework of the Study.....	47
Figure 8.	Map of Calbayog City .....	59

## List of Tables

Table 1.	MIL Competency Matrix .....	26
Table 2.	Media Literacy Competencies .....	31
Table 3.	Variables to be measured .....	56
Table 4.	Profile of the Informants .....	61
Table 5.	MIL Skills Scale Statements.....	66
Table 6.	Social Media Usage Scale.....	71
Table 7.	Reasons for Using Social Media Scale.....	71
Table 8.	Knowledge on Information Disorder Scale.....	72
Table 9.	Media and Information Literacy Skills Scale.....	73
Table 10.	Level of Media and Information Literacy Skills.....	74
Table 11.	Responsiveness Categories .....	76
Table 12.	Profile of SHS Students .....	78
Table 13.	Social Media Access .....	79
Table 14.	Reason for Accessing Social Med.....	81
Table 15.	Social Media Sites Used .....	83
Table 16.	Knowledge on Information Disorder .....	85
Table 17.	Consumption Skills .....	87
Table 18.	Production Skills .....	90
Table 19.	Level of MIL Skills .....	92
Table 20.	MIL Learning Competencies Categories.....	104
Table 21.	MIL Learning Competencies Contents.....	106
Table 22.	Responsiveness of MIL Curriculum .....	108

# **Chapter 1**

## **INTRODUCTION**

### **Rationale of the Study**

Learners of the 21st century are strongly linked to the existence of digital media bringing a new way for them to acquire access and process information. Referred to as “digital natives”, this generation of media and information consumers is characterized by having digital technologies and internet as part of their daily life (Thomas, 2011). With varied digital platforms available, social media is the topmost venue for young audience to engage in online activities. A research in United States showed that 70% of teens use social media multiple times a day (Rideout & Robb, 2018). Availability of digital technologies such as smart phones, tablets, laptops and mobile application ushered the growth in this area.

The rising digital wave among young media users, however, brings out concerns especially on this age of information disorder. Malicious activities like cyberbullying, hacking, trolling and fake news are emerging in most of social networking service platforms (Murimi, 2018). This could be the rationale behind the inclusion of Media and Information Literacy (MIL) in Senior High School (SHS) Curriculum under the basic education program of the Philippines. MIL is seen as an empowering tool for citizens to counter the threats of media especially in the social media sphere.

UNESCO (2011) defined media and information literacy (MIL) as “essential competencies (knowledge, skills, and attitude) that allow citizens to engage with media and other information providers effectively and develop critical thinking and life-long learning skills for socializing and becoming active citizens.” In simpler terms, MIL is viewed as the ability of one person to critically consume and produce information and media contents, thus giving birth to the term “media prosumer.” A media and information literate person, therefore, is someone who could be responsible information seeker and consumer, and knowledge creator and innovator (UNESCO, 2013).

The concept of prosumption, coined by Alvin Toffler in 1980, holds relevance to sphere of digital communications (Islas, Arribas, & Gutiérrez, 2018). The dual function of consuming and producing media and information content separates from the idea of a linear relationship between the information producers and the audience. McWhorter (2019) identified social media acts like sharing stories, video, or pictures as acts of a prosumer. Social media, however, also facilitated the spread of wrong information like fake news (Tandoc Jr, Lim & Ling, 2018). Lee (2018) argued that an effective way of fighting the threats of digital media is through Media and Information Literacy (MIL) education.

Livingstone (2008) claimed that researches have focused more studying the audience as consumer (access, selection, and understanding) of information and failed to see them as a creators and producers of contents. Further, scholars argue that media literacy is a broad field to study. In that sense, it is the goal of the study to assess the responsiveness of SHS Media and Information Literacy education to

information disorder on social media. Frau-Meigs (2019) recognized that the phenomenon of information disorder constitutes wide degrees of purpose to harm, may it be in a form of disinformation, misinformation, or malinformation.

This research assessed the MIL skills of SHS learners by looking at how they consume and produce media messages on social media. In addition, teacher's perception on the subject and the evaluation of Media and Information Literacy curriculum was part of this study. By focusing the study on social media and information disorder, it provided a clearer picture of the current state of MIL education in basic education with consideration of prevailing issues on the cyber world. This study argues that teaching MIL should be grounded on research-based data that reflects the current MIL skills of learners. The study proposed improvements on the MIL curriculum guide based on the result of this research.

Further, results of the study could be a source of information in order to develop MIL policies and strategies in local and national level. Unlike in other countries, Philippines has yet to establish a policy that would address media and information literacy at a national scale. Links of media and information literacy to fields like health, environment, and agriculture prove that MIL plays a crucial part in some developmental initiatives. Generally, UNSESO (2013) views MIL as a tool in empowering citizens through the access to free information and the exercise of freedom of expression. The development of MIL competencies is beneficial not only to the individual but to the society in general. The offering of MIL in SHS is just a slice of a greater whole to fully realize of the benefits of being media and information literate nation.

## **Research Problem**

Social media as a leading digital platform for communication and interaction enabled threats like fake news, trolling, hacking and cyberbullying to emerge. Sectors of the society agree that the media and information literacy is the best solution to mitigate the risks brought by digital information disorder (Frau-Meigs, 2019). It is in this context that this research wanted to evaluate Media and Information Literacy (MIL) education by looking at the MIL skills of Senior High School (SHS) learners and the SHS MIL curriculum.

This study aimed to determine the responsiveness of Media and Information Literacy (MIL) education to social media information disorder. Specifically, the study intended to answer these questions:

1. What is the extent of social media usage of the students?
2. What is the knowledge of the students on the risks and threats of information disorder?
3. What is the level of Media and Information Literacy skills of the students?
4. What are the perceptions of Senior High School teachers on Media and Information Literacy curriculum?
5. How responsive is Media and Information Literacy curriculum in Senior High School to information disorder in social media?

## **Objectives of the Study**

In general, this research attempted to identify how Media and Information Literacy education in Senior High School responds to information disorder in social media. By looking at three viewpoints of Media and Information Literacy education namely: the students, the teacher and the curriculum, this study provided an overview of the responsiveness of MIL to the new media.

Specifically, this study advanced the following objectives:

1. To identify the extent of social media usage of the students;
2. To determine the knowledge of the students on risks and threats of information disorder;
3. To assess the level of Media and Information Literacy skills of the students;
4. To know the perceptions of Senior High School teachers on Media and Information Literacy curriculum; and
5. To examine how responsive is Media and Information Literacy curriculum in Senior High School to information disorder in social media?

## **Importance of the Study**

Examining media and information literacy in the context of information disorder on social media provides a micro perspective on MIL education in the country. Considering the broadness of the field, limiting the study on social media is more appropriate in this digital era where learners are more engage in social networking sites. By doing this, the study tried to bring out the relevance and significance of media and information literacy in contemporary times.

The assessment on the self-perceived media and information literacy skills of students offers a situationer of the current level of MIL skills of senior high school learners. Teachers will have a picture on the capabilities of students to further improve MIL instruction. Furthermore, this study intended to identify the points where the teaching of media and information literacy in schools should be directed. The result of the assessment of students' skills, perception of teachers and content analysis of curriculum, serves as the foundation in recommending revision on the existing SHS curriculum guide on Media and Information Literacy.

Learners' social media usage and knowledge on information disorder was also investigated on this study. Teacher may use this as reference on how to integrate social media use in classroom instruction. Possible social media use framework may also be created from the result of the study. This framework may include proper conduct and behavior on social media use among students that will promote digital citizenship. School administrators may also craft policies that will help

develop MIL competencies among learners to further counteract to negative impacts and threats of social media.

In the area of communication, the data collected on this study can be used as a basis in crafting communication programs geared towards younger audience that is now into social media. By discovering the media and information literacy skills of respondents, possible developmental programs may be designed on the basis of MIL competencies of the learners.

Since the research tackled media and information literacy emphasizing on the consumption and production powers of social media user, this study could be a benchmark of possible research on larger sample size perhaps on a national scale. Data that were obtained in this study provided a picture of MIL implementation in the country. Further, this research advances recommendation on the improvement of MIL education. This can be used as basis in crafting MIL education framework for the Philippines.

## **Chapter 2**

### **REVIEW OF RELATED LITERATURE AND STUDY FRAMEWORK**

#### **Review of Related Literature**

##### **Social Media Use**

Scholars varied definitions of social media navigate across different disciplines like information technology, mass communication, sociology, and marketing. Carr and Reyes (2015) characterized social media as an internet-based mass personal channel emphasizing value of user-generated content which drives interactions among users. Its roots could be traced from the foundations of Web 2.0 (some referred as Internet 2.0) which allowed production and sharing of user generated content (Kaplan & Haenlein, 2010).

Social media giants like Facebook and Twitter are considered to have most number of users of Social Networking Sites (SNS) (Salloum et al., 2017). Social network sites allow its users to: a) create public or semi-public profile; b) define a list of shared connections; c) view and visit other user they share connections with (Boyd & Ellison, 2007). Kuss and Griffiths (2017) differentiated SNS from social media as the former focuses on connecting to people which is not applicable to some social media applications like Wikipedia. Knowing that social networking is considered to be a subset of social media use, this study will use the term interchangeably considering previous works which have used the terms similarly.

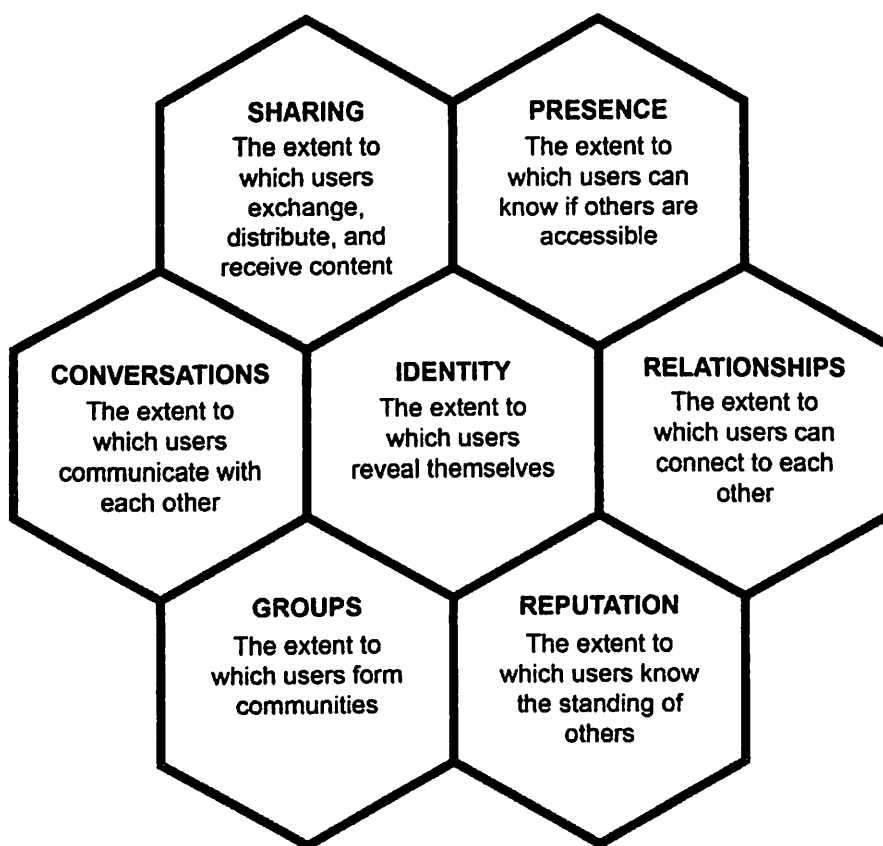
Social media penetration has increased over the years. In the Philippines, high internet usage is attributed to growing number of social media users (Reyes et al., 2017). Social network company "We are Social" reported in 2019 that Philippines is on top of global numbers when it comes to social media usage (Gonzales, 2019). Social demographics data shows that 86% Filipino Facebook users belong to younger age bracket that is 18 to 24 years old (Social Weather Stations, 2019). In a study by National Council for Children's Television, 44.53% of learners from Grades 4-6 owns and use Facebook account (Gentallan et al., 2019). Ownership of Smartphones, which enables individual to connect to internet and download mobile applications, is also associated to the rise of social media usage over developing countries (Poushter, Bishop & Chwe, 2018).

Scholars have studied varied reason why users access social media sites. Based on existing literature, Whiting and Williams (2013) identified seven utilities of social media which are: a) social interaction; b) information seeking; c) pass time; d) entertainment; e) relaxation; f) communicatory utility; and g) convenience utility. In the case of students, younger social media users cite instant communication with friends; viewing status of friend; sharing, liking and commenting on photos; and following latest news as the top reasons for using the digital platform (Bicen, 2015).

Functions and features of social media are closely tied to information. Social networking sites enabled internet users to share, request, and acquire information and knowledge (Lin & Wang, 2020). Information and knowledge shared in social media could be visualized as contents in varied forms like text, audio, video, graphics and photo. Sharing information on one's personal life was the focus of the

online revolution brought by social networking sites like Facebook (Priyanka, 2016). Moreover, social media users also share information as they engage in online activities such as updating their status, commenting, advertising (Lin & Wang, 2020). The diverse information ecosystem of social media makes it more complex to study social media users' behavior.

**Figure 1. Functional Building Blocks of Social Media**



*Source: Social media? Get serious! Understanding the functional building blocks of social media( Kietzmann et al., 2011)*

To better understand users' engagement in social media ecology, Kietzmann et al (2011) outlined the qualities of social media dubbed as the seven functional building blocks of social media which are identity, conversations, sharing, presence, relationships, reputation, and groups. The honey comb framework, seen in Figure 1,

provides a more organized construct of social media experience of an individual. It must be noted that different social media sites might highlight selected features and that these blocks are not mutually exclusive to each other.

Engagement in social media starts with creating a profile which serves as the identity of the user. One's identity is considered to be the central focus of social media (Baccarella et al., 2018). By creating a profile, the user divulges information such as name, date of birth, gender and location. Although a user has the option create an identity which is different from reality, this kind of setup have implications. Social media features such as "Like," "React," "Reply," "Comment," and "Direct Message" enable users to engage in conversation with other users. Sometimes, these features also reveal information of the user regarding its interests that might be perceived to be useful to others. The same principle applies if one user is identified to be part a group with common interests.

Social networking sites are perceived to be a reliable to tool for information sharing because of users with rapid information-sharing ability (Osatuyi, 2013). Sharing in social media covers exchanging, distributing, and receiving content such as text, video, picture, sound, link and location (Baccarella et al., 2018; Kietzmann et al., 2011). Sharing content enables information to traverse to a wider audience. This could be the reason why most news organization and marketing companies use social media to advance their organization's cause. Consequently, social media became a tool for profit making.

For users of social media, aside from the instant connection with other people, social networking sites became a preferred source of information because of its immediacy and social attributes (Khoo, 2014). Media consumers go to social media to seek a myriad of information on product sales, events and happenings, business and tutorials (Whiting & Williams, 2013). By facilitating the exchanging of ideas, social networking sites offered to become a platform of informal learning (Priyanka, 2016). Social media sites like Facebook and Twitter also became a major platform where users can access and share news from mainstream media (Dwyer & Martin, 2017). A survey of Social Weather Stations (2019) revealed that Facebook comes second to television as source for news consumption among Filipino adults.

The interplay of consumption, production, and interaction features of social media bring out complicated issues that in some way harm users. Social media interaction brought to rise of some issues concerning to privacy, security, accessibility, social inclusion and governance (Bertot, Jaeger & Hansen, 2012). Information shared in social media is provided by users with questionable authority or trustworthiness which is hard to assess (Kim, Sin, & Yoo-Lee, 2014). One prominent phenomenon regarding fabricated information is the spread of fake news on social networking sites. Mechanism such as liking, sharing and searing for information can amplify the proliferation of fake news (Lazer et al., 2018). Fake news, considered to be a form of information disorder, is also associated with other disorders like misinformation and disinformation (Lazer et al., 2018). These different issues existing over the cyber space will be then considered as information pollutions which threatens users who access social media.

## Information Disorder

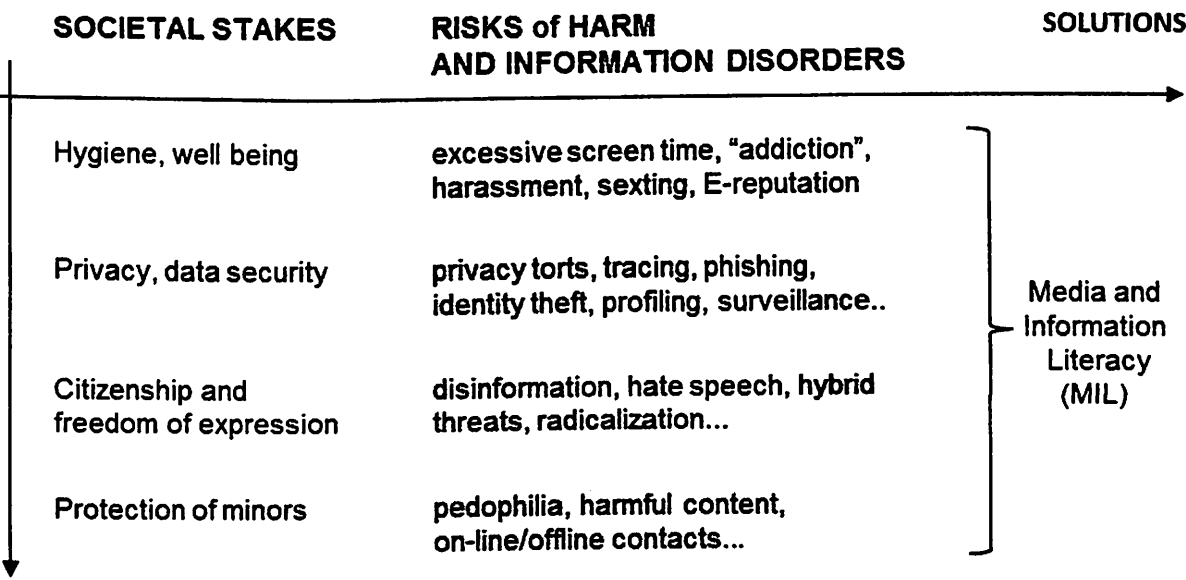
In an attempt to have unified concept of information pollution, the Council of Europe proposed the term Information Disorder which encompasses three types of harmful and false information (Wardle & Derakhshan, 2017). The three categories of information disorder are misinformation, disinformation, and malinformation. Misinformation is false information that is deliberately shared but causes no danger to anyone (Wardle & Derakhshan, 2017). Disinformation is kind of information that is false and “deliberately created or disseminated with the express purpose to cause harm” (Wardle, 2018). Malinformation is separated from the two because it is truthful information but is shared to cause danger like sharing private information in public spaces (Wardle, 2018).

Wardle and Derakhshan (2017) renounce the use of “fake news” citing insufficiency of the term to characterize the complex phenomena of information pollution. Creating distinctions on various forms of information disorder provide the audience a deeper understanding of the phenomena. The paradigm shift to information disorder is associated to the transition of the cyber world to Web 2.0 where social media is a big player. Any individual with access to technology can generate information that can be perceived as reliable source without taking into consideration the one’s expertise (Qutab, Myers & Gardner, 2019).

The notion of ‘information disorder’ gained attention in the field of media and information literacy starting in 2012 (Frau-Meigs, 2019). Despite its recent appearance on scholarly works, there have been previous related-concepts that

were studied on polluting the information society. Using the lens media and information literacy, Frau-Meigs (2019) provided classification of information disorders that exist in grater shapers of harmful content and behavior. These classifications are divided into four areas of society namely: a) Hygiene, well-being; b) Privacy, data security; c) Citizenship and freedom of expression; and d) Protection of minors. Each area there are phenomena that are perceived to be harmful and considered unethical as seen in Figure 2.

**Figure 2. Classification of Information Disorders**



*Source: Social media? Information Disorders: Risks and Opportunities for Digital Media and Information Literacy (Frau-Meigs, 2019)*

This framework provides a macro perspective of the threats of information disorders that disrupt aspects of an individual and of the society in general. The risks presented in the framework are just some of the common issues on social media but they are not limited to those. Some of these threats will be explored in these literature review guided by the four classifications.

**Hygiene and wellbeing.** Digital hygiene and digital wellbeing concerns on how an individual use digital technology in a healthy, safe, and responsible way (Chamber, 2018; Sklar 2017). Neglecting digital wellbeing leads to other complications such as digital distraction, digital overload, and internet addiction. **Digital distraction** interrupts one's concentration from the main task that is being done as a result of usage of electronic devices and media (Agrawal, Sahana & De', 2017). On the other hand, **digital overload** is a situation wherein the brain is distracted and is on a hyper state despite being away from technology (Agrawal, Sahana & De', 2017).

Digital overload is attributed to excessive consumption of information from the internet and over attachment to digital technologies. Studies showed that digital distraction and digital overload contributes to the development of internet addiction (Nath, Chen, & Muyingi, 2017). **Internet addiction** is another behavior characterized by uncontrolled or excessive urge and actions concerning use of computer and internet and lead to impairment (Weinstein, & Lejoyeux, 2010). Maintaining one's digital hygiene would mean having good cyber-habits thus promoting digital health which could lessen the ill effects of digital use (Swirsky, & Boyd, 2018).

**Privacy and Data Security.** The huge amount of information shared online, specifically social networking sites, had urged attackers to use such information for malicious purposes raising concerns over users' security and privacy (Deliri & Albanese, 2015). Ho, Maiga, and Aïmeur, (2009) identified three privacy problems among social networking sites: a) user's lack awareness privacy setting and its threats; c) lack of flexibility over privacy tools to protect user's data; and c) user's fail to control on what information about them. Social media threats concerning privacy

includes identity theft, phishing, and disclosure of sensitive information (Ho, Maiga, & Aïmeur, 2009; Deliri & Albanese, 2015). Malicious users and third-party organizations capture and utilize social media users' information to gain more income (Rathore et al., 2017).

**Identity theft** in cyber world involves stealing information regarding one's identity without the consent of the user and utilize it for fraud (Khan, Rakhman, Bangera, 2017; Patel et al., 2017). Another form of theft is **Phishing** which involves deceiving internet users to provide personal information or financial whereabouts to transfer money to the attacker (Chaudhry, Chaudhry & Rittenhouse, 2016). On one hand, **hacking** is a form of cybercrime aims to have access to the user device through the use of social media (Patel et al., 2017). These acts are categorized as cybercrimes and are deemed unethical. Awareness of users of social networking sites is perceived to be better way to counterattack these threats.

**Citizenship and Freedom of Expression.** The growing number of users of digital technologies brought out the concept of Digital Citizenship. It is characterized as the "people's role in society through the use of digital technologies" which entail empowering and democratizing qualities (Hintz, Dencik, & Wahl-Jorgensen, 2017). Freedom of Expression, being one of the fundamental democratic rights of an individual, is practiced and being observed with the use of digital technologies such as social networking sites.

The proliferation of disinformation on social media threatens the right for opinion and expression which in a way distorts the truth and influence the way

people consume and share ideas (Nuñez, 2019). Wardle (2019) enumerated seven types of disinformation and misinformation which are fabricated content, manipulated content, imposter content, false context, misleading content, false connection, and satire or parody.

Another threat of associated to the proliferation of disinformation over social media is **data mining**. It is the finding of hidden information and discovering interesting patterns using databases (Yuan, 2017). Wardle (2018) explained that distributors of disinformation may use information of about one's activity gathered from data mining could be used as tool to target users who are susceptible in believing fake contents. Data mining in social media done to know more about the public sparks privacy concern for it leads to less privacy among the public and heightens surveillance instead (Kennedy & Moss, 2015).

Abuse of freedom of expression and opinion can also be seen in acts like internet trolling, cyberbullying and harassment. **Trolling** is an internet activity that aims to distress online users usually done anonymously by another online user (Nichol, 2012). Incidence of trolling of social media escalates to online hate and harassment (Case, King & Case, 2019). Another form of conflict in social media is **cyberbullying**. It is characterized as aggressive behavior with the intention of repeatedly harm individual causing some damages and consequences (Zych et al., 2019). Cyberbullying could be in direct or indirect form. Direct bullying is directly involved such as sending harmful contents, insulting, or threatening (Vandebosch & Van Cleemput, 2009). Meanwhile, indirect bullying exists without the victim's

knowledge like spreading gossip, creating pages against the person or publishing confidential or sensitive information threatening (Vandebosch & Van Cleemput, 2009).

**Protection of Minors.** Aside from bullying, hacking and racism in social media, minors are also exposed sexual online treats such as exposure to pornographic content which are considered unwelcome contents (Van Audenhove, 2011). Youth also engage in sexting and revenge porn which makes them vulnerable consumers (Osterday, 2015). Sexting is act of sending and receiving sexually explicit material such as images, videos, or messages (Weisskirch & Delevi, 2011). Social media users who are vulnerable to these kinds of threats might face alteration of psychological, social, and cultural dynamics (Chandramouli, 2011).

These threats of information of disorder may have different characteristics, motives, and implications but they share a common ground of being unethical activities. In some cases, these activities are interconnected to each other. Scholars suggest that awareness of these risks could lead to better actions to counter these threats (Gopisetty, 2016; Anderson et al., 2012; Lorenz et al., 2012) Similarly, awareness of risks on internet use contributes to the development of media literacy (Buckingham, Banaji, Carr, Cranmer & Willett, 2005). Potter (2004) puts this as the 'knowledge structures' which refers to information of the user regarding media operations and media effects. In the case of this study, the existence of information disorder is considered to be effects of the complex nature of media. Hobbs (2017) explained that although scholar still doubt the value of media knowledge as component of media literacy, they acknowledge that information of media systems provides context and in a way affect the inquiry and interpretation process.

## **Media and Information Literacy**

In early years, media literacy and information literacy were considered as two different fields (UNESCO, 2013). Media literacy is more concerned on understanding, evaluating, and producing media contents for various channels such as newspaper, radio and television. On the other hand, information literacy emphasizes the access, use, evaluation, sharing of information. It emerged as a field tracing its roots from library science (UNESCO, 2013). With the advent of information and communication technology (ICT), media landscape drastically changed over the years giving birth to digital literacy or more recently known as new media literacy (NML). This new concept encompasses computer and digital technologies such as multimedia, social media and artificial intelligence.

The development of the internet and the emergence of the dangers of digital exclusion brought out the discussion over the convergence of these literacies (Frau-Meigs, 2012). Loicq (2014) argued that the difference on digital media and non-digital media is no longer relevant because of convergence of media experience from different modes of communication, technology platforms and practices.

UNESCO (2013) points out that these various types of literacy overlaps in different areas henceforth, merging these areas into one umbrella term which is Media and Information Literacy (MIL) makes sense. This is an attempt to have a holistic theoretical approach on various literacies (Grizzle et al., 2014). Although MIL features two main schools of thoughts—media literacy and information literacy, UNESCO recognizes other notions on MIL and their relationships on MIL (Wilson,

Grizzle, Tuazon, Akyempong, & Cheung, 2013). These notions are specific literacies, as illustrated in Figure 1, which are combinations of traditional and digital media literacies. These terms may have different concepts but they are converged under one field which is MIL.

**Figure 3. Ecology of MIL: Notions of MIL**



*Source: UNESCO's Media and information literacy curriculum for teachers: Curriculum and Competency Framework.*

MIL also underpins other existing terms such as social networking literacy and other social literacies that was brought out by the development of technologies. (Grizzle et al., 2014). The dynamic nature of a new concept of MIL fits in to an evolving media and information users. Along with these myriad of terminologies, UNESCO described MIL as “the essential competencies (knowledge, skills and attitude) that allow citizens to engage with media and other information providers effectively and develop critical thinking and life-long learning skills for socializing and becoming active citizens” (Wilson, Grizzle, Tuazon, Akyempong, & Cheung, 2013).

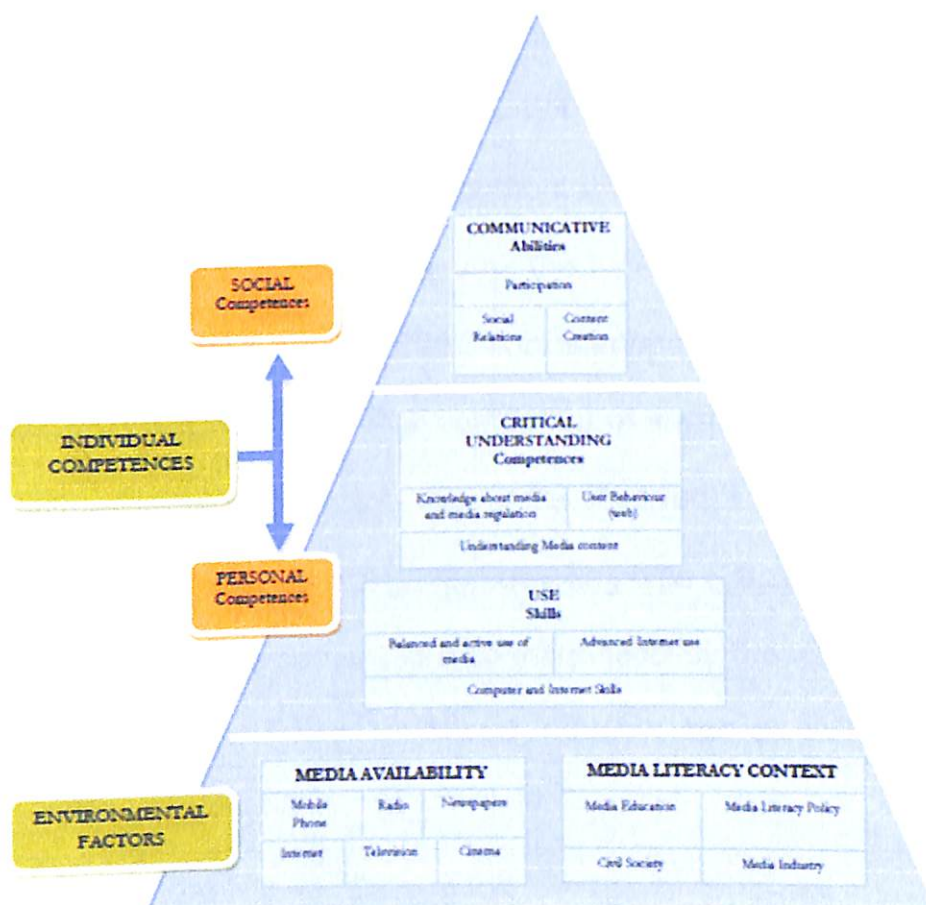
Scholars also use other terminologies such as media education (ME) and media literacy education. Media Education is globally used and sometimes considered as the term that covers both media literacy and information literacy (Wilson, Grizzle, Tuazon, Akyempong, & Cheung, 2013). In East Asian Context, media literacy education is more popular term (Chen, Lin, Li, & Lee, 2018). Despite these different naming conventions, the term MIL unifies the various notions on the field. In this paper, MIL will be used often referring to other related terms.

MIL is also deeply anchored on the concept of freedom of expression and the right to information. UNESCO (n.d.) views MIL as a part of human rights. Grizzle et al. (2014) argued that research reveals that integrating MIL in all aspect of society has benefits for the citizens, government, and quality of media and information. The development of policies and strategies for MIL is linked to United Nations Development Initiatives such as education for all, preservation of documentary heritage, freedom of information and any others (Grizzle, et al., 2014).

## MIL Competencies

In an effort to establish criteria to measure the complex nature of media literacy, European Association for Viewers' Interests (EAVI) crafted the Media Literacy Assessment Framework (Celot, 2009). This framework, as seen in Figure 2, is presented in a form of a pyramid which is divided into two dimensions—Individual Competencies and Environmental Factors. Although there are similarities on the competencies outlined in this framework to other existing media literacy framework, the pyramid structure suggests a more organized approach on media literacy.

**Figure 4. Media Literacy Competencies by EAVI**



Source: EAVI Consortium Study on Assessment Criteria for Media Literacy Levels in Europe

Tornero & Varis (2010) assert that elements found at the base of the pyramid serve as the groundwork for the ones at the top of the pyramid. The individual competencies are subdivided into three skills which are use, critical understanding and communicate. Use skills refers to technical skills needed by an individual to effectively use media communication tools. On one hand, critical understanding skills focus on the ability of the user to process and understand media messages and information. Use skills and critical understanding skills, which are categorized as personal competencies, are precursors to social competencies or the communicative and participative abilities of an individual. The peak of the pyramid calls out for a media literate individual to be engaged in various social spheres.

At the lower section of the pyramid are the environmental factors which are media availability and media literacy context. Celot (2009) asserts that these aspects are “pre-conditions for media literacy development and the factors which facilitate or hinder it.” In the assessment of media literacy, the type of media tools accessed by an individual is also examined (Celot, 2009). This is supported by Grizzle et al (2014) in their study which states that there is a correlation of socio-economic status (SES) and the level of new media literacy. Indicators involved in examining SES are computer ownership, internet availability, and dwelling type (Grizzle, et al., 2014). On one hand, media literacy environment is also influenced by these factors: a) Media Education; b) Media Literacy Policy; c) Media Industry; and d) civil society (Celot, 2009).

After several years, UNESCO (2013) recognized MIL as the new literacy construct that brings together information literacy, media literacy, ICT literacy and

digital literacy. With the adoption of a new approach, there was a need to set standards on how to assess MIL implementation in each country. UNESCO (2013) conceptualized the MIL Assessment framework which outlines competencies used to measure MIL at national, institutional, and individual levels.

The MIL Assessment Framework is composed of two sets of indicators which serve as a tool that helps describe the country's readiness on MIL (Tier One) and competencies and level of proficiencies on MIL by individual citizens (Tier Two). Aside from characterizing the implementation of MIL in the country, the MIL Assessment Framework aims to offer a guide for planning and developing national policies on MIL by providing evidence-based information (UNESCO, 2013).

MIL Country Readiness (Tier One) provides indicators on gauging preparedness of one country in taking up MIL initiatives (UNESCO, 2013). It is divided into five categories which are: a) Media and information in education; b) Media and information literacy policy; c) Media and information supply; d) Media and information access and use; and e) Civil Society. These categories measure how private and public institutions promote MIL in the country (Moeller, Joseph, Lau, & Carbo, 2011).

These indicators highlight on how environmental and external factors are crucial to the attainment of individual MIL skills and competencies. UNESCO's model is supported by EVAVI's Media Literacy Assessment Framework which begins in media literacy context as the foundation of Media Literacy. Similarly, according to Moeller, Joseph, Lau, & Carbo (2011), the construction of some indicators in Tier

One were taken from the EAVI's document Study on Assessment Criteria for Media Literacy Levels in Europe (Celot, 2009).

MIL Competencies (Tier Two) focus on individual competencies of a media and information literate individual. These competencies are observable outcomes on their knowledge, skills, and attitudes on MIL (UNESCO, 2013). The second set of indicators (Tier Two) were crafted to "measure the individual competencies among librarians, teacher-trainers, teachers in training and in serves and student" (Moeller, Joseph, Lau, & Carbo, 2011).

There are three major components which comprise the MIL competencies: Access, Use, and Creation. These three components are further refined into 12 subject matters which are equally divided into each MIL components. The subject matters are translated into MIL competency standards. To assess these standards, a performance criterion is utilized (UNESCO, 2013). There is a total of 113 performance criteria spread over all MIL competencies. The different components and competencies of the MIL Assessment Framework—Tier Two are presented in Table 2. Several scholars also used the same framework in studying media and information literacy-related skills. Yoshida (2018) used 25 performance criteria in three competency categories of UNESCO MIL Assessment Framework to investigate Social Network System (SNS) competencies of Japanese high school students. Holma, Krumina, Pakalna, & Avanesova (2014) concluded that UNESCO MIL Competency Matrix could also be adopted in creating methods to assess information literacy among adults.

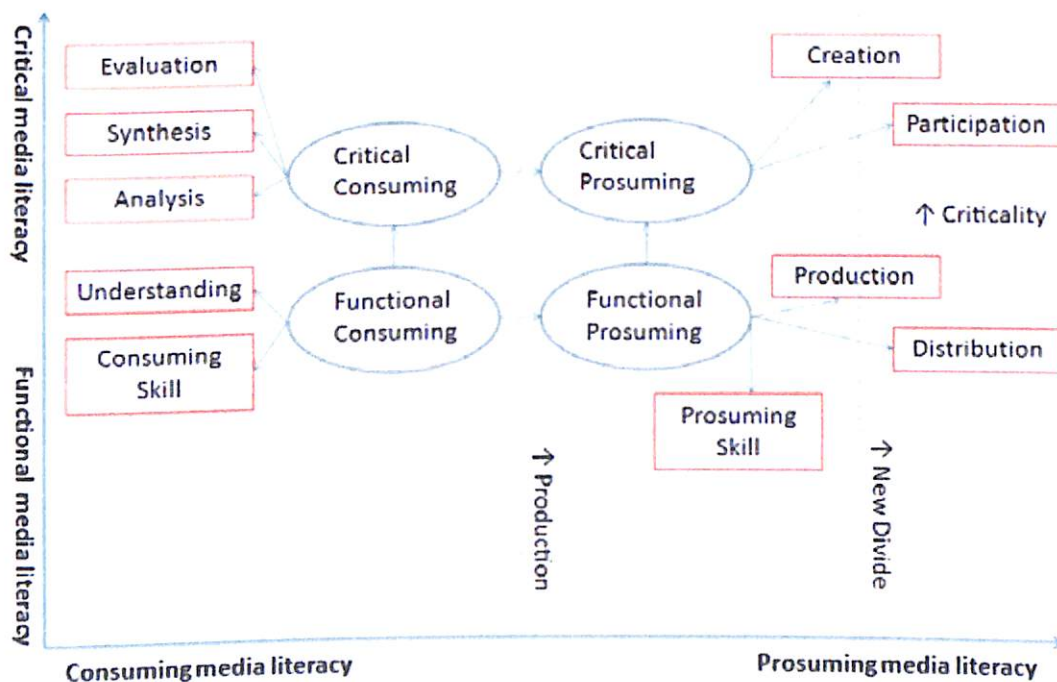
**Table 1. MIL Competency Matrix**

MIL COMPONENT	MIL SUBJECT MATTERS	MIL COMPETENCY <i>Media and Information literate person is able to:</i>	PERFORMACE CRITERIA
1. Recognizing the demand for, being able to search for, being able to access and retrieve information and media content	1. Definition and articulation of a need for information	1. Determine and articulate the nature, role and scope of the information and media (content) through a variety of resources.	36 performance criteria
	2. Search and location of information and media content	2. Search and locate information and media content.	
	3. Access to information, media content and media and information providers	3. Access needed information and media content effectively, efficiently and ethically as well as media and information providers.	
	4. Retrieval and holding / storage / retention of information and media content	4. Retrieve and temporally hold information and media content using a variety of methods and tools.	
2. Understanding, assessment and evaluation of information and media	5. Understanding of information and media	5. Understand necessity of media and information providers in society.	42 performance criteria
	6. Assessment of information and media content, and media and information providers	6. Assess, analyze, compare, articulate, and apply initial criteria for assessment of the information retrieved and its sources, as well as evaluate media and information providers in society.	
	7. Evaluation of information and media content, and media and information providers	7. Evaluate and authenticate information and media content gathered and its sources and media and information providers in society.	
	8. Organization of information and media content	8. Synthesize and organize information and media content gathered.	
3. Creation, utilization and monitoring of information and media content	9. Creation of knowledge and creative expression	9. Create and produce new information, media content or knowledge for a specific purpose in an innovative, ethical and creative manner.	35 performance criteria
	10. Communication of information, media content and knowledge in ethical and effective manner	10. Communicate information, media content and knowledge in an ethical, legal and effective manner using appropriate channels and tools.	
	11. Participating in societal-public activities as active citizen	11. Engaged with media and information providers for self-expression, intercultural dialogue and democratic participation through various means in ethical, effective and efficient manner.	
	12. Monitoring influence of information, media content, knowledge production and use as well as media and information providers	12. Monitor the impact of created and distributed information, media content and knowledge as well as use existing media and other information providers.	

Source: UNESCO'S Global media and information literacy assessment framework: Country readiness and competencies.

In an Asian context, media literacy and information literacy co-exist and are embedded in Singapore’s education system (Lin, Mokhtar & Wang, 2015). Lin, Li, Deng, & Lee (2013) proposed a new media literacy (NML) framework that is also a set of competencies for a new media literate individual. The model is composed of four quadrants which represent the four kind of literacies which are: a) functional consuming (FC); b) critical consuming (CC); c) functional prosuming (FP); and d) critical prosuming (CP). It features two continua which categorizes NML into two ideas—consuming, which represent the ability to consume media, and prosuming, which connotes to produce-and-consume new media (Chen, Lin, Li, & Lee, 2018). Each quadrant contains indicators which are similar to UNESCO’s MIL Assessment Framework. These indicators are illustrated in Figure 3.

**Figure 5. New Media Literacy Framework**



Source: *Understanding new media literacy: The development of a measuring instrument* by Lin, Li, Deng, & Lee (2013)

Garcia-Ruiz, Ramirez, & Rodriguez (2014) mentioned that the concept of “pronsumer” is not new and that the term was used by McLuhan in 1972. Giurgiu & Barsan (2008) mentioned that Tofler coined the term "prosumer" highlighting the ability of consumers to be involved in the process of production. Although not a new term, the word is the core and consequence of Web 2.0 era where any individual can be both consumer and producer of web content (Giurgiu & Barsan, 2008). Henceforth, it can be deduced that MIL could also be viewed as the ability of an individual to critically consume (use, analyze and evaluate) and produce media contents and information. In the context of MIL, the consuming process includes the ethical use of media, information and technology and the production stage involves the participation of an individual, as members of the global village, in democratic and intercultural dialogue through the use of technology (Wilson, 2012).

Looking at various competencies proposed by different organizations, there seems to have connections on the skills that a media and information literate should acquire. These skillsets may have been grouped and categorized in different ways and have used another terms but a common ground for these competencies can be narrowed down into three areas: a) access and use; b) analysis and evaluation; and c) production and participation. These groups of competencies will be further discussed in the succeeding paragraphs.

**Access and Use.** Access refers to locating and utilizing media and technology tools (Hobbs, 2010). Buckingham, Banaji, Carr, Cranmer & Willett (2005) provided two dimensions of access as a media literacy skill; these are physical access and manipulating technology. The former denotes the presence of television, radio,

computer, mobile phones, and other media technologies to the consumer. The second dimension could be classified as the use skill. Media literate individual must use appropriate media technology to store and retrieve information and media contents (UNESCO, 2013). This is further extended to the ability of an individual to be aware of one's information and media needs (UNESCO, 2013).

**Analysis and Evaluation.** Celot (2009) categorized analyzation and evaluation skills as critical understanding competencies. UNESCO (2013) on the other hand, distinguished the three skills (understanding, analysis, and evaluation) as separate competencies under one component. Understanding refers to consumer's knowledge on how media and information providers operate; legal and ethical issues concerning media and information; and impacts of media to individual and to the society as a whole (UNESCO, 2013). The capacity to process information is essential in understanding media messages, without it, media consumers would fail to find meaning from media contents (Celot, 2009).

Analysis involves reading media and information messages and interpreting its meanings (UNESCO, 2013). Eristi & Erdem (2017) regarded analyzation as the most prominent media literacy skill citing its core position in the concept of media literacy. Evaluation skill finishes the analyzation stage by making judgment on media contents based on certain criteria (Eristi & Erdem, 2017). It involves checking on the authenticity and validity of media messages and information (UNESCO, 2013). Since media messages are produced with various purposes, media literate consumers evaluate media contents by relating it to their real-life experience or through its objectivity and reality (Eristi & Erdem, 2017).

**Production and Participation.** Production in media literacy could refer to media content creation using varied tools and engaging in consuming activities. (Sekarasih, Walsh & Scharrer, 2015). Media production skills and experience of creativity media were among the components of communicative skills outlined by Celot (2009) which are like production skills. Communicative skills are important as it transforms media consumers into media producers (Eristi & Erdem, 2017). As consumers turn to be producers, media literate individual engages with other people through the use of media technologies. UNESCO (2013) asserted that a media and information literate individual has the ability share and interact with media and information providers for various purposes.

The three major areas of media and information literacy skills mentioned above were adapted in this study and were used as basis on assessing the level of media and information competencies of the students. Despite having different approaches to media and information literacy, it must be noted that these frameworks also acknowledge the factors that contributes or affects the acquisition and development of these competencies. With the standards instituted by UNESCO, it would be on the member countries to craft policies and strategies to incorporate and cultivate MIL in formal and non-formal education systems.

In the context of media and information presumption, the three areas could also be grouped into two categories of media and information literacy competencies as seen in Table 2. Consumption skills cover Access and Use and, Analysis and Evaluation while Production skills include Production and Participation.

**Table 2. Media Literacy Competencies**

<b>PROSUMTION CATEGORY</b>	<b>COMMON THEME</b>	<b>MEDIA LITERACY COMPETENCIES by EAVI, 2010</b>	<b>MEDIA AND INFORMATION LITERACY (MIL) COMPETENCIES by UNESCO 2013</b>	<b>NEW MEDIA LITERACY COMPETENCIES by Lin et al., 2013</b>
<b>CONSUMPTION SKILLS</b>	<b>Access and Use</b>	<b>USE SKILLS</b> <ul style="list-style-type: none"> <li>• Computer and Internet Skills</li> <li>• Balanced and Active Use of Media</li> <li>• Advanced Internet Use</li> </ul>	<b>USE</b> <ul style="list-style-type: none"> <li>• Articulation/Definition</li> <li>• Search/ Location</li> <li>• Access</li> <li>• Retrieval/ Holding</li> </ul>	<b>FUNCTIONAL CONSUMING</b> <ul style="list-style-type: none"> <li>• Consuming skills</li> <li>• Understanding</li> </ul>
	<b>Analysis and Evaluation</b>	<b>CRITICAL UNDERSTANDING COMPETENCES</b> <ul style="list-style-type: none"> <li>• Understanding Media Content and its Function</li> <li>• Knowledge about media and media regulation</li> <li>• User Behavior</li> </ul>	<b>EVALUATION</b> <ul style="list-style-type: none"> <li>• Understanding</li> <li>• Assessment</li> <li>• Evaluation</li> <li>• Organization</li> </ul>	<b>CRITICAL CONSUMING</b> <ul style="list-style-type: none"> <li>• Analysis</li> <li>• Synthesis</li> <li>• Evaluation</li> </ul>
<b>PRODUCTION SKILLS</b>	<b>Production and Participation</b>	<b>COMMUNICATIVE ABILITIES</b> <ul style="list-style-type: none"> <li>• Social Relations</li> <li>• Citizen Participation</li> <li>• Content Creation</li> </ul>	<b>CREATION</b> <ul style="list-style-type: none"> <li>• Creation</li> <li>• Communication</li> <li>• Participation</li> <li>• Monitoring</li> </ul>	<b>FUNCTIONAL PROSUMING</b> <ul style="list-style-type: none"> <li>• Prosuming Skill</li> <li>• Distribution</li> <li>• Production</li> </ul>
				<b>CRITICAL PROSUMING</b> <ul style="list-style-type: none"> <li>• Participation</li> <li>• Creation</li> </ul>

Although media literacy is a lifelong skill that needs to be developed by an individual, schools have crucial part in developing these competencies. Different countries have taken several initiatives in integrating media and information literacy in their education systems. Teaching media literacy has been established in many schools across the globe in all levels starting from K-12 to undergraduate studies (NAMLE, 2007). Hobbs and Frost (2003) pointed out that the use of media in the K-12 classrooms is not enough thus there is a need to develop a curriculum to engage students in media literacy education.

In the Philippines, media education was advanced as a cause by several public and private organizations such as Philippine Information Agency (PIA, 2018), Center for Media Freedom and Responsibility (CMFR, n.d.) and National Council for Children's Television (NCCT, n.d.). In classroom setting, media and information literacy is integrated in basic education subjects such as English, Arts and Health. Until in 2012, Department of Education (DepEd) incorporated Media and Information Literacy (MIL) as a stand-alone subject in SHS curriculum (DepEd, 2015).

A case study of Bautista (2019) found out that senior high school teachers in the Philippines lack the understanding on the subject Media and Information Literacy. Further, teachers have inadequate preparation and materials in teaching MIL to students (Bautista, 2019). This study was conducted in the early year of the implementation and teachers are dependent on DepEd's resources. DepEd's current curriculum guide on MIL subject is the only available document concerning implementation MIL in the Philippines at a national scale. It articulates expected learning outcomes of students taking MIL in senior high school.

## **MIL Assessment**

There is an increase on research studies on MIL over the past years; however, studies have focused on assessment of media practices or if not focused on specific media topics (Costa, Lopes, Araujo, & Ávila, 2018) such as news literacy, internet literacy, and digital literacy of students across different levels. News literacy was examined in the study of Kwan, Agapit, & Bascos (2008) among public high school students in Metro Manila. Using survey questionnaires, the study concluded that high school students are news literates. In another study, Hoffman (2016) found out that social media usage is not correlated to levels of news media literacy. He used sets of questions combining multiple choice and five-point Likert Scale to assess news media literacy among undergraduate journalism students at University of Missouri.

Digital literacy is also being studied by media scholars considering its strong link to media technologies and information tools. Saxena et al (2018) assessed the digital literacy and use of smart phones among Indian dental students. The study, however, focused on the students' use of technologies in relation to their studies. Saxena et al (2018) concluded that students use smart phones and social media in their learning activities despite having no direct integration of technology in the curriculum. In a more diverse population, Literat (2014) used online survey, based on new media literacy skills developed by Jenkins et al (2006), to assess NML skills, media exposure, digital participation, and civic engagement. Results revealed that individuals who consume and produce new media had the highest level of NML skills.

All studies mentioned above used a self-rated survey to assess specific literacies. This kind of research instrument is also widely used in several media literacy assessment studies. Garcia-Ruiz, Ramirez, and Rodriguez (2014) utilized online questionnaires to survey 2,143 students in Spain across different levels and measure levels of media literacy skills among children and adolescents. The study states that the respondents' use of technological devices is not sufficient for them to become media literate. Garcia-Ruiz, Ramirez, and Rodriguez (2014) pointed out that despite being regarded as digital natives, the respondents do not have necessary skills to become media prosumers. They highlighted the need for establishment of media literacy in the curriculum to develop prosumer culture (Garcia-Ruiz, Ramirez, & Rodriguez, 2014).

In Taiwan, Chang and Liu (2011) developed the Media Literacy Assessment-Scale (MLSS) to assess elementary school students. MLSS was composed of three subscales namely Media Application Skills, Learning with Media and Attitude towards Media. The instrument used a five-point Likert Scale. They concluded that there is a gender difference on media literacy skills among students leaning towards female being more media literate compared to mean. The results contradict to studies revealing that there is no significant difference on media literacy between two genders (Chen, Lin, Li, & Lee, 2018; Costa, Lopes, Araujo, & Ávila, 2018). Hence, there is a need to discover these two different views on media literacy in the context of gender. Further, Chang and Liu (2011) claimed that MLSS is an instrument that possess adequate validity and reliability.

Quantitative approach dominates the study on media literacy. On the other hand, scholars also tried to investigate media literacy using a qualitative method focusing on students. Payne (2008), in her dissertation, used a phenomenological approach in capturing the media literacy habits experience of middle school students in Texas. The use of reflective analysis on students' textual responses and personal interview yielded to 11 emerging themes. Two of these themes are: "Middle school students may not be aware of how media construction affects their media viewing experience"; and "Middle school students who have completed an elective Film and Media course in middle school believe they are more literate users of media than students who have not taken the elective Film and Media course as an elective" Payne (2008).

Over the years, scholars accepted the concept of MIL as one component encompassing multiliteracies. Despite the scarcity of research on the assessment of media and information literacy skills (Costa, Lopes, Araujo, & Ávila, 2018), there are few researchers who have attempted also to assess and measure MIL by means of various instruments and approaches.

Using a qualitative approach, Siricharoen & Siricharoen (2012) described the situation of MIL in Thailand specifically among Thai Youths. They used individual interviews and focus group discussion to collect data from journalists, high school, and university students, and parents. Study revealed that Social Media is popular among Thai youths and that building communities and getting quick information is the reason for their media exposure (Siricharoen & Siricharoen, 2012). Research informants revealed that Thai Youths needed MIL skills which are: a) making

judgements; b) personal integrity; c) training of family; and d) behavior of close friends (Siricharoen & Siricharoen, 2012).

Great percentage of MIL researches involves college and university students. This is due to high demand of critical thinking skills among undergraduate and graduate students (Hoi, Theo & Zhou, 2015). The study *Media and Information Literacy among Macau University Students: An Initial Study* combined three instruments to investigate self-perception of the students on media and information literacies (Hoi, Theo & Zhou, 2015). The study adapted into a Chinese culture these three instruments: the Media Literacy Self-Assessment Scale, the Competence Information Literacy Questionnaire, and the UNESCO Information Literacy Lifecycle.

A similar study was conducted in mainland China regarding MIL skills that were based on UNESCO's "International Media and Information Literacy Survey of the Research Habits and Practices of University Students" (IMILS) (Zhang, Li & Zhang, 2018). The research presented the students' "media and information awareness, information needs, ability of information access and selection, ability of information evaluation, and ability to process and make use of information" (Zhang, Li & Zhang, 2018).

Scholars also attempted to measure MIL skills among individuals using item tests. In a study by Costa, Lopes, Araujo, & Ávila (2018) they used a 20-item MIL Test to assess media and information skills of 500 adults with various educational backgrounds in Lisbon. Using Item Response Theory (ITR), the researchers constructed the printed booklet test containing questions based on two-dimension—

cognitive-critical and creative (Costa, Lopes, Araujo, & Ávila, 2018). Items were a mixture of text and images to assess the level MIL proficiency of the participants. This approach of media literacy assessment is referred by Hobbs (2017) as a competency-based measure. In this kind of method, students are asked questions requiring them to analyze or create media text or messages (Hobbs, 2017).

In the Philippines, another method was used to determine the effectiveness of an MIL lecture program among public school-teacher librarians. The study of Yap & Manabat (2018) utilized item test in 2016 and 2017 to determine pre-test and post-test result to determine the knowledge of participants on MIL Pedagogies based on UNESCO (Yap & Manabat, 2018). Questions formulated were limited to True or False response. Test results showed that the lecture on MIL was an effective program on improving the knowledge of teachers on MIL (Yap & Manabat, 2018).

From these forms of assessment method, there is still a continuing struggle on identifying a more accurate measurement of MIL skills. Hobbs (2017) argues that using both self-report and or competency-based approach can be useful tool in measuring media literacy. Despite various approach on determining the extent of media and information literacy competency of an individual, all studies share a common goal of improving the MIL skills and finding a way to develop these set of competencies.

## **Media and Information Literacy Education**

Component of media and information literacy such as media literacy, information literacy, news literacy and digital literacy has been long integrated in school curricula across different levels. Literature suggests that these MIL components were offered as a separate subject or integrated in higher education curriculum such as in teacher education (Cherner & Curry, 2019; Meehan et al., 2015), journalism and communication (Davies, 2018), and library science (Saunders et al., 2015). In the basic education, most countries create programs that introduce media literacy in K-12 curriculum.

Several scholars have also studied some aspects of media and information literacy curriculum in formal education setting. Schmidt (2013), in his study, concluded that media literacy education is already embedded across all levels from basic education to collegiate level in American educational system. Schmidt (2013) also found out that media literacy is less commonly taught in early grade levels and that media literacy is more likely to be given attention post-secondary level. Similarly, in the Philippines, MIL is taught in senior high school which is considered to be last stage of secondary education in the country.

Another study was conducted to gain the views of international experts on what should be included in media literacy education curriculum. Fedorov, et al (2016) found out that according to experts, learning outcomes for media literacy in secondary schools should be focused more on identifying and understanding media forms and texts. Experts also revealed the contents of media literacy curriculum for

secondary students should include the role of media in society and its political and social implications, media ethics, media representation and languages and protection from harmful media effects

In attempt to gain basic information about developing MIL curriculum, Park (2020) analyzed UNESCO's MIL with exiting media and information-related curriculum in Korea. Two major findings were revealed in the analyzation. There are more training contents for media literacy than information literacy in UNESCO's MIL competencies (Park, 2020). On another hand, MIL competencies by UNESCO "included more aspects of the composition and competencies of information literacy than media literacy" (Park, 2020). Park (2020) suggested that media literacy and information literacy curriculum should be integrated within the media and information literacy.

It was already in the recent years that media and information literacy was considered to be one construct covering all other literacies. The field already gained attention from public policy actors after the rise of fake news on social media citing that media and information is a serious topic that needs to be given attention (Moravčíková, 2018). In the Philippines, it was the implementation of K to 12 basic education system that paved the way of inclusion of a Media and Information Literacy curriculum for high school (Labangon & Zabala, 2018).

In 2016, a group of media educators and other stakeholders convened to formulate an MIL framework for Filipinos (Yap & Manabat, 2018). This document, however, is yet to be made published and available for public consumption. DepEd's

current curriculum guide on MIL subject is the only available document concerning implementation MIL in the Philippines at a national scale. It articulates expected learning outcomes of students taking MIL in senior high school. The curriculum guides describe the course that introduce basic knowledge of media and information and aims to develop student's creativity and critical thinking to include becoming responsible user and producer of media and information (DepED, ND).

Literature suggests that teachers play a vital role in the development of media and information literacy skills of the students. A study has proved that teaching is crucial in the development of learners' critical information literacy (Carlsson & Sundin, 2020). UNESCO also shares the same view of the role of teachers as seen in their published media and information literacy curriculum for teachers (Wilson et al., 2014). On the contrary, a study conducted in the Philippines found that teachers teaching Media and Information Literacy in Senior High School lack understanding of the meaning, importance, and coverage of the subject (Bautista, 2019). These information suggest that teachers are central in the implementation of media and information literacy education.

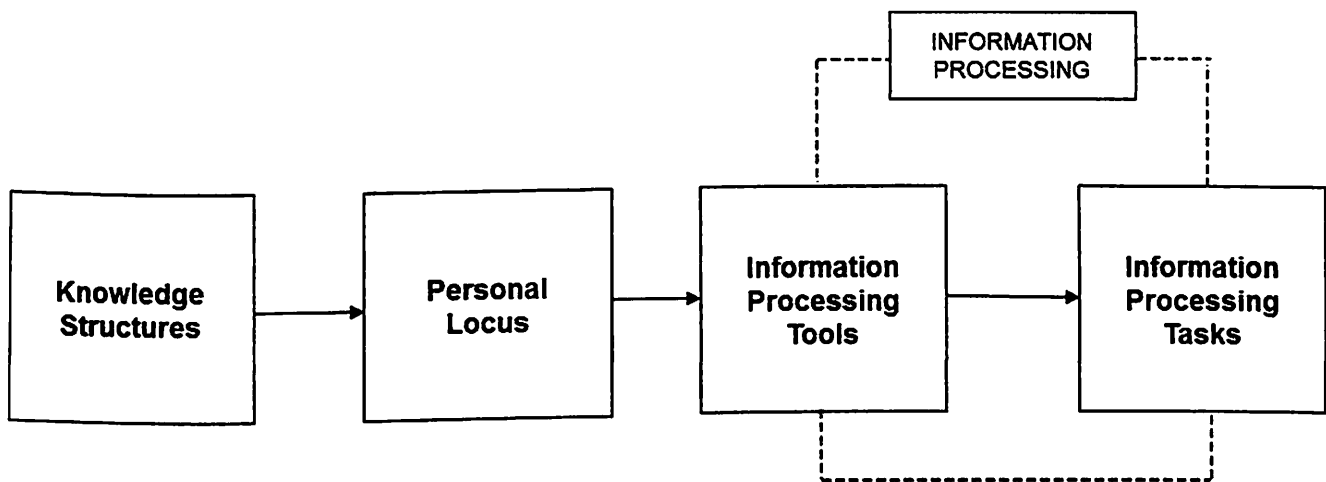
## **Theoretical Framework**

### **Theory of Media Literacy**

Media literacy studies are explored in the context of mass communication theory and learning theory. It is therefore logical to have a convergence of these fields: media literacy, communication theory and constructivist theory (Schilder, 2014). Combining all the insights of fields related to the study of media literacy, Potter (2004) proposed the Theory of Media Literacy in which this study is grounded. Central to the Theory of Media Literacy is the complement between individual's knowledge on media and critical thinking skills. Increase in individual's media knowledge (media effects, media content, media industries) together with information processing skills facilitates the development of media literacy (Scharrer & Ramasubramanian, 2015).

Potter's (2004) proposed cognitive information processing framework of media literacy is composed of four factors namely knowledge structures, personal locus, competencies and skills, and flow of information-processing tasks. These factors work interactively in the system and should not be treated as mutually exclusive. Potter (2004) pointed out that "a weakness in one area can suppress an otherwise high level of functioning in the other areas; also, strength within some of these factors is needed to build up the strength in the other factors." The theory combines media consumer's knowledge on media, motivation and the competencies needed to process information. (Craft, Ashley & Maksl, 2017).

**Figure 6. Media Literacy Theory Framework**



**Knowledge Structures.** Theory of media literacy suggests that awareness and information on areas of knowledge structure serves as a foundation of media literacy. Potter (2004) identified five components of knowledge structure which are a) media effects; b) media content; c) media industries, c) real world; and d) the self. Media effects draws out from the impacts of media in general. This is somehow the concern of the protectionist approach. The second structure focuses on one's knowledge on the available media content. This guides them in the access and use of media products. The third centers on how media industries work and its impact of media and information production. Real world calls out the real-world experience of an individual to understand media messages (Tinker, 2010). This makes the separation on the reality created by media and that of the in the actual world. The last one is self which deals of one's self-awareness.

Most of the areas involved in knowledge structures are embedded in Media and Information Literacy competencies outlined by UNESCO. Mastery of these

contents such various kinds of media, process of media and information production, and influence and effects of media are basic foundations of media literacy education. Potter (2004) mentioned that if a person would have knowledge on the five areas, the individual would be more aware during the information-processing tasks that later leads to a better decision. Media Literacy education, although, often fail to contextualize understanding of media to the reality and based it on existing issues.

**Personal Locus.** The second component focuses on individual's goals and drive for media consumption and exposure. It covers one's mindfulness, self-efficacy, and competence, which interacts with the knowledge of media systems influencing the development of media literacy (Maksl, Ashley, & Craft, 2015). Foundation on knowledge structures goes through the personal locus which gives people a more options and allows individual in deciding how to consume media contents. Potter (2004) points out if personal locus is developed, the more an individual becomes media literate through "increasing their drives for personal control and awareness during exposures." This element could be determined by understanding their exposure and reasons for accessing and use of media and information technologies. Further, Potter (2004) pointed that personal locus holds a central position to the model starting from the knowledge structure providing background to personal and locus, and the latter governing the use of media competencies and skills in the information-processing tasks. The more develop the personal locus is, the more media literate an individual becomes.

**Information-processing tools.** Competencies and skills are tools for a person to process information from media. Potter (2004) enumerated skills media literacy skills

which are analysis, evaluation, grouping, induction, deduction, synthesis, and abstraction. He made a distinction between skills and competencies. Competencies are learned through life and basic in accessing media just like reading the news or manipulating the remote control (Potter, 2004). Skills, on the other hand, requires more thinking and reasoning. Potter (2004) explains that skills and competency should work together to attain maximum media literacy.

**Information-processing tasks.** The flow of information processing tasks is composed of three tasks that complete the process of transformation of media messages into knowledge (Tinker, 2010). These tasks, which are filtering, meaning matching, and meaning construction, are sequential step to process information (Potter, 2004). Filtering is the process where one decides whether to ignore or process and information after applying media literacy skills. Potter (2004) explained that if the information is filter in then an individual make sense of it by recognizing symbols and matching to learned definitions. Lastly, a media literate individual construct media message using the same skills turning information into knowledge.

The use of Potter's (2004) Theory of Media Literacy is frequently applied in studies concerning specific literacy such as news literacy (Ashley, Poepel & Willis, 2010; Maksl et al., 2015; Vraga et al., 2016; Allam & ElGhetany, 2020) and its connection to other literacies (Bordac, 2009). Adopting Potter's model of media literacy, Maksl, Ashley & Craft (2015) crafted a scale in an attempt to measure the level of news media literacy of teenagers. Results highly revealed news literate teenagers have higher level of knowledge on media and are motivated to consume news. Further, Maksl, Ashley & Craft (2015) posited that news media literates are

the one who: a) reflects on their media experience; c) believes they are in control of the influence of media; and c) contains high scale of basic knowledge on media.

On the other hand, earlier study suggests that exposure on print material concerning media ownership may lower the perception of the media consumer on the credibility of print news source thus increasing critical consumption of news media (Ashley, Poepsel & Willis, 2010). This affirms the theory that knowledge on media drives personal locus which influence the consumption of media by an individual. Going beyond the concept of new literacy, Bordac (2009) affirmed that information processing skills outlined by Potter are perceived to be linked to the skills of information literacy and media literacy. Thus, it makes sense to use the Theory of Media Literacy in the context of a new media and information literacy construct.

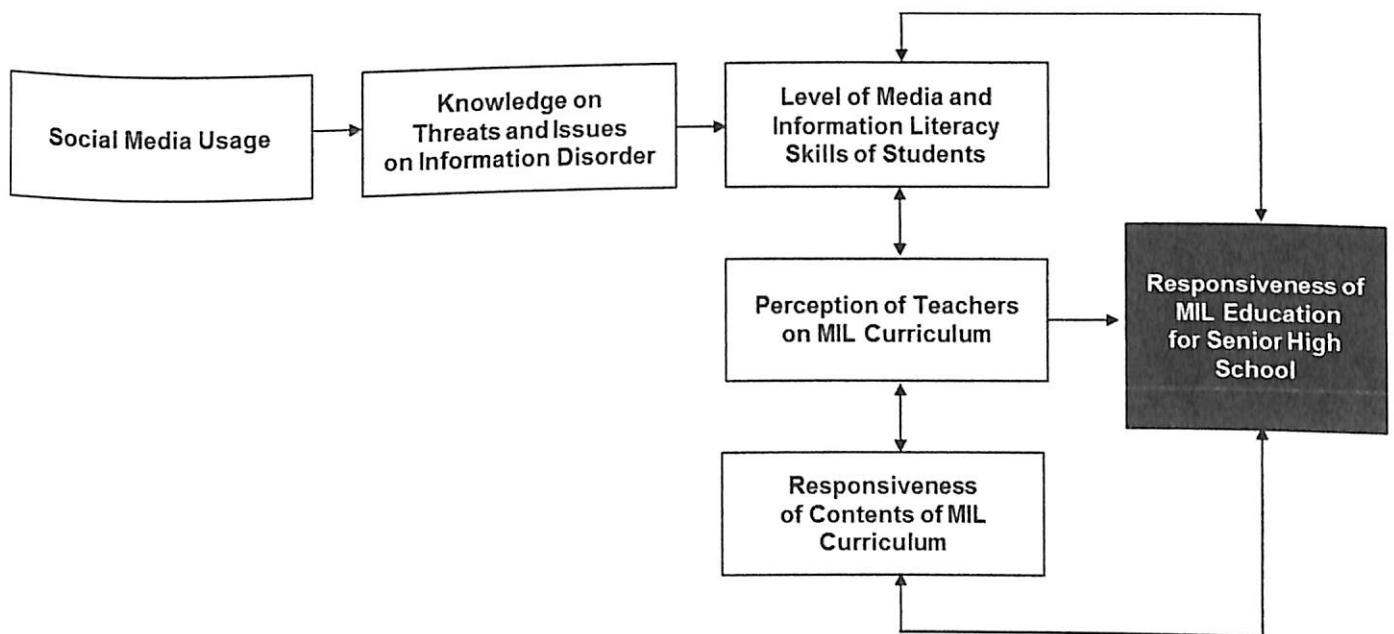
Potter (2004) argues that this model is “much more conscious processing of information and much more preparation for the exposures” than of those other media literacy model. This protectionist approach is opposite to the democratic viewpoint of media literacy. Instead of mitigating the negative effects of media to people, democratic approach to media literacy sees the importance of empowering citizens to critically analyze and evaluate media messages. Hobbs (2011) argued that Potter did not recognize the complexity of the media literacy. Further, Hobbs (2011) noted that media literacy should not teach individuals what to think but rather empowering them by highlighting the process of thinking. On the hand, Potter (2004a) acknowledged that media literacy goes beyond the awareness of media messages or industries; it concerns on understanding how individual construct meaning with what they already know.

The idea of media and information literacy situated in concept of presumption modifies the Theory of Media Literacy proposed by Potter (2004). In a study of McWhorter (2019), study on young adults as new prosumers found a correlation between knowledge of media effects and sharing of news contents on social media. Users who share news have higher level of understanding on media effects. Further, McWhorter (2019) theorized that sharing original news stories and sending photos and videos to news organization would increase news media literacy. These findings could explain the inter-relatedness of knowledge on media, media prosumption and media literacy which could be viewed from Potter's Theory of Media Literacy.

## Conceptual Framework

The goal of this study is to determine how Media and Information Literacy (MIL) education in Senior High School respond to social media information disorder by looking at the three areas namely: the students, teacher, and curriculum. Responsiveness in this study is determined by investigating the level of MIL skills of SHS students, the perception of teachers on MIL curriculum, and the contents of MIL curriculum. Figure 7 presents the conceptual framework of the study.

**Figure 7. Conceptual Framework of the Study**



The first layer of the framework presented the groundwork of examining the Media and Information Literacy of the students which are composed of three components namely: social media usage, knowledge on threats and issues of

information disorder and the level of MIL skills. This layer is anchored on Media Literacy Theory of Potter (2004). Potter (2019) posited that there are three components of media literacy that work together, these are knowledge, skills and personal locus.

Social media usage on this research focused on investigating the extent of social media usage and their intentions of using these platforms. Potter (2019) argued that awareness of one's goal of media use the more you have control on media exposure and processing information from that exposure. In this study social media usage refers to the type of social media used, frequency and time of social media use, and the reasons for using social media.

On the other hand, knowledge on threats of Information Disorder dealt on examining the students' awareness on the existence of various harmful online activities on social media. Frau-Meigs (2019) enumerated several risks of information disorder such as internet addiction, phishing, disinformation, and harmful content. In this study, knowledge is operationalized as the respondent's awareness and understanding of risks of information disorder.

Potter (2004) identified media literacy skills as tools to process information during media consumption. Skills identified by Potter (2004) —analysis, evaluation, grouping, induction, deduction, synthesis, and abstraction—are limited to the idea that a media literate individual only consume media messages. This study extends the concept of media literacy skill, as information processing, prosed by Potter to the idea that media and information literate persons consume and produce information.

Hence, the study used Media and Information Literacy Skills, referring to consumption skills and production skills conforming to concept media and information prosuming.

The evaluation of Media and Information Literacy (MIL) skills of the students is central to the determination of the responsiveness of MIL education for senior high school. Examination of the MIL education through the lens of the students confirms the outcome of the curriculum which is delivered by the teacher. Thus, the result of the assessment of skills of the students provided an insight on how MIL education impacted them.

The second component in the examination of responsiveness of MIL education is the perception of MIL teachers on the curriculum. This provided a perspective on how the curriculum is seen by the teacher and how they utilized it in the delivery of learning to the students. Teachers are seen as mediators in the tripartite pedagogical situation. Teachers have the goal bridging the gap between the student and the content from confusion to clarity (Friesen & Osguthorpe, 2018).

Finally, the analysis of the content of the MIL Curriculum reveals the significant learning competencies set as standard for the students to be attained. Responsiveness is examined through identifying the significance of each learning competency. Significant learning competency is seen in this study as competency that directly contributes to the development of MIL skills of the students focusing on mitigating the threats of social media disorder. Responsiveness of the curriculum is determined by the quantity of significant learning competencies.

The result of investigation of the three components contributes to the evaluation of the responsiveness of MIL education for Senior High School. The students' skills can be attributed to the teacher's actions and perception, and the contents of the curriculum. Further, the gap between the curriculum and the student's skills can be seen through the perspective of the teachers. Each component is seen as a vital aspect of the study.

## Operational Definition of Terms

### **Consumption skills**

In this study, consumption skill, is a component of Media and Information Literacy (MIL) Skills that refers to the ability of an individual to take in media and information messages on social media. Consumption skills are subdivided into two components namely: Access and Use, and Analysis and Evaluation.

### **Frequency of social media use**

It refers to the number of times participants use social media. This will be measured using five-point scale, assigned with assigned with numerical score starting with one (1) expressed as Never, meaning the respondents never had the experience of using such social media, and five (5) expressed as Very Frequent, meaning the respondents uses the technology several times a day.

### **Information disorder**

It is also referred as social media information disorder. In this study, it refers to the existence of inaccurate, misleading,

and damaging information over social media. Following the framework of Frau-Meigs (2019), information disorder extends to possible risks in cyber space such as internet addiction, disinformation, cyberbullying, and harmful content.

### **Knowledge.**

In this study, knowledge would refer to the participants' level of understanding and awareness of risks of information disorder such as internet addiction, disinformation, cyberbullying, and harmful content. This will be measured based the level of agreement on knowledge statements that are answerable by five-point Likert scale with numerical scores from one (1) for strongly disagree and five (5) for strongly agree. Knowledge will be measured based on their self-reported assessment on their knowledge on information disorder using weighted mean.

### **MIL Curriculum**

Media and Information Literacy Curriculum or Curriculum Guide is a document that contains the which outlines the contents,

topics, and learning competencies that must be attained by the students who is taking the subject. The curriculum guide for MIL in senior high school is prescribed by the Department of Education and is used by the teachers to teach the subject.

### **MIL Education**

Media and Information Literacy (MIL) Education refers to the teaching of Media and Information Literacy to students. In this study, MIL education is operationalized as the teaching of MIL skills to Senior High School students that happens inside the classroom and is facilitated by the teacher.

### **MIL skills**

Media and Information Literacy (MIL) skills is a component of Media and Information Literacy competency that refers to specific activities performed by the respondents to critically consume and produce contents on social media. This will be measured through statements where participants will respond on how frequent they apply those skills when accessing social media. Response to statement will be in a form of a five-point

scale assigned with numerical score starting with one (1) expressed as Never, meaning the respondents fail to apply the specific skill, and five (5) expressed as Always, meaning the respondents apply the specific skill on a regular basis.

### **Production skills**

In this study, production skills, is a component of Media and Information Literacy (MIL) Skills that refers to the ability of an individual to share, create, and produce media and information messages on social media and at the same time participate in social media interactions and discussions.

### **Responsiveness**

In this study, responsiveness refers to the ability of Media and information Literacy to respond and address the threats brought by information disorder in social media.

### **Social media**

This refers to the online platforms used by the participants that allow them to create accounts and profile, connect and interact to other users and generate content. Some

notable social media sites are Facebook, Twitter, Instagram, and YouTube.

### **Social media usage**

Social media usage pertains to means of accessing social media, type of social media used, frequency of social media use, time spent and the reasons for using social media. This will be measured using survey wherein pre-selected social media platforms will be presented. The first column will identify if respondents have accessed the specific social media site. Next columns would measure frequency of use then the time spent using the social media platform.

### **Time spent on social media**

It refers to the number of hours a participant uses the specific social media site on a daily basis. This will be measured using these ranges: less than 30 minutes, 30 to 60 minutes, 1-2 hours, 3-5 hours, 5 hours more.

**Table 3. Variables and Indicators**

<b>Variables</b>	<b>Method of Measurement</b>	<b>Indicators</b>
<b>Social Media Usage</b>		
Frequency of Use	5-point Likert Scale with assigned values  1 — Never 2 — Rare 3 — Sometimes 4 — Always 5 — Very Frequent	Frequency of using the specific social media platform on a daily basis
Time of use	5-point Likert Scale with assigned value  1 — less than 30 minutes 2 — 30 to 60 minutes 3 — Sometimes 4 — 1-2 hours 5 — more than 5 hours	Length of time of using the specific social media platform
Reasons for using	3-point Likert Scale with assigned values  1 — Does not apply 2 — Applies 3 — Highly Applies	Level of application on the statements identifying the reasons of using social media
<b>Knowledge on Threats and Issues of Information Disorder</b>	5-point Likert Scale with assigned values  1 — Strongly Disagree 2 — Disagree 3 — Neutral 4 — Agree 5 — Strongly Agree	Level of agreement on statements measuring Knowledge on Threats and Issues of Information Disorder

<b>Level of Media and Information Literacy Skills</b>	5-point Likert Scale with assigned values  1 — Never 2 — Rarely 3 — Sometimes 4 — Often 5 — Always	Frequency of performing or applying the MIL skills
<b>Perceptions of teachers on the MIL Curriculum</b>	Qualitative Interview	Common themes in the answers from the interview
<b>Responsiveness of MIL Curriculum</b>	Content Analysis of Learning Competencies	Number of significant learning competencies in the MIL Curriculum

## **Chapter 3**

### **METHODOLOGY**

#### **Research Design**

This study employed triangulation method to assess the responsiveness of Media and Information Literacy (MIL) education to social media information disorder. Triangulation method in research is used for validation and exploration of concepts and themes using variety of methods to collect data in different kinds of samples (Jonsen & Jehn, 2009). Specifically, this study utilized both quantitative and qualitative research methods to gather data.

Descriptive-survey research design was used to assess the MIL skills of senior high school students. Descriptive-survey design is used in studies that aim to describe the amount of a particular characteristic in a population (Brink, 1998). Survey method is a type of self-report measure that requires participants to rate themselves in line with the variable (Schneider, Gruman & Coutts, 2005).

Qualitative interview was also used to know perception of teachers on media and information literacy. Specifically, the study used Key Informant Interview (KII) to gather data. This kind of interview is categorized as qualitative interview which are conducted to small group of persons using interview guides (Kumar, 1989). To analyze the MIL Curriculum guide, content analysis was utilized. Content analysis is a systematic procedure used to documents and answer specific research questions (Frey, 2020).

## Locale of the study

The study was carried out in Calbayog City, Philippines. Calbayog City is a 1st class city in Samar Island with 183,851 total population based on Philippine Statistics Authority's (PSA) 2015 census. (PSA, 2018). Calbayog City is found at the northwest part of Samar Island and one of the two cities in the Province of Samar. It is a coastal area with activities tied to fishing and agriculture.

**Figure 8. Map of Calbayog City**



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(<http://creativecommons.org/licenses/by-sa/3.0/>)]

Specifically, the study was focused in one private school in Calbayog City offering Senior High School. The said school also offers complete basic education program, undergraduate, and graduate studies. The Senior High School program of the school is concentrated on Academic Track.

## **Respondents of the study**

**SHS Learners.** Senior high school (SHS) students were the main respondents of this study. Specifically, this study included Grade 12 students who were able to take the subject Media and Information Literacy for one semester. They have varied specializations depending on the track they have chosen and the offering of the school.

The study involved students who were enrolled in four strands offered by the school namely Science, Technology, Engineering and Mathematics (STEM), Accountancy, Business and Management (ABM), Humanities and Social Sciences (HUMSS), and General Academic (GA). MIL is core subject which means this is offered across all tracks and strand.

**Teachers.** The study included Senior High School teachers of Media and Information Literacy to attain the fourth objective of the study. The teachers were asked on their perceptions on MIL as a subject of Senior High School and their view on the subject's curriculum guide. There were three teachers who were selected by the researcher to be participants of the study.

These three teachers served as key informants. These informants were teachers of Media and Information Literacy in Senior High School. All of them were employed as teachers in a private school. They were referred in this study as Informant No. 1, Informant No. 2 and Informant No. 3. Table 4 presents the background of the informants:

**Table 4. Profile of the Informants**

<b>Informant</b>	<b>Age/Sex</b>	<b>Educational Background</b>	<b>Years of Teaching Experience</b>	<b>No. of Years in Teaching MIL</b>
Informant No. 1	46/Male	Bachelor of Secondary Education major in Social Science	21 years	4 years
Informant No. 2	26/Male	Bachelor of Science Computer Science	3 years	1 year
Informant No. 3	28/Male	Bachelor of Secondary Education major in English	4 years	2 years

**MIL Curriculum Guide.** The Media and Information Literacy (MIL) curriculum guide for Senior High School is the main unit of analysis for the content analysis part of the study. The curriculum guide was downloaded from the official website of the Department of Education which is [www.deped.gov.ph](http://www.deped.gov.ph). The curriculum guide contains the learning standards followed by the teachers to teach the subject. Learning standards are divided into four parts: key stage standard, content standard, performance standard, and learning competency which are all outlined in the curriculum guide (DepEd, 2015).

For this research, the analysis would focus only on learning competencies of MIL curriculum guide. DepEd (2015) describes learning competencies as knowledge, understanding, skills, and attitudes that are expected to be demonstrated by the learner in every learning activity. There are 58 learning competencies enumerated in the MIL curriculum guide which are used by teachers as basis for lesson delivery.

### **Sampling Scheme**

To determine the sample size of the research, the researcher employed Slovin's Formula. A sample size of 131 respondents was determined from the population of 196 Grade 11 senior high school students and with the margin of error of 5%. More so, the convenience sampling was utilized in identifying the respondents. Convenience sampling is a nonrandom sampling scheme where members of target population meet practical criteria such as accessibility and proximity (Dörnyei, 2007).

The goal of the convenience sampling is to gather information from the respondents who are accessible to the researcher (Etikan, Musa, & Alkassim, 2016). In the case of this study, research participants were selected because of their access to internet connection and use of social media where research instrument was delivered.

To select the informants for the interview, purposive sampling method was used. Purposive sampling, also referred a judgment sampling, is a type sampling procedure where the research deliberately chose and informant because of the

characteristics possessed by the informant (Etikan, Musa & Alkassim, 2016). In the case of this study, the main criterion for the informant is that they should have experienced teaching Media and Information Literacy in senior high school regardless of their years of experience.

### **Research instrument**

**MIL Questionnaire for Students.** A researcher-made survey questionnaire is the main instrument of this study. The questionnaire is divided three major parts: a) social media usage; b) knowledge on threats of information disorder; and c) media and information literacy skills. Before going into the main instrument, respondents were asked to report their demographic profile specifically, age, and sex.

The first part of the survey deals on participants' social media usage particularly on the following: a) social media access; b) social media sites used; c) frequency of use; d) length of use; and d) reasons for usage. Social media access dealt on identifying what technology is used by the respondents to access social media sites and how do they connect to the internet. Thus, respondents were asked to check their answer as their response to the questions.

Social media sites used, frequency of use, and length of use were assessed using a table. The respondents identified if they have used the specific social media platform and if they do, they needed to assess the frequency of use and length of use. Frequency of use and length of use was assessed using a five-point scale. There are ten social media sites presented in the questionnaire which are perceived

to be the most used platforms at present based on the number of users. For reason of accessing social media sites, there are 12 reasons presented wherein the respondents were asked to respond using three-point scale.

The second part of the instrument concentrated on identifying the participants' knowledge on issues and threats of Information Disorder. Measuring knowledge or awareness on certain issue involves knowing what the participants know and they do not know about the issue or topic (Ciochetto & Haley, 1995). Guided by Classification of Information Disorder by Frau-Meigs (2019), threats and issues on information disorder were used as basis in formulation knowledge questions. Issues used as basis are digital distraction, internet addiction, hacking, phishing, malinformation, disinformation, cyberbullying, data mining and spread of pornographic contents. Statements were constructed in simple and direct manner to avoid confusion and semantic barriers. Participants were asked to respond each statement using five-point Likert scale.

The last part of the instrument focused on the assessment of the media and information literacy skills of senior high school learners. In an attempt to develop an MIL scale that is relevant and appropriate to present media landscape, the researcher utilized two frameworks namely: The Media and Information Literacy (MIL) Competencies by UNESCO (2013) and the Classification of Information Disorder by Frau-Meigs (2019).

Steps were taken to formulate scale that will assess the MIL Skills of the respondents. The first phase involved the inventory of 113 performance criteria in the

MIL Assessment Framework provided by UNESCO (2013). Performance criteria are as specific activities (skills, knowledge, and understanding/attitudes) used to assess media and information literacy competencies among individuals. These criteria were classified into skills, knowledge, and attitude competencies.

There were 28 skill-based competencies that were identified and utilized in this study. The four societal stakes in the Classification of Information Disorder by Frau-Meigs (2019) namely: a) Hygiene, wellbeing; b) Privacy, data security; c) Citizenship and freedom of expression; and d) Protection were used as a guide in choosing the skills to be included in the instrument. These were further grouped into two as consumption skills and production skills as seen Table 4.

From the skills identified, statements were formulated to reflect specific activities that are taken by a media and information literate individual. These statements are considered to be the ideal actions taken by student to counter the threats of information disorder. To assess their MIL skills, participants responded to statements based on how they frequently apply the specific actions. A five-point Likert scale will be used to rate each statement with "5" for "Always" as the highest and "1" for "Never" being the lowest.

The survey-questionnaire was pre-tested to random respondents to gain feedback regarding the instrument. This is to ensure that the participants understand and comprehend the statements. After the pre-testing, some wordings and sentence construction were changed for easier comprehension.

**Table 5. MIL Skills Scale Statements**

AREA	MIL PERFORMANCE CRITERAA	INFORMATION DISORDER CLASSIFICATION	MIL SURVEY STATEMENT
<b>CONSUMPTION SKILLS</b>			
<b>Access and Use</b>	Seeks to identify an author, producer, organizer, disseminator of information and media content	Citizenship and freedom of expression	1. I identify the source of information or news that I read online.
	Identifies, differentiates and prioritizes potential information sources by type of information source, date, topic, author, sender, receiver, keywords, tags and terms, etc.	Citizenship and freedom of expression	2. I check the website, author, topic, date and other elements related to the information I read online.
	Decides what types of information and media resources are required	Citizenship and freedom of expression	3. I follow and like social media pages or websites that are verified and credible.
	Accesses selected information and media content through a variety of media and other information providers	Hygiene, wellbeing	4. I view other social media pages or website to search and read information on an issue or topic.
	Recognized the need for information and media content	Hygiene, wellbeing	5. I limit my social media use only to times where there is a need to.
	Applies basic requirements of holding information and media content	Privacy, data security	6. I control my privacy settings and hold personal information as private.
<b>Understanding and Evaluation</b>	Defines assessment criteria for information and media content retrieved and information sources: purpose, audience, authorship, credibility, significance, supplier, relevance, currency, reliability, completeness, accuracy, timelines, scope, and coverage.	Citizenship and freedom of expression	7. I read or view first the posts I encounter online before making any conclusion and taking actions.
	Recognizes the impact of information and media content on oneself	Hygiene, wellbeing	8. I could detect if the information shared online can be damaging to one's identity or to the public in general
	Identifies how information and media content can be represented differently and in different formats	Citizenship and freedom of expression	9. I find meaning from the information shared online and check with my own opinion.
	Recognizes that audiences/users interpret information and media content in different ways	Citizenship and freedom of expression	10. I ask someone to check and interpret an information/ news I read online.
	Appreciates information and media content applying aesthetic criteria and formats	Hygiene, wellbeing	11. I can detect if the image, video, or graphics shared online is manipulated or misleading.
	Understands the codes and genres of different media and information platforms	citizenship and freedom of expression	12. I can differentiate news from opinion, press release from advertisements and other media genres.
	Creates or uses basic assessment instrument(s) / tool(s) for evaluation of information and media content, as well as media and other information providers	Citizenship and freedom of expression	13. I use criteria to check if the information shared online is true or credible.

Understands the purpose and importance / significance of information and media content and its context on sustainable development	Citizenship and freedom of expression	14. I identify the purpose of a post or information shared online.
Identifies and unionizes related needs / topics / issues and asks additional questions	Citizenship and freedom of expression	15. I identify the issue or topic communicated in a post shared online.
Evaluates information and media content gathered, its sources as well as media and information providers	Citizenship and freedom of expression	16. I validate and check the source of information I read online.
Compares information from different media and information sources	citizenship and freedom of expression	17. I compare and check similar information from other sources to validate the information.
Draws conclusions from information and media content gathered using various technique and makes a judgment	Citizenship and freedom of expression	18. I can verify the information shared online if it's factual, misleading or fake.

## PRODUCTION SKILLS

<b>Production and Participation</b>	Reflects and, if needed, revises the creation process	Hygiene, wellbeing	19. I review first the information's truthfulness before sharing or posting it online.
	Considers the importance of socio-cultural aspects of the target audience, such as gender, race, age, ability etc.	Citizenship and freedom of expression	20. I consider other people identity, belief, and other aspects when sharing information online.
	Communicates information and media content in a legal way	Hygiene, wellbeing	21. I consider copyright and plagiarism and do citation if needed when sharing information online.
	Knows how to protect own work, personal data, civil liberties, privacy and intellectual rights	Privacy, data security	22. I do not give personal and private information such as cellphone number, date of birth and passwords when making post online.
	Aware of the consequences and risks of communicating, distributing and sharing knowledge in virtual worlds	Protection of minors	23. I consider the impacts of my posts to other people before sharing it online.
	Communicates information and media content in an ethical way	Hygiene, wellbeing	24. I use my own identity when interacting to people online.
	Engages and participates in societal-public activities through various means and tools	Citizenship and freedom of expression	25. I engage in online discussion on relevant and timely topics online.
	Chooses a communication medium, format and license that best supports the communication, distribution and sharing of information, media content and knowledge, taking into account the size and type of audience	Citizenship and freedom of expression	26. I choose the right platform in social media where I can share information and express my thoughts.
	Redirects and recasts information and media content, based in comparison of actual results with intended results	citizenship and freedom of expression	27. I report social media posts that are considered harmful such those containing hate speech and pornographic contents
	Uses or establishes monitoring means/ mechanisms and policies/instruments for periodical assessment of the effectiveness of intended impacts	Citizenship and freedom of expression	28. I share corrections on information I find erroneous online.

**Interview for Teachers.** The Key Informant Interview was used to gather the perception of teachers on Media and Information Literacy curriculum senior high school. Key informant interviews are form of in-depth interviews of selected individual who are considered knowledgeable of the topic at hand (Lavrakas, 2008). These individuals are referred to as informants. In the case of this study, teachers who taught Media and Information Literacy in senior high school are considered as informants.

Interview schedule was utilized as the instrument to conduct the Key Informant Interview. Interview schedule contains set of questions to be asked by the interviewer when conducting interview (Lewis-Becket al., 2003). The questions in the interview schedule are divided into three parts. The first part asks about the profile and experience of teachers on teaching MIL in SHS. The second part deals on perception their perception regarding the MIL curriculum. The last part tackles on their recommendations for the improvement of MIL education for SHS.

**Content Analysis Matrix.** Content Analysis was used to assess the responsiveness of SHS Media and Information Literacy (MIL) curriculum to information disorder. To carry out the analysis, the study utilized a categorization matrix that served as the main instrument in doing the content analysis. A categorization matrix is used in qualitative content analysis to categorize data (Elo, & Kyngäs, 2008). The matrix for this research allowed the assessment of all learning competencies enumerated in the curriculum by identifying its learning domains and responsiveness to social media information disorder including the contents of the learning competencies.

## **Data gathering procedure**

The study utilized an online survey method to generate data in answering the research objectives. Online survey offers researchers a more optimized approach by having larger audience (Lovreglio, Ronchi, & Kinsey, 2019). The instrument was transformed into an online document using Google Forms wherein a web link was generated. This link directed users to the electronic version of the instrument.

The researcher utilized social media to distribute the research instrument. The link was posted in a Facebook group where senior high school students are members. To ensure maximum participation, the members of the said group were messaged personally by the researcher. The link of the survey was sent to the participants through their individual Facebook account.

For the interview on teachers, a letter was sent through email to ask their willingness to participate in the study. A brief description of the research was also sent for them to have an idea on the rationale of study. After responding positively, the schedule of the conduct the interview was set. The interview schedule which contains the questions was also sent to the informants prior to the day of interview. The interview was done through video conference tool. With the permission of the informants, the interviews were recorded and transcribed for analysis.

To address the last objective of this study which focuses on examining the current Media and Information Literacy Curriculum Guide published by Department of Education, a content analysis was used to study the document. The learning competencies were extracted from the curriculum guide to be used for the analysis.

**Analysis of data**

Data collected from the survey were downloaded from Google Forms in a form of spreadsheet for analysis. Generally, the study used descriptive statistics which included measures of central tendency, to analyze data derived from this research. Frequency count and weighted mean were employed to get the values from variables in the questionnaire.

**Social Media Usage.** For the questions on technology used and internet access frequency and percentage distributions were used. For the social media platforms used, frequency count was used to determine the platform with highest number of users. These platforms were ranked for more analyzation. In the items of frequency of use and time spent, weighted mean was computed for each platform. To interpret responses, a range was used that is presented in Table 6.

**Table 6. Social Media Usage Scale**

<b>Score</b>	<b>Frequency of Use</b>	<b>Time of Use</b>	<b>Range</b>
<b>5</b>	Very Frequent (several times a day)	less than 30 minutes	4.21 — 5.00
<b>4</b>	Always (at least once a day)	30 to 60 minutes	3.41 — 4.20
<b>3</b>	Sometimes (few times a week)	1-2 hours	2.61 — 3.40
<b>2</b>	Rare (less often)	3-5 hours	1.81 — 2.60
<b>1</b>	Never	more than 5 hours	1.00 — 1.80

**Reasons for social media use.** These questions are rated using 3-point scale with assigned scores, 1 being the lowest and 3 being the highest. Participants assessed if the specific reason applies to them when they use social media. To determine the general response, weighted mean was computed for each statement. Results were interpreted using the interpretation as presented in Table 7. Statements were ranked based on the result of the computation.

**Table 7. Reasons for Using Social Media Scale**

<b>Score</b>	<b>Frequency of Use</b>	<b>Range</b>
<b>3</b>	Highly Applies	2.36 — 3.00
<b>2</b>	Applies	1.68 — 2.35
<b>2</b>	Does Not Apply	1.00 — 1.67

**Knowledge on Information Disorder.** Knowledge questions on Information Disorder are scored using five-point Likert Scale. Participants responded on each statement based on their agreement on the ideas of the item. Each response has assigned scores from 1, being the lowest and 5, being the highest. To determine the level of knowledge on information disorder, an interpretation of scores was adapted by the researcher based on instrument used for knowledge assessment. Table 8 presents the scale and interpretation of Knowledge on Information Disorder.

**Table 8. Knowledge on Information Disorder Scale**

<b>Score</b>	<b>Scale</b>	<b>Range</b>	<b>Interpretation</b>
<b>5</b>	<b>Strongly Agree</b>	<b>4.21 — 5.00</b>	<b>Extremely Knowledgeable</b>
<b>4</b>	<b>Agree</b>	<b>3.41 — 4.20</b>	<b>Highly Knowledgeable</b>
<b>3</b>	<b>Neutral</b>	<b>2.61 — 3.40</b>	<b>Averagely Knowledgeable</b>
<b>2</b>	<b>Disagree</b>	<b>1.81 — 2.60</b>	<b>Moderately Knowledgeable</b>
<b>1</b>	<b>Strongly Disagree</b>	<b>1.00 — 1.80</b>	<b>Not Knowledgeable</b>

**Media and Information Literacy Skills.** The assessment of MIL skills is dependent on participants' self-reported response on each statement. Statements are skill-based activities performed by a media and information literate individual. Participants responded depending how frequent they perform these activities. A five-point Likert scale was used, and its interpretation is presented in Table 8.

**Table 9. Media and Information Literacy Skills Scale**

<b>Score</b>	<b>Interpretation</b>	<b>Range</b>
<b>5</b>	Always	4.21 — 5.00
<b>4</b>	Often	3.41 — 4.20
<b>3</b>	Sometimes	2.61 — 3.40
<b>2</b>	Rarely	1.81 — 2.60
<b>1</b>	Never	1.00 — 1.80

Following the concept of media and information prosumption, statements were divided into two categories which are consumption skills and production skills. The statements for consumption skills and production skills were separated although similar scale was used for both components

To determine the level of media and information literacy skills of the students, the over-all results from the consumption skills and production skills were computed by getting the average score in each component. The over-all level of media and information skills of students was computed by combining the results from consumption skills and production skills. The results were then interpreted using the scale seen in Table 10.

**Table 10. Level of Media and Information Literacy Skills**

<b>Score</b>	<b>Scale</b>	<b>Range</b>	<b>Interpretation</b>
<b>5</b>	Always	4.21 — 5.00	Very High
<b>4</b>	Often	3.41 — 4.20	High
<b>3</b>	Sometimes	2.61 — 3.40	Average
<b>2</b>	Rarely	1.81 — 2.60	Low
<b>1</b>	Never	1.00 — 1.80	Very Low

**Perception of Teachers on MIL.** A separate instrument was used to determine the perception of teachers on media and information literacy. An interview schedule was used for the interview were most questions are open ended questions. Responses from the interview were treated as qualitative data.

These responses were analyzed using a thematic analysis which is utilized in analyzing qualitative data. Specifically, the study employed a thematic text analysis where the researcher determined recurring themes on text (Popping, 2015). After identifying themes from the responses, coherent categories are presented to give meaning to themes (Renner & Taylor-Powell, 2003).

**Content analysis of MIL Curriculum.** To better understand the current senior high school curriculum guide on Media and Information Literacy, the research employed a content analysis of the curriculum. Content Analysis is a method used in research to examine communicative material. Content analysis was also used by scholars to analyze curriculum like in the study of Malekipour, et al. (2017) where they used

summative qualitative content analysis approach in examining the Educational Technology curriculum.

In this study, the learning competencies enumerated in curriculum guide were subjected to analysis using the content analysis matrix. The first stage was the identification of the learning domain of each competency whether its knowledge, skills, or attitude. The second part was on identifying if the learning competency falls under consumption category or production category following the idea of media and information prosumption. Further, a thematic analysis was done to find the common themes among the contents of the learning competencies.

The last stage of analysis of the learning competencies was on its responsiveness to social media information disorder. This part evaluated if the learning competencies contribute to the development of media and information skills competency of the learners that will protect them to threats of information disorder. Table 10 presents the categories of responsiveness of the MIL learning competencies relative to information disorder.

**Table 11. Responsiveness Categories**

<b>Responsiveness Categories</b>	<b>Interpretation</b>
<b>Significant</b>	The learning competency is <b>SIGNIFICANT</b> if it is deemed valuable in the development of MIL skills of the learners relative to information disorders. This means that the competency if attained will be helpful for the learners to counter information disorder in social media.
<b>Related</b>	The learning competency is <b>RELATED</b> if it is considered to aid in the development of MIL skills of the learners. This means that the competency serves as a supplement for students to understand and recognize the existence of information disorder.
<b>Impractical</b>	The learning competency is <b>IMPRACTICAL</b> if it is viewed as part of understanding the concept Media and Information Literacy in general but does not contain significant utility in the development of Media and Information Literacy skills especially in the aspect of addressing information disorder

## Chapter 4

### RESULTS AND DISCUSSIONS

This section presents the results of the study. Guided by the research questions and objectives, the presentation of results is divided into five parts namely the social media usage of the students, the knowledge of students on Information Disorder, the level of Media and Information Literacy skills of the students, the perceptions of teachers on MIL curriculum and the responsiveness of the MIL curriculum guide. The general goal of this research is to evaluate the responsiveness of the Senior High School Media and Information Literacy education to social media information disorder.

#### **Social Media Usage of the Students**

**Profile of Senior High School students.** Senior high school students were profiled based on their social attributes specifically on their age and sex. Respondents of the survey were former Grade 12 students who have taken Media and Information Literacy (MIL) in senior high school.

Table 12 presents the age range of the respondents from 17 years old to 20 years old. The largest percentage of the respondents was 18 years old with 45.80% of the sample. The data show that most of the respondents were considered of the legal age. This means that most students are no longer exempted from criminal liability for the acts they may commit in social media that can be classified as

criminal offense. In terms of sex, there were more female respondents with 60.31% than male respondents with 39.6%.

**Table 12. Profile of SHS Students**

<b>Variable</b>	<b>Frequency</b>	<b>Percentage</b>
<b>Age</b>		
20 years old	2	1.53%
19 years old	22	16.79%
18 years old	60	45.80%
17 years old	47	35.88%
<b>TOTAL</b>	<b>131</b>	<b>100.00%</b>
<b>Sex</b>		
Male	52	39.69%
Female	79	60.31%
<b>TOTAL</b>	<b>131</b>	<b>100.00%</b>

**Ways of accessing social media.** Respondents were asked on how they access social media in terms of gadgets used and source of internet connection. Table 13 reveals that all respondents (131) used their mobile phones or smartphones in accessing social media sites. The proliferation of smartphones on the market is often cited as the reason for the increase of social media users. More than half of respondents or 56.49% used WiFi (wireless fidelity), while 39.69% used Mobile Data as their source of internet connection. These data are acceptable since all respondents used smartphones which can be connected via WiFi or through the use of Mobile Data.

**Table 13. Social Media Access**

<b>Variable</b>	<b>Frequency</b>	<b>Percentage</b>
<b><i>Technology</i></b>		
Desktop Computer	16	12.21%
Laptop/Notebook	51	38.93%
Tablet/iPad	9	6.87%
Mobile Phone/Smart Phone	131	100.00%
<b><i>Source of Internet</i></b>		
Wi-Fi	74	56.49%
Broadband DSL	5	3.82%
Mobile Data	52	39.69%

**Reasons for accessing Social Media.** There are varied reasons why students access social media. Results showed that respondents use social media for communication, information, and entertainment. Table 14 shows that respondents agreed that they used social media to communicate with other people ( $M=2.73$ ) and to be updated on school works ( $M=2.65$ ). Social media became a main channel of communication for the respondents. Engagements in social media are driven by the ability of individuals to have conversations which is one of the functional blocks of social media as cited by Kietzmann et al. (2011).

Another reason why respondents use social media is for knowledge and information sharing. Results showed that social media users obtained knowledge through tutorial or instructional contents (M=2.65) and they updated on news and current events through social media (M=2.59). This also supports the other functional blocks of social media proposed by Kietzmann et al. (2011) which is the exchange and distribution of different contents. These contents may include video clips, TV shows, or movies that are present in social media. Entertainment in social media (M=2.72) was also among the top reasons in using social media as selected by the respondents.

Average ratings were given by the respondents on statements regarding sharing their opinion online (M=1.97), e-commerce activities (M=1.87), and playing online games (M=1.85). These are considered to be secondary reasons why students use social media. It means that respondents have less engagement on social media when it comes to voicing out their sentiments especially on timely issues. This suggests that high school students have less engagement in political and civic activities although Lenzi, et al (2015) posits that use of social networking sites for informational purposes could be associated with higher civic competencies that could increase the ability of the individual to engage in civic activities in the future.

Table 14 reveals also that among the statements on the reasons for accessing social media, students rated low the statement regarding building of network of followers and gaining social media likes (M=1.20). This implies that students do not prioritize managing the number of followers and the number of likes

that they earn. Thus, this confirms the study of Nesi & Prinstein (2018) wherein they found a subset of individuals among adolescent's social media users who reported frequent social media use for popularity. Further, this reason is true only to adolescents who have achieved a greater online reputation.

**Table 14. Reason for Accessing Social Media**

<b>Statement</b>	<b>Weighted Mean</b>	<b>Interpretation</b>
To communicate with other people through messages and exchange of information	2.73	Highly Applies
To be entertained through watching videos clips, movies, TV shows and other content	2.72	Highly Applies
To gain new knowledge that be might useful through tutorials and instructional videos	2.65	Highly Applies
To be updated on schools works and use the platform for information sharing and communicate with classmates and teachers.	2.65	Highly Applies
To be updated on news, information and significant events about people and places	2.59	Highly Applies
To share thoughts, opinions, views and feeling on certain issues and participate in discussions to raise certain cause	1.97	Applies
To document life events and milestone by posting status and uploading photos, videos	1.91	Applies
To check, sell or buy new products and services shared online	1.87	Applies
To join other similar groups with similar interests and connect to new people	1.85	Applies
To join multiplayer games online or play any other online games available on the net	1.85	Applies
To manage online presence by updating personal information shared on site's profile	1.81	Applies
To build network of followers by having a huge number of likes and followers to become famous online	1.20	Does Not Apply

**Extent of Social Media Usage.** To determine the respondents' degree of usage of different social media platforms, three aspects were checked namely the number of users per platform, frequency of usage and the time they spent on each specific site. Table 15 presents the top 10 social media sites that are commonly used by the respondents with their corresponding result.

In terms of numbers of users, all 131 respondents (100%) used Facebook Messenger but only 130 respondents (99.24%) used Facebook as a separate social media application. This confirms earlier results that respondents' top reason for using social media is primarily for communication. Facebook Messenger application allows individuals to exchange instant messages. Similarly, the data show that respondents used Facebook Messenger always or at least once a day ( $M=4.11$ ), although they only spent an average of 30 to 60 minute ( $M=3.36$ ) a day. In a study conducted by Gangneux (2020), young social media users cited the convenience of the app as the top reason why they use Facebook Messenger.

Following Facebook and Messenger is YouTube with 129 users (98.47). In terms of frequency, results revealed that respondents spent more time on YouTube than any other social media platforms present in the survey with an average of 1 to 3 hours of usage ( $M=3.82$ ) on a daily basis. In a study by Khan (2017), it was found out that social media engagements in YouTube are driven by content consumption and is motivated by entertaining contents found on the site (Khan, 2017). The result of this survey confirms early result that states that one of the top reasons for accessing social media among the respondents is for entertainment.

Most respondents also used the photo-based social media application Instagram with 113 users (86.26%) and the micro-blogging site Twitter with 100 users (76.34%). These two social media sites make the top 5 commonly used social media by the respondents where most of their social media activities take place.

**Table 15. Social Media Sites Used**

Type of Social Media	Users		Frequency		Time	
	<i>f</i>	%	<i>M</i>	<i>Interpretation</i>	<i>M</i>	<i>Interpretation</i>
Facebook	130	99.24%	4.06	Always	3.49	1 to 3 hours
Facebook Messenger	131	100.00%	4.11	Always	3.36	30 to 60 minutes
Instagram	113	86.26%	3.24	Sometimes	2.56	less than 30 minutes
Pinterest	64	48.85%	1.96	Rare	1.73	Never
Snapchat	91	69.47%	2.40	Rare	1.89	less than 30 minutes
Tiktok	53	40.46%	1.89	Rare	1.75	Never
Twitter	100	76.34%	2.99	Sometimes	2.46	less than 30 minutes
Wechat	5	3.82%	1.07	Never	1.02	Never
WhatsApp	5	3.82%	1.09	Never	1.03	Never
YouTube	129	98.47%	3.90	Always	3.82	1 to 3 hours

## Knowledge on Threats and Issues of Information Disorders

Generally, respondents reported that they have enough knowledge on the existence of threats and issues of information disorder. Results show that students were knowledgeable on issues concerning privacy specifically on stealing and hacking (M=4.53) and the crime against violation of one's privacy (M=4.50). Table 16 shows that these two items were on the top of the rank. Literature suggests that high internet activity among students is associated to increase in awareness of privacy threats on social media (Bartsch & Dienlin, 2016; Lorenz, Sousa, & Tomberg, 2012).

Table 16 also shows that respondents were knowledgeable about the existence of fake news (disinformation, misinformation) on social media (M=4.40) and the characteristics, purpose and impacts of fake news (M=4.37). Students also reported that they were aware of issues like cyberbullying (M=4.38), internet addiction (M=4.37), and identity theft (M=4.26).

Among the issues presented in the instrument, it was only the statement related to data mining which scored Highly Knowledgeable (M=4.02). In this statement respondents were asked on their awareness on tracking social media activities of social media users intended to create a database of information. Literature review reveals that knowledge of users of social media data mining is still an unexplored area in research. Kennedy, et al (2017) argues that social media users still have varied perspectives concerning data mining on social media.

**Table 16. Knowledge on Information Disorder**

<b>Statement</b>	<b>Weighted Mean</b>	<b>Interpretation</b>
I know that hacking and stealing private information are considered as cybercrimes and punishable by law.	4.53	Extremely Knowledgeable
I know that exposing sensitive information about a person is a violation of one's privacy.	4.50	Extremely Knowledgeable
I know that sharing harmful content such as pornographic material could endanger social media users who are minors.	4.49	Extremely Knowledgeable
I am aware of the presence of false information and fake news on social media and how they proliferate.	4.40	Extremely Knowledgeable
I am aware that cyberbullying and any other form of hate speech on social media are punishable by law.	4.38	Extremely Knowledgeable
I am aware that too much use of social media could lead to internet addiction.	4.37	Extremely Knowledgeable
I know the kinds, characteristics, purpose and impacts of fake news or false information on social media.	4.34	Extremely Knowledgeable
I know that too much exposure to social media could lead to interruption of my concentration.	4.31	Extremely Knowledgeable
I am aware that the personal information I share online could be used for fraud and theft.	4.26	Extremely Knowledgeable
I am aware of the presence of pornographic contents on social media.	4.25	Extremely Knowledgeable
I am aware of the presence of trolls on social media who aims to elicit anger and deceive people's opinion or views on certain issue.	4.24	Extremely Knowledgeable
I am aware that my social media activities are tracked and used together with other users to produce collection social media users' database.	4.02	Highly Knowledgeable

## **Media and Information Skills of the Students**

**Consumption Skills.** Consumption is one component of Media and Information Literacy Skills. This component could be further divided into two categories which are Access and Use and Understanding and Evaluation. Table 17 presents the results of the survey on the consumption skills of the respondents.

In terms of access and use of media and information, most respondents significantly reported that they were in control of their social media privacy settings (M=4.20). Similarly, earlier data show that most respondents were knowledgeable on the issues of privacy. Existing studies have shown that user's knowledge on privacy is linked to privacy control behavior (Park, 2013; Park, 2012). Table 17 shows that respondents have scored very high in terms of reading first the information online before making any conclusion (M=4.33). Results also indicated that students followed and liked verified social media pages (M=4.20) and that they visited other social media pages to check and verify information on certain topics or issues (M=3.98).

Although general responses on consumption skills are above the midpoint level, it must be noted that lowest mean was recorded on some aspects such as the limitation on use of social media (M=3.53). Further, activities concerning evaluating information were found to be at the lower ranks which included using criteria to check the validity of information shared online (M=3.58), differentiating news from opinion (M=3.83), and detecting if images or videos were manipulated or misleading (M=3.84).

**Table 17. Consumption Skills**

<b>Statements</b>	<b>Mean</b>	<b>Interpretation</b>
I identify the source of information or news that I read online.	3.93	Often
I check the website, author, topic, date and other elements related to the information I read online.	3.74	Often
I follow and like social media pages or websites that are verified and credible.	4.20	Often
I view other social media pages or websites to search and read information on an issue or topic.	3.98	Often
I limit my social media use only to times where there is a need to.	3.53	Often
I control my privacy settings and hold personal information as private.	4.42	Always
I read or view first the posts I encounter online before making any conclusion and taking actions.	4.33	Always
I can detect if the information shared online can be damaging to one's identity or to the public in general.	4.08	Often
I find meaning from the information shared online and check with my own opinion.	3.92	Often
I ask someone to check and interpret an information/news I read online.	3.46	Often
I can detect if the image, video, or graphics shared online is manipulated or misleading.	3.84	Often
I can differentiate news from opinion, press release from advertisements and other media genres.	3.83	Often
I use criteria to check if the information shared online is true or credible.	3.58	Often
I identify the purpose of a post or information shared online.	3.95	Often
I identify the issue or topic communicated in a post shared online.	3.97	Often
I validate and check the source of information I read online.	3.86	Often
I compare and check similar information from other sources to validate the information.	3.85	Often
I can verify the information shared online if it's factual, misleading or fake.	3.94	Often

Livingstone (2014) posits that young social media users are more concerned on determining what is fake and what is real. Youngest age group are more concerned on avoiding what is fake to an extent avoiding use of social networking sites (Livingstone, 2014). Items mentioned in the study are skills that will help students evaluate the authenticity of media and information contents. Leeder (2019) concluded in his study that there is correlation between the self-reported information behaviors and the accuracy of identifying fake news stories.

Results of this survey indicate that senior high students have high consumption skills. The minimal gap between the access skills and evaluation skills suggests that students have yet to develop their evaluation skills. This kind of occurrence is also similar to study by Chen, Lin, Li, and Lee (2018) where it was found that secondary school students have higher functional consumption skills (access and use) than their critical consumption skills (analysis and evaluation).

**Production Skills.** Another component of Media and Information Literacy skills is the ability of an individual to critically produce media and information messages. Table 18 presents the result of the survey on production activities on social media. Consistent with preceding results of this survey, respondents scored high in the area of privacy where they reported that they do not include personal information when making posts online ( $M=4.31$ ). This is a good indication that senior high school students are mindful of the sensitivity and impact of declaring private and personal information on social media.

Survey results also revealed that respondents are considerate of the contents they share or create on social media. According to the data, respondents reported that they reviewed the truthfulness of content before sharing it online (M=4.24). They also consider their audience's identity and belief (M=4.11) and the impact of posts to other people (M=4.11). Also, they used their own identity when interacting online (M=4.24). These results imply that information sharing, and content creation behavior of the respondents lessens the spread of untoward activities like cyberbullying and trolling.

Production skill also covers the ability of an individual to participate in discussion and monitor media and information messages. It is in these areas that the respondents scored low as indicated in the result of the survey. The data show that respondents limit their engagement in online discussions on timely topics (M=3.92). Respondents also often report social media posts that were considered harmful (M=3.69). The lowest score was recorded on the statement regarding sharing corrections on erroneous information online (M=3.27).

This result implies that some of the respondents may not have fully practiced their participation and monitoring skills especially in media and information contents on social media. A similar study was conducted by Rubinas (2019) which found that Metro Manila Youth have less engagement in socio-civic and political areas in terms of their digital news consumption. On one hand, literature suggests that high media literacy skills of individuals can be correlated to an increase in online civic and political participation (Kahne, et al., 2012).

**Table 18. Production Skills**

<b>Statements</b>	<b>Mean</b>	<b>Interpretation</b>
I review first the information's truthfulness before sharing or posting it online.	4.24	Always
I consider other people's identity, belief, and other aspects when sharing information online.	4.11	Often
I consider copyright and plagiarism and do citation if needed when sharing information online.	3.93	Often
I do not give personal and private information such as cellphone number, date of birth and passwords when making post online.	4.31	Always
I consider the impacts of my posts to other people before sharing it online.	4.24	Always
I use my own identity when interacting to people online.	4.24	Always
I engage in online discussion on relevant and timely topics online.	3.44	Often
I choose the right platform in social media where I can share information and express my thoughts.	3.92	Often
I report social media posts that are considered harmful such those containing hate speech and pornographic contents.	3.69	Often
I share corrections on information I find erroneous online.	3.27	Sometimes

**Level of MIL Skills of SHS students.** Combining the result of the survey and following the concept of media prosumption, the level of media and information literacy skills was determined as presented in Table 19. Skills of the respondents were based on their reported answers on the MIL questionnaire. Data show that the majority of the senior high school students have high consumption skills (M=3.91). This indicates that students have developed their consumption skills as they navigate in social media. Although the skills did not reach at a maximum level, data shows that their consumption skills are at a good standing considering the result of the study.

In terms of production skills, senior high school students scored high (M=3.94) based on their reported skills. Respondents have practiced their production skills frequently in dealing with media and information contents on social media. Although, it must be noted that among the skills assessed, it was in production skills that the lowest score was recorded. This must be considered in terms of developing the MIL skills of the students. Despite this gap, respondents scored higher in terms of production compared to consumption. The comparison will help map out the strengths and weaknesses in the dimensions of media and information literacy.

Over-all results reveal that senior high school students who have taken media and information literacy subject have high prosumption skills (M=3.79). This suggests that the respondents have practiced and developed their MIL-related skills in using social media. It can be deduced that senior high school students are responsive to threats of information in social media.

**Table 19. Level of MIL Skills**

<b>Variable</b>	<b>Mean</b>	<b>Interpretation</b>
Consumption Skills	3.91	High
Production Skills	3.94	High
Prosumption Skills	3.79	High

The idea that the respondents have not reached the optimum level of their media and information literacy skills indicates that the respondents are developing their prosumption skills. Similarly, a study of Lim & Theng (2011) found out that youths have acquired a fair level of new media literacy skills and have shown high level of awareness on online dangers and legal guidelines. This study argues that knowledge on media serves as a foundation of the development of MIL skills.

Other factors like economic status may affect the level of media and information literacy skills. Learners who belong to families who have higher income tend to be more media and information literate (Ashrafi-rizi, Ramezani, Koupaei, & Kazempour, 2014). In the case of this study, learners who were respondents are enrolled in a private school and are assumed to be financially advantaged. Social media usage and the use of technology are also associated with the level of media literacy skills as proved in some studies (Hoi, Teo & Zhou, 2015; Park and Burford, 2013). On the contrary, Garcia-Ruiz, et al (2014) argued that learners, despite being considered to be digital natives, lack the skills to perform as media prosumers.

## Perception of teachers on MIL curriculum

To gather the views of Media and Information Literacy (MIL) teachers on the Senior High School (SHS) curriculum guide released by the Department of Education, an interview was conducted on three MIL teachers. The interview was transcribed and analyzed to determine the common themes among their answers. There are three themes that were discovered in the interview and it is presented in this section.

**MIL curriculum contents are misaligned.** Responses coming from the teachers point out that there are contents on the SHS MIL curriculum guide that are considered to be less important but are given more emphasis. For instance, teachers mentioned that MIL curriculum is perceived to be a multimedia course because of the number of competencies related to multimedia production. Teachers have mentioned that:

*“Kasi ang nagayari pagsinabing MIL, gawa ka ng video, gawa ka ng short film. Naging production course siya. Naging production course ang tingin ng iba sa MIL na hindi dapat, bahagi lang siya. (What happened is that when they say MIL, you make videos, you make short film. It became a production course. Others have seen it as production course which should not, it is just a part)” [Informant No. 1]*

*“Most of the competencies, I noticed, are focused on multimedia production. This have affected on how teacher viewed in MIL and there is that wrong notion of the subject.” [Informant No. 3]*

According to the teachers, these contents are no longer relevant to the in terms of developing the MIL skills of the students and these do not represent the focus of teaching media and information literacy. Although, Informant No. 1 has acknowledged that production skills are a part of media literacy. Teachers have cited that these topics are related to educational technology which is already different from the concept of MIL. Teachers have said that:

*“...there are some topics inside the curriculum guide that does not speak about MIL. Having aware of these visual media, auditory media, and different kinds of media you have to specify this something about educational technology, that does not make sense to me especially because what is media and information literacy is right know for student having to be aware of these [social media] threats right now.” [Informant No. 2]*

*“That is why I always advocate for not covering everything that is in the CG. In fact, the second part for the second quarter is EdTech na yun eh (That is already Educational Technology). Those are multimedia, actually if I may say, wala nang multimedia ngayon (Those are multimedia, actually if I may say, multimedia does not exist already today).” [Informant No. 1]*

Informants also agreed on the idea that multimedia topics are already included in another senior high school subject which is Empowerment Technologies. Department of Education (nd) described Empowerment Technologies as subject that is focused on the use of “information and communication technologies as a tool for curating, contextualizing, collaborating, and creating content and experiences for learning in the professional tracks.” The subject includes topics on web design, photo manipulation, and the use varied multimedia tools. According to the teachers:

*“actually if you compare it to the lessons in another subject which is Empowerment Technologies, there are lessons that are redundant, that is why I do not discuss some topics to the students especially on multimedia or digital production.” [Informant No. 3]*

*“I mean I am not saying hindi siya importante. Ang sinasabi ko lang baka hindi siya sa MIL. Actually may Empowerment Technologies ang mga bata. And in the junior high school may computer ICT subject na sila pnagdaanan na nila yan.”*

*(I mean I am not saying that [multimedia production] is not important. What I want to say is that maybe it is not MIL. Actually, students have Empowerment Technologies. And in junior high school they have Computer ICT subject when they are already done)”. [Informant No. 1]*

Teachers suggested the removal of these contents from the media and information literacy curriculum since these topics are already redundant. Further, one teacher also suggested the exclusion of topics concerning educational technology.

The informant reveals that:

*“Again, I want to emphasize the removal of lesson on massive open online classes or MOOCs and also distance learning. It is already a redundant lesson especially right now that the students are already experiencing it.” [Informant No. 2]*

Literature suggests that creating and producing contents through the use of multimedia is part of media literacy. On one hand, in a study conducted by Fedorov, et al (2016), media literacy education experts were asked on the important learning outcomes for media literacy education wherein they gave less importance on topics like identifying variety forms of media for school students.

Further, teachers have observed that the contents of the current MIL curriculum for senior high school does not conform on what is suggested by UNESCO on the competencies for media and information literacy. One informant mentioned comparison between the MIL curriculum and the MIL framework provided by UNESCO.

*“So my research and exposure to a lot of material from UNESCO, as I found out that it was UNESCO who framed or created the discipline. So we always go back to the source. So we have that habit of looking at the original source. So I think it was an opportunity for me to compare that is a sort of misalignment with the MIL that we have in the CG and the MIL framework by UNESCO.” [Informant No. 1]*

One teacher suggested that the MIL curriculum should follow the standards set by UNESCO as to what are the competencies for media and information literacy.

The informant suggested that:

*“So What I wanted to recommend for to the MIL curriculum guide or the DepEd is focus more on the key concepts of media and information literacy as provided by UNESO on what is their suggestion found in their curriculum on MIL. They have to follow that particular standard. So we don't have to make our own standard we have to follow what is provided to us by UNESCO on what is the global standard of MIL.” [Informant No. 2]*

Teachers' perception on the contents of the curriculum reveals that there are gaps in terms of defining the nature of the subject. The observations on the contents of the curriculum are products of teachers' study on the subject which proves that there is a difference on what the general idea of the subject to the lessons set by the curriculum.

**MIL curriculum lacks relevance.** Teachers have pointed out that the Media and Information Literacy curriculum lacks relevance in the present context citing the contents of the curriculum. According to the teachers, there may have a difference on the situation when the MIL curriculum guide was crafted. Teachers said that the current media landscape is quite different to the time it was first released.

*“If I recall, MIL was first introduced when they launched the Senior High School in the Philippines. Although 2016 was the first Senior High School implementation, the curriculum was already available before 2016. It may have different scenario during that time. Media have changed drastically for the past few years.” [Informant No. 3]*

*“In fairness it was created in 2013 but I hope they realize na, oh kailangan na talaga siyang baguhin. From 2013 hanggang ngayon marami nang nagbago. I am not saying it is not is relevant, but we have to do and upgrading or improving.”*

*(In fairness it was created in 2013 but I hope they realize that there is really a need for it to be changed. From 2013 up until now, many things have changed. I am not saying it is not is relevant, but we have to do and upgrading or improving.) [Informant No. 1]*

Further, one teacher has mentioned that the curriculum guide does not contain issues that are already present in the media landscape. Although, there were a mention of some specific issues, the most pressing one have yet to be written in the curriculum. Also, another teacher has mentioned the inclusion of threats in social media. According to the informants:

*“...the CG does not talk about disinformation, information disorder; those are not found in the CG. There are concepts that are important that are not found in the CG. That’s the problem.” [Informant No. 1]*

*“I did hope that the curriculum guide provided is that does respond to the threats right now of present in social media even in the mainstream media. I think it should have some reformation of the lessons that are being suggested in the curriculum.” [Informant No. 2]*

Another teacher has suggested that media and information literacy should be focused on the issues and threats in social media. The teacher thinks that contextualizing the curriculum on the realities of media would make it more useful for the students rather focusing on pure contents. According to that teacher:

*“It would be better if lessons are divided into specific issues like Fake News, bullying or computer addiction. These are the realities that need to be addressed. If the MIL curriculum is designed to respond to these specific issues at the same time teaching students how to apply MIL, I think this would make a lot of change.” [Informant No. 3]*

Teachers also pointed out that teaching MIL in Philippine context would be different because of the kind of society that the country has. One teacher has mentioned that since Philippine is a democratic country there is consideration of Freedom of Speech when teaching MIL to students. Another teacher has suggested the development of culture of discussion and debate among learners.

*“There is a need to focus on Philippine as a democratic country then ang kahalagahan nong MIL. .. If were in a different county baka magiiba ang pagtuturo natin. Tayo bilang Pilipino dapat maitahi natin siya. Sabin naman ng UNESO ang MIL is connected with empowering people to be able to exercise their democratic rights, there freedom of speech. Ang freedom of speech nakatali yan san freedom of the press. Ito yung mga konsepto na dapat bigyan ng pagpapahalaga.”*

*(There is a need to focus on Philippines as a democratic country then the importance of MIL... if I were in a different country I maybe teaching MIL differently. We as Filipino we should embed those. According to UNESCO, MIL is connected with empowering people to be able to exercise their democratic rights, there freedom of speech. Freedom of Speech is connected to Freedom of the Press. That is the concept that we need to give importance.) [Informant No. 1]*

*“So what I want to emphasize right now is according to the MIL curriculum of UNESCO is about the imposing policies, strategies, and guidelines, which is actually aligned with the sustainable development goals by the UN is to impose strategies on helping these students build a culture of discussion, a culture of debate and of critical thinking, about having our student being aware of these policies provided by our local government and of the United Nations.”*  
**[Informant No. 2]**

Teachers have acknowledged both the realities of the current society and the content of the curriculum. Teachers have recommended changes in the MIL curriculum for Senior High School considering on the context of the learners and the environment that they have.

**MIL Curriculum is just suggestive.** All the informants revealed that the curriculum guide provided by the Department of Education only suggests the lesson that they are going to tackle in their respective MIL classes. Although, there is a need for the teachers to follow the standard curriculum, it does not mean that they cannot modify the lessons of the subject.

Informants revealed that they use the curriculum guide in making their syllabus which is their guide on the lessons for their class. The lessons that the students have experienced in their MIL class are products of the modifications made by the teacher.

*“the curriculum guide serves as my basis in planning my lesson. In our case we make a syllabus which serves as a lesson plan. To be honest, I am not following the entire sequence and the contents of the curriculum guide provided by DepEd. I rearrange some lessons and inserted some topics, although I make sure that is still aligned with the learning competencies. It just a matter of contextualization”*  
**[Informant No. 3]**

Teachers also revealed that because of their status as private school teachers, they had an opportunity to contextualize the lesson based on what are outlined in the curriculum. Although teachers acknowledged that the curriculum is seen as the standard and it sets the minimum competencies. Teachers revealed that:

*“So we are developing our syllabus aligned with curriculum guide, in this case the MIL curriculum guide but as a private institution we are always encouraged to go beyond what is being offered by the CG, because for us the curriculum guide is the minimum. We would look at it as the minimum requirement. As a private institution you should give more than what is offered by the curriculum guide. So that was an opportunity for me to be able to enhance what the CG is offering.”*  
**[Informant No. 1]**

*“Somehow being employed in a private school, it is good for us to be able to tweak since we are encouraged by our management to tweak if it is something relevant that you can insert it in the curriculum guide provided by DepEd. At what extent? Yes I did some tweaking on the way I teach the concept following the CG, especially even if it is a core subject I have to have put some specificities since we are a special school. So, I had to tweak in the curriculum.”*  
**[Informant No. 2]**

Further, the interview results revealed that because teachers had the chance to do some modifications in the delivery of the lesson from the curriculum, it paved the way for them to discuss topics that are not found or specified in the curriculum guide such as Fake News, Privacy and Security, and Digital Overload. According to the teachers:

*“Yeah, since I did some contextualization on the lesson there was part that I was able to discuss these things. But you have to take note that is not found in the CG. It is now the challenge to the teacher to hit the learning competencies at the same time incorporate those timely topics like Fake News for example.”*  
**[Informant No. 3]**

Based on their responses, their situation as private school teachers allowed them highlight important lessons and develop essential skills needed by the students based on their contexts. Results reveal that teachers play an important role in the development of MIL skills of the students who are under the MIL subject. Teachers are seen to be curriculum implementers who decides and manages how the contents of the curriculum will be delivered.

The result of this interview provided insights on the Media and Information Literacy curriculum for Senior High School in the perspective of teachers. Teachers have identified some lapses and recognized the gaps of the curriculum. This proves that there is a need for the MIL curriculum to be reviewed to make it more relevant for the learners.

## **Responsiveness of MIL Curriculum**

A content analysis of the curriculum guide of Media and Information Literacy was done to determine the responsiveness of the SHS MIL curriculum to the social media information disorder. To carry out the analysis, learning competencies were extracted and analyzed based on their learning domain classification, media, and information prosumption category and responsiveness to information disorder.

**Learning competencies categories.** Table 20 presents results of categorizing the learning competencies of the Media and Information (MIL) curriculum. Three aspects were considered in categorizing the learning competencies which includes the learning domain, the MIL component, and the combination of both aspects.

Following the concept of Bloom (1956), learning competencies were classified based on three learning domains (Knowledge, Skills, Attitude). Results showed that most learning competencies in MIL curriculum are knowledge-based (56.90%). This implies that the curriculum is content-centered rather skill-centered. Although, it must be noted that nearly half of the learning competencies are geared towards the development of skills (41.20%) considered to be related to MIL. Further, there is only 1 (1.72) out of 58 learning competencies that is classified under affective domain.

Learning competencies were further classified based on their area of concentration following the concept of media and information prosumption. As mentioned in this paper, Media and Information Literacy is seen to be a combination of media and information consumption and production. Analysis of the curriculum

reveals that there is only a minimal difference between the percentage of learning competencies considered to be under consumption component and that of those classified as production learning competencies. It must be noted though that there are more competencies that are seen to develop or contribute to the consumption competencies of learners (53.45%) compared to competencies that are expected to enhance the students production competencies (46.55%).

Combining the concepts of learning domain and media and information prosumption, the learning competencies were further analyzed for deeper understanding. Results showed that knowledge competencies are nearly balanced between consumption (17 out 58) and production (16 out of 58). In contrast, there is a minimal gap between competencies under consumption skills (14 out of 58) and competencies classified as production skills (10 out 58).

On one hand, literature suggests that most MIL competencies (knowledge, skills, attitude) are more concentrated on consumption category. For instance, UNESCO (2013) presented eight media and information literacy competencies that can be classified as consumption competencies. The reason for this is that the consumption category covers two major MIL competencies which are access and use and understanding and evaluation.

Meanwhile, production competencies, as enumerated by UNESCO (2014), include only four MIL competencies which cover creation and monitoring competencies. This implies that there is a need to revisit the allocation of learning

competencies based on the key aspects of media and information literacy as recommended by UNESCO or other media literacy related organizations.

**Table 20. MIL Learning Competencies Categories**

<b>Categories</b>	<b>Frequency</b>	<b>Percentage</b>
<b><i>By Learning Domain</i></b>		
Knowledge	33	56.90%
Skill	24	41.38%
Attitude	1	1.72%
<b>TOTAL</b>	<b>58</b>	<b>100.00%</b>
<b><i>By MIL Component</i></b>		
consumption	31	53.45%
production	27	46.55%
<b>TOTAL</b>	<b>58</b>	<b>100.00%</b>
<b><i>Combined Categorization</i></b>		
Consumption Knowledge	17	29.31%
Consumption Skill	14	24.14%
Consumption Attitude	0	0.00%
Production Knowledge	16	27.59%
Production Skill	10	17.24%
<b>Production Attitude</b>	<b>1</b>	<b>1.72%</b>
<b>TOTAL</b>	<b>58</b>	<b>100.00%</b>

**Contents of MIL Curriculum.** By focusing the analysis on the learning competencies, common themes of the contents of SHS MIL curriculum guide were identified. Table 21 presents the themes extracted from the MIL learning competencies, their frequency and percentage.

Data show that there is a bigger percentage for learning competencies on multimedia production or 18 out 58 competencies (31.03%). Learning competencies enumerated in the curriculum are similar to each other. The only difference is that group of competencies were specified to each form of multimedia namely: text, visual, audio, manipulative and motion media. Competencies in this area includes design principle for multimedia production, process of multimedia production, and dimensions of multimedia forms (DepEd, nd) This confirms the perception of MIL teachers that the curriculum is loaded with lessons on multimedia production which in their perspective is deemed less priority in terms of developing the MIL skills of the students.

Following multimedia production are competencies on understanding and evaluating media content with 9 out 58 (15.52%) of the entire competencies. It must be noted though that of the nine competencies identified, six of which are situated in the context of multimedia production. These six learning competencies are part of the group of the competencies listed under the lessons on multimedia of the SHS MIL curriculum guide. These are separated from the others because it focuses on evaluating the reliability and validity of information of specific types of multimedia.

Contents on knowing what media, information and media and information literacy is were also identified from the analysis. Further, there are competencies that focus on issues related to media and issues and challenges to media. Most of these topics were generic and there is only one competency that specified some issues. This competency specified issues such as digital divide, addiction and bullying in one

learning competency. Other identified contents where forms and types of media, media and information ethics, and media innovation.

**Table 21. MIL Learning Competencies Contents**

<b>Themes</b>	<b>Frequency</b>	<b>Percentage</b>
Copyright and other related issues	3	5.17%
Forms and types of media	4	6.90%
Issues and challenges related to media and its impacts	6	10.34%
Media and information ethics	4	6.90%
Media habits	1	1.72%
Media innovation	3	5.17%
Multimedia production	18	31.03%
People and media	2	3.45%
Sources of media and information	1	1.72%
Understanding and evaluating media contents	9	15.52%
Understanding media, information, and media and information literacy	7	12.07%

**Responsiveness of the MIL Curriculum.** Analysis of the learning competencies was done using set of criteria to determine the responsiveness of the Media and Information Literacy curriculum. Table 22 presents the result of the responsiveness

analysis made on the 58 learning competencies on the senior high school MIL curriculum.

Results show that only 18 out of 58 learning competencies are considered to be significant learning competencies. This means that these competencies if developed by the learner could help him or her navigate social media and at the same time counter the threats of information disorder. Majority of the significant learning competencies are those involving evaluating media and information contents. There are competencies also pertaining to media and information ethics and other media-related issues such as copyright, bullying, netiquette, and any others. It must be noted also that most of these competencies identified as significant are skill-based which means this requires students to take actions.

On the other hand, more than half or 32 out of 58 learning competencies are classified as related competencies. These competencies are considered to be foundational competencies that will help develop the MIL skills of the learners. Although considered also to be important, these competencies will not directly develop the MIL skills needed by the learners to face the threats of information disorder existing in social media. Content of these related learning competencies covers topics on understanding media and information contents, examining the impacts of media and information to people and society, and knowledge on multimedia production.

Impractical competencies, on one hand, only account a minimal share (8 out of 58) of the entire list of learning competencies. These competencies, which are considered not contributory in the development of MIL skills, included contents on media innovation and various types of media.

**Table 22. Responsiveness of MIL Curriculum**

<b>Responsiveness Category</b>	<b>Frequency</b>	<b>Percentage</b>
Significant	18	31.03%
Related	32	55.17%
Impractical	8	13.79%
<b>Total</b>	<b>58</b>	<b>100.00%</b>

According to literature, a responsive curriculum is the one that addresses the evolving needs of the students and changing realities of the world (Ameyaw, 2019). Result of the analysis suggests that the Media and Information Literacy curriculum fails to respond to the current realities of the media landscape especially in social media where there is information pollution. The distribution between consumption competencies and production competencies must also be considered in the improvement of the curriculum.

## **Responsiveness of MIL Education to Information Disorder**

Results and discussion in the aspects of this study showed how Media and Information Literacy Education in Senior High School responded to the threats of Information Disorder in social media. In terms of the media and information literacy skills reported by the students, the results show that they are responsive to social media information disorder. By looking at their consumption skills and production skills, the students have exercised their media and information literacy skills in social media especially on dealing with issues relating to information disorder. This is backed up with their knowledge and awareness of the existence of threats of information disorder.

Analysis on the MIL curriculum guide says otherwise. The learning competencies on the Media and Information Literacy curriculum for Senior High School provided by the Department of Education was proved to have failed to respond to the existence of social media information disorder. This study found out that there are learning competencies that do not directly develop nor prepare the students to be critical media and information users and creators. This is supported by the perception of teachers who are considered to be main curriculum implementers. Teachers cited the time when the curriculum was crafted. Context during that time may be different with the realities of the current age.

There could be several reasons why there is a gap between the students' skill and the contents of the curriculum. Results of this study suggest that teachers were able to contextualize the lesson of MIL on the current realities of media today. The

role of teachers in implementing media literacy curriculum is seen as a key aspect of media literacy education but there is still a need for further studies considering the lack of researches on this area (Weninger, 2019). Having lessons on issues concerning information disorder such as privacy, bullying, and disinformation could be attributed to the development of MIL skills of the students. Several reasons may be cited as to how students reached a high level of MIL skills such as their social media usage.

## Chapter 5

### SUMMARY, CONCLUSION, RECOMMENDATIONS

#### Summary

This study investigated how responsive the media and information literacy education in senior high school to social media information disorder. As proposed by Frau-Meigs (2019), media and information literacy is the solution to counter the threats of information disorder. The study primarily studied three main areas namely: the MIL skills of the students, the perception of teachers on MIL curriculum, and the responsiveness of the MIL curriculum. Further, the study also examined students' social media usage and their knowledge on the threats of information disorder.

Social media was focused on this study because of the increasing social media activity among internet users, especially high school students. The study found out that high school students use Facebook, Facebook Messenger, and YouTube several times a day. Among the main reasons cited by the students on using social media are for communication, information, and entertainment. Survey results also showed that senior high school students are knowledgeable on the existence of issues and threats of information disorder such as cybercrimes, stealing of private information and fake news (misinformation, disinformation).

The level of media and information literacy skills was assessed in this study using a self-reported survey questionnaire. Media and information literacy skills was operationalized in this study as the combination of consumption and production skills

or known as prosumption skills. Results show that senior high school students, who have taken MIL classes, have high consumption and production skills. The results proved that students have high prosumption skills by performing appropriate activities in social media.

Perception of teachers on the media and information literacy curriculum were sought. Interview results revealed three common themes pointing out to the MIL curriculum provided by the Department of Education. These themes are: 1) MIL curriculum contents are misaligned; 2) MIL curriculum lacks relevance; and 3) MIL curriculum is suggestive. This suggests that teachers are aware of the gaps of the curriculum. Further, the interview revealed that teachers have devised solutions to make the curriculum responsive for the learners.

Analysis of the learning competencies outlined in the curriculum proved that the media and information literacy curriculum for senior high school is not responsive to threats of social media information disorder. Although, majority of the learning competencies are considered to be related, a lesser percentage is deemed to be significant in developing the media and information literacy skills that will help counter the threats of information disorder in social media.

## **Conclusion**

Based on the result of the study, the Media and Information Literacy education in Senior High School is proved to be not fully responsive to the threats of social media information disorder. Students have reported a high level of prosumption skills which makes them capable of recognizing and countering the threats of information disorder in social media. This can be attributed to teachers who have contextualized the implementation of MIL curriculum in their classes. Teachers have recognized the lapses of the curriculum and have devised solutions to make it more relevant.

On the contrary, the Media and Information curriculum provided by the Department of Education for Senior High School was found to be unresponsive to the current media and information situation specifically to threats of social media information disorder. This proves that there is a need for the MIL curriculum to be revised and updated to make it align with the context of the present times.

## **Recommendations**

The study assessed the media and information literacy skills of the students using a survey-questionnaire. The survey is limited to self-reported skills of the students with regards to their media and information literacy skills. Future research could investigate the actual media and information literacy skills of the students based on their observed or performed competencies.

Similar research undertakings could also deal on the correlation between social media usage and media and information literacy skills. Also, the link between knowledge media-related issues and threats with their media and information literacy skills can be studied. These types of information are valuable for other studies geared towards the development media and information literacy skills of the students.

Teachers' perception on the MIL curriculum reveals that they have modified their delivery of the lesson which is apart from the suggested contents of the curriculum. This could be a springboard for further research on the strategies of teachers in teaching MIL and its effectiveness. These studies could check on the impacts of teaching MIL to the development of MIL skills of the students.

Based on the result of this study, the revision and updating of the Media and Information Literacy curriculum guide for Senior High School is extremely recommended. The removal of competencies on multimedia production must be lessened. Instead, the evaluation of media and information texts for specific types of media such as film, advertisements, or news should be given more importance. The inclusion of specific media and information-related issues such as disinformation, cyberbullying, internet trolls and data mining is recommended. The integration of these topics to curriculum should be centered on the awareness and the development of skills on how to deal with these issues.

The allocation between the knowledge and skills competencies must also be considered in redesigning the curriculum. Skill-based competencies must be given emphasis considering the nature of the subject. Similar consideration must be applied in determining the distribution of competencies for consumption and production. In terms of production, the inclusion of competencies on how students will engage in socio-civic activities is recommended.

In a macro scale, a Media and Information Literacy Framework designed in Philippine context is deemed necessary to set the direction for media and information literacy education across all levels in the education system. It is suggested to benchmark from the Media and Information Literacy Framework to achieve a cohesive structure for MIL education in the country. This developed framework would be used as a basis in designing the Media and Information Literacy curriculum for Senior High School that is responsive to the current media and information sphere.

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## **ANNEXES**

## **ANNEX A**

**MEDIA AND INFORMATION LITERACY SKILLS OF SENIOR  
HIGH SCHOOL STUDENTS SURVEY QUESTIONNAIRE**

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*Dear Respondents,*

*This questionnaire is a part of a study that is intended to discover your social media usage, knowledge on information disorder and level of media and information literacy (MIL) skills. This research will help in improving the MIL curriculum prescribed by the Department of Education. Your answers on this instrument would be of great help. Rest assured that your responses will be treated with great confidentiality.*

*The Researcher*

Please mark ✓ (check) for your response on each item.

1. Sex            \_\_\_ Male \_\_\_ Female
2. Age            \_\_\_ 15 \_\_\_ 16 \_\_\_ 17 \_\_\_ 18 \_\_\_ Above 18
3. Grade Level   \_\_\_ 11 \_\_\_ 12

**A. Social Media Usage**

1. What technology do you use to access social media sites?

- \_\_\_ Desktop computer
- \_\_\_ Laptop/Netbook
- \_\_\_ Tablet/iPad
- \_\_\_ Mobile phone/Smart phone
- \_\_\_ others (please specify)

2. What is your main source of internet connection?

- \_\_\_ WiFi Connection
- \_\_\_ Wired Connection/Broadband DSL
- \_\_\_ Mobile Data
- \_\_\_ others (please specify)

*(continued on next page)*

3. What social media sites do you use?

Social media sites	Frequency of use	Time spent
<b>Facebook</b> <input type="checkbox"/> Yes <input type="checkbox"/> No	<input type="checkbox"/> Very Frequent (several times) <input type="checkbox"/> Always (at least once a day) <input type="checkbox"/> Sometimes (few times a week) <input type="checkbox"/> Rare (less often) <input type="checkbox"/> Never	<input type="checkbox"/> less than 30 minutes <input type="checkbox"/> 30 to 60 minutes <input type="checkbox"/> 1-2 hours <input type="checkbox"/> 3-5 hours <input type="checkbox"/> more than 5 hours
<b>Facebook Messenger</b> <input type="checkbox"/> Yes <input type="checkbox"/> No	<input type="checkbox"/> Very Frequent (several times) <input type="checkbox"/> Always (at least once a day) <input type="checkbox"/> Sometimes (few times a week) <input type="checkbox"/> Rare (less often) <input type="checkbox"/> Never	<input type="checkbox"/> less than 30 minutes <input type="checkbox"/> 30 to 60 minutes <input type="checkbox"/> 1-2 hours <input type="checkbox"/> 3-5 hours <input type="checkbox"/> more than 5 hours
<b>Instagram</b> <input type="checkbox"/> Yes <input type="checkbox"/> No	<input type="checkbox"/> Very Frequent (several times) <input type="checkbox"/> Always (at least once a day) <input type="checkbox"/> Sometimes (few times a week) <input type="checkbox"/> Rare (less often) <input type="checkbox"/> Never	<input type="checkbox"/> less than 30 minutes <input type="checkbox"/> 30 to 60 minutes <input type="checkbox"/> 1-2 hours <input type="checkbox"/> 3-5 hours <input type="checkbox"/> more than 5 hours
<b>Pinterest</b> <input type="checkbox"/> Yes <input type="checkbox"/> No	<input type="checkbox"/> Very Frequent (several times) <input type="checkbox"/> Always (at least once a day) <input type="checkbox"/> Sometimes (few times a week) <input type="checkbox"/> Rare (less often) <input type="checkbox"/> Never	<input type="checkbox"/> less than 30 minutes <input type="checkbox"/> 30 to 60 minutes <input type="checkbox"/> 1-2 hours <input type="checkbox"/> 3-5 hours <input type="checkbox"/> more than 5 hours
<b>Snapchat</b> <input type="checkbox"/> Yes <input type="checkbox"/> No	<input type="checkbox"/> Very Frequent (several times) <input type="checkbox"/> Always (at least once a day) <input type="checkbox"/> Sometimes (few times a week) <input type="checkbox"/> Rare (less often) <input type="checkbox"/> Never	<input type="checkbox"/> less than 30 minutes <input type="checkbox"/> 30 to 60 minutes <input type="checkbox"/> 1-2 hours <input type="checkbox"/> 3-5 hours <input type="checkbox"/> more than 5 hours

*(continued on next page)*

<b>Tiktok</b> <input type="checkbox"/> Yes <input type="checkbox"/> No	<input type="checkbox"/> Very Frequent (several times) <input type="checkbox"/> Always (at least once a day) <input type="checkbox"/> Sometimes (few times a week) <input type="checkbox"/> Rare (less often) <input type="checkbox"/> Never	<input type="checkbox"/> less than 30 minutes <input type="checkbox"/> 30 to 60 minutes <input type="checkbox"/> 1-2 hours <input type="checkbox"/> 3-5 hours <input type="checkbox"/> more than 5 hours
<b>Twitter</b> <input type="checkbox"/> Yes <input type="checkbox"/> No	<input type="checkbox"/> Very Frequent (several times) <input type="checkbox"/> Always (at least once a day) <input type="checkbox"/> Sometimes (few times a week) <input type="checkbox"/> Rare (less often) <input type="checkbox"/> Never	<input type="checkbox"/> less than 30 minutes <input type="checkbox"/> 30 to 60 minutes <input type="checkbox"/> 1-2 hours <input type="checkbox"/> 3-5 hours <input type="checkbox"/> more than 5 hours
<b>WeChat</b> <input type="checkbox"/> Yes <input type="checkbox"/> No	<input type="checkbox"/> Very Frequent (several times) <input type="checkbox"/> Always (at least once a day) <input type="checkbox"/> Sometimes (few times a week) <input type="checkbox"/> Rare (less often) <input type="checkbox"/> Never	<input type="checkbox"/> less than 30 minutes <input type="checkbox"/> 30 to 60 minutes <input type="checkbox"/> 1-2 hours <input type="checkbox"/> 3-5 hours <input type="checkbox"/> more than 5 hours
<b>WhatsApp</b> <input type="checkbox"/> Yes <input type="checkbox"/> No	<input type="checkbox"/> Very Frequent (several times) <input type="checkbox"/> Always (at least once a day) <input type="checkbox"/> Sometimes (few times a week) <input type="checkbox"/> Rare (less often) <input type="checkbox"/> Never	<input type="checkbox"/> less than 30 minutes <input type="checkbox"/> 30 to 60 minutes <input type="checkbox"/> 1-2 hours <input type="checkbox"/> 3-5 hours <input type="checkbox"/> more than 5 hours
<b>YouTube</b> <input type="checkbox"/> Yes <input type="checkbox"/> No	<input type="checkbox"/> Very Frequent (several times) <input type="checkbox"/> Always (at least once a day) <input type="checkbox"/> Sometimes (few times a week) <input type="checkbox"/> Rare (less often) <input type="checkbox"/> Never	<input type="checkbox"/> less than 30 minutes <input type="checkbox"/> 30 to 60 minutes <input type="checkbox"/> 1-2 hours <input type="checkbox"/> 3-5 hours <input type="checkbox"/> more than 5 hours
<b>Others, please specify</b> <hr/>	<input type="checkbox"/> Very Frequent (several times) <input type="checkbox"/> Always (at least once a day) <input type="checkbox"/> Sometimes (few times a week) <input type="checkbox"/> Rare (less often) <input type="checkbox"/> Never	<input type="checkbox"/> less than 30 minutes <input type="checkbox"/> 30 to 60 minutes <input type="checkbox"/> 1-2 hours <input type="checkbox"/> 3-5 hours <input type="checkbox"/> more than 5 hours

4. What are your reasons in using social media sites?

Statements	Highly Applies	Applies	Does Not Apply
1. To be updated on news, information and significant events about people and places	_____	_____	_____
2. To communicate with other people through messages and exchange of information	_____	_____	_____
3. To be entertained through watching videos clips, movies, TV shows and other content	_____	_____	_____
4. To gain new knowledge to might useful through tutorials and instructional videos	_____	_____	_____
5. To check, sell or buy new products and services shared online	_____	_____	_____
6. To join other similar groups with similar interests and connect to new people	_____	_____	_____
7. To join multiplayer games online or play any other online games available on the net	_____	_____	_____
8. To document life events and milestone by posting status and uploading photos, videos	_____	_____	_____
9. To share thoughts, opinion, views and feeling on certain issues and participate in discussions to raise certain cause	_____	_____	_____
10. To manage online presence by updating personal information shared on site's profile	_____	_____	_____
11. To be updated on schools works and use the platform for information sharing and communicate with classmates and teachers.	_____	_____	_____
12. To build network of followers by having a huge number of likes and followers to become famous online	_____	_____	_____

*(continued on next page)*

## B. Knowledge on Threats and Risks of Information Disorder

The following are statements that will check on your knowledge regarding issues and threats of Information Disorder. If you feel agree or disagree on the statements, select your response based on the five scale available.

Statements	Strongly Agree	Agree	Neutral	Disagree	Strongly Disagree
1. I am aware that too much use of social media could lead to internet addiction.	_____	_____	_____	_____	_____
2. I know that too much exposure to social media could lead to interruption of my concentration.	_____	_____	_____	_____	_____
3. I know that exposing sensitive information about a person is a violation of one's privacy.	_____	_____	_____	_____	_____
4. I am aware that the personal information I share online could be used for fraud and theft.	_____	_____	_____	_____	_____
5. I know that hacking and stealing private information are considered as cybercrimes and punishable by law.	_____	_____	_____	_____	_____
6. I am aware that my social media activity is tracked and used together with other user to produce collection social media users' database.	_____	_____	_____	_____	_____
7. I am aware of the presence of false information and fake news on social media and how they proliferate.	_____	_____	_____	_____	_____
8. I know the kinds characteristics of, purpose and impacts of fake news or false information on social media.	_____	_____	_____	_____	_____
9. I am aware that cyberbullying and any other form of hate speech on social media are punishable by law.	_____	_____	_____	_____	_____
10. I am aware of the presence of trolls on social media who aims to elicit anger and deceive people's opinion or views on certain issue.	_____	_____	_____	_____	_____
11. I am aware of the presence of pornographic contents on social media.	_____	_____	_____	_____	_____
12. I know that sharing harmful content such as pornographic material could endanger social media users who are minor.	_____	_____	_____	_____	_____

(continued on next page)

### C. Level of Media and Information Literacy Skills

The following are statements that will assess your Media and Information Literacy skills. Each statement presents action or activity that you do while consuming and producing media and information on social media. Respond to each statement by checking on the how often you do or apply these actions.

Statements	Always	Often	Sometimes	Rarely	Never
<b>CONSUMPTION SKILLS</b>					
29. I identify the source of information or news that I read online.	_____	_____	_____	_____	_____
30. I check the website, author, topic, date and other elements related to the information I read online.	_____	_____	_____	_____	_____
31. I follow and like social media pages or websites that are verified and credible.	_____	_____	_____	_____	_____
32. I view other social media pages or website to search and read information on an issue or topic.	_____	_____	_____	_____	_____
33. I limit my social media use only to times where there is a need to.	_____	_____	_____	_____	_____
34. I control my privacy settings and hold personal information as private.	_____	_____	_____	_____	_____
35. I read or view first the posts I encounter online before making any conclusion and taking actions.	_____	_____	_____	_____	_____
36. I can detect if the information shared online can be damaging to one's identity or to the public in general	_____	_____	_____	_____	_____
37. I find meaning from the information shared online and check with my own opinion.	_____	_____	_____	_____	_____
38. I ask someone to check and interpret an information/ news I read online.	_____	_____	_____	_____	_____
39. I can detect if the image, video, or graphics shared online is manipulated or misleading.	_____	_____	_____	_____	_____
40. I can differentiate news from opinion, press release from advertisements and other media genres.	_____	_____	_____	_____	_____

*(continued on next page)*

Statements	Always	Often	Sometimes	Rarely	Never
41. I use criteria to check if the information shared online is true or credible.	_____	_____	_____	_____	_____
42. I identify the purpose of a post or information shared online.	_____	_____	_____	_____	_____
43. I identify the issue or topic communicated in a post shared online.	_____	_____	_____	_____	_____
44. I validate and check the source of information I read online.	_____	_____	_____	_____	_____
45. I compare and check similar information from other sources to validate the information.	_____	_____	_____	_____	_____
46. I can verify the information shared online if it's factual, misleading or fake.	_____	_____	_____	_____	_____

<b>PRODUCTION SKILLS</b>	Always	Often	Sometimes	Rarely	Never
47. I review first the information's truthfulness before sharing or posting it online.	_____	_____	_____	_____	_____
48. I consider other people identity, belief, and other aspects when sharing information online.	_____	_____	_____	_____	_____
49. I consider copyright and plagiarism and do citation if needed when sharing information online.	_____	_____	_____	_____	_____
50. I do not give personal and private information such as cellphone number, date of birth and passwords when making post online.	_____	_____	_____	_____	_____
51. I consider the impacts of my posts to other people before sharing it online.	_____	_____	_____	_____	_____
52. I use my own identity when interacting to people online.	_____	_____	_____	_____	_____
53. I engage in online discussion on relevant and timely topics online.	_____	_____	_____	_____	_____
54. I choose the right platform in social media where I can share information and express my thoughts.	_____	_____	_____	_____	_____
55. I report social media posts that are considered harmful such those containing hate speech and pornographic contents.	_____	_____	_____	_____	_____
56. I share corrections on information I find erroneous online.	_____	_____	_____	_____	_____

*END OF THE QUESTIONNAIRE*

## **ANNEX B**

## INTERVIEW SCHEDULE

### GUIDE QUESTIONS ON PERCEPTIONS OF SENIOR HIGH SCHOOL TEACHERS ON MEDIA LITERACY EDUCATION

#### I. Profile of the teachers

1. How many years have you been teaching?
2. How many years have you experienced teaching Media and Information Literacy in Senior High School?
3. Have you had prior knowledge on Media and Information Literacy before teaching it in Senior High School? How that situation affected or helped you?
4. Can you describe your MIL class? What lessons do you usually teach? What activities do you employ in teaching MIL to your students?
5. Are you familiar with the term **Information Disorder** or do you have any idea regarding this phenomenon? Can you share your insights on this term?
6. Are you familiar with these topics? Have you discussed the following topics/issues in your MIL class?
  - Digital Distraction
  - Digital Overload
  - Internet Addiction
  - Privacy and Security
  - Hacking/Phishing
  - Internet Trolls
  - Fake News (Misinformation, Disinformation)
  - Cyberbullying
  - Data Mining
  - Spread of Pornographic Contents

#### II. Perception of Teachers on MIL Education

1. What is your own idea of Media and Information Literacy? What do you think is the goal of the subject MIL?
2. What is the relevance of offering Media and Information Literacy to Senior High School students?
3. In your perception, how would Media and Information Literacy subject help students navigate social media and counter its threats?
4. Are you familiar with the contents of the SHS Media and Information Literacy curriculum guide? How do you utilize the curriculum guide in the delivery of your lesson?
5. Do you see the current Media and Information Literacy Curriculum Guide by the Department of Education as relevant? Does it respond to the threats that are present in social media?
6. What are the lessons or competencies in the current Media and Information Literacy Curriculum you consider the most important for the learners to have considering the current media landscape that we have?

### **Recommendations on MIL curriculum**

1. Are there any lessons or competencies that you feel must be added to current SHS Media and Information Literacy Curriculum? What are those?
2. If you are to suggest changes in the current Media and Information Literacy Curriculum, what are your recommendations and point of revisions?

## **ANNEX C**

# LEARNING COMPETENCY ANALYSIS MATRIX

LEARNING COMPETENCIES		CODE	LEARNING DOMAIN CATEGORY	PROSUMPTION CATEGORY	COMBINED CATEGORY	RESPONSIVENESS
1	describes how communication is affected by media and information	UM	Knowledge	consumption	Consumption Knowledge	Related
2	identifies the similarities and differences of media literacy, information literacy, and technology literacy	UM	Knowledge	consumption	Consumption Knowledge	Impractical
3	editorializes the value of being a media and information literate individual	UM	Skill	consumption	Consumption Skill	Related
4	identifies characteristics /describes a responsible uses and competent producers of media and information	ME	Knowledge	production	Production Knowledge	Significant
5	shares to class media habits, lifestyles and preferences	MH	Skill	consumption	Consumption Skill	Related
6	identifies traditional media and new media and their relationships	MT	Knowledge	consumption	Consumption Knowledge	Impractical
7	editorializes the roles and functions of media in democratic society	UM	Knowledge	consumption	Consumption Knowledge	Impractical
8	searches latest theory on information and media	UM	Skill	consumption	Consumption Skill	Related
9	defines information needs, locates, accesses, assesses, organizes, and communicates information	UM	Knowledge	consumption	Consumption Knowledge	Related
10	demonstrates ethical use of information	ME	Skill	production	Production Skill	Significant
11	classifies contents of different media types	MT	Knowledge	consumption	Consumption Knowledge	Related
12	defines media convergence through current examples	MT	Knowledge	consumption	Consumption Knowledge	Impractical

		UM	Knowledge	consumption	Consumption Knowledge	Imprecise
13	discusses to class on how a particular individual/ or society is portrayed in public using different type of media					
14	compares potential sources of media and information	SM	Knowledge	consumption	Consumption Knowledge	Significant
15	interviews an elder from the community regarding indigenous media and information resource	MT	Skill	production	Production Skill	Related
16	evaluates everyday media and information with regard to with codes, convention, and messages; in regards with audience, producers, and other stakeholders	UE	Skill	consumption	Consumption Skill	Significant
17	produces and assesses the codes, convention, and messages of a group presentation	UE	Skill	consumption	Consumption Skill	Significant
18	puts into practice their understanding of the intellectual property, copy right, and fair use guidelines	CP	Skill	production	Production Skill	Significant
19	demonstrates proper conduct and behavior online (netiquette, virtual self)	ME	Skill	consumption	Consumption Skill	Significant
20	puts into action their personal resolve to combat digital divide, addiction, and bullying	MI	Skill	production	Production Skill	Significant
21	explains copyright, fair use, etc. vis-a-vis human rights	CP	Knowledge	consumption	Consumption Knowledge	Significant
22	discusses current issues related to copyright vis-à-vis gov't./provide sectors actions	CP	Knowledge	production	Production Knowledge	Significant
23	explains actions to promote ethical use of media and information	ME	Knowledge	consumption	Consumption Knowledge	Significant
24	enumerates opportunities and challenges in media and information	MI	Knowledge	production	Production Knowledge	Related
25	realizes opportunities and challenges in media and information	MI	Attitude	production	Production Attitude	Related
26	researches and cites recent examples of the power of media and information to affect change	MI	Knowledge	consumption	Consumption Knowledge	Related
27	evaluates current trends in media and information and how it will affect/how they affect individuals and the society as a whole	UE	Skill	consumption	Consumption Skill	Significant

		Min	Knowledge	consumption	Consumption Knowledge	Impactical
28	describes massive open on-line			consumption	Consumption Knowledge	Impactical
29	predicts future media innovation	MIn	Knowledge	consumption	Consumption Knowledge	Impactical
30	synthesizes the overall knowledge about media and information with skills for producing a prototype of what the learners think is a future media innovation	MIn	Knowledge	production	Production Knowledge	Impactical
31	synthesizes the overall implication of media and information to an individual (personal, professional, educational, and others) and the society as a whole (economic, social, political, educational, and others)	MI	Knowledge	consumption	Consumption Knowledge	Related
32	Cites studies showing proofs of positive and negative effects of media, information on individual and society.	MI	Skill	consumption	Consumption Skill	Related
33	describes the different dimensions of people media	PM	Knowledge	consumption	Consumption Knowledge	Related
34	categorizes different examples of people and state reasons for such categorization	PM	Knowledge	consumption	Consumption Knowledge	Related
35	describes the different dimensions of text information and media	MMP	Knowledge	production	Production Knowledge	Related
36	comprehends how text information and media is/are formally and informally produced, organized, and disseminated	MMP	Knowledge	production	Production Knowledge	Related
37	evaluates the reliability and validity of text information and media and its/ their sources using selection criteria	UE	Skill	consumption	Consumption Skill	Significant
38	produces and evaluates a creative text- based presentation using design principle and elements	MMP	Skill	production	Production Skill	Related
39	describes the different dimensions of visual information and media	MMP	Knowledge	production	Production Knowledge	Related
40	comprehends how visual information and media is/are formally and informally produced, organized, and disseminated	MMP	Knowledge	production	Production Knowledge	Related

	UE	Skill	consumption	Consumption Skill	Significant
41					
42	MMP	Skill	production	Production Skill	Related
43	MMP	Knowledge	production	Production Knowledge	Related
44	MMP	Knowledge	production	Production Knowledge	Related
45	UE	Skill	consumption	Consumption Skill	Significant
46	MMP	Skill	production	Production Skill	Related
47	MMP	Knowledge	production	Production Knowledge	Related
48	MMP	Knowledge	production	Production Knowledge	Related
49	UE	Skill	consumption	Consumption Skill	Related
50	MMP	Skill	production	Production Skill	Related
51	MMP	Knowledge	production	Production Knowledge	Related
52	MMP	Knowledge	production	Production Knowledge	Related
53	UE	Skill	consumption	Consumption Skill	Significant

		MMP	Skill	production	Production Skill	Related
54	produces and evaluates a creative manipulative-based presentation using design principle and elements					
55	describes the different dimension of multimedia information and media	MMP	Knowledge	production	Production Knowledge	Related
56	comprehends how multimedia information and media is /are formally and informally produced, organized, and disseminated	MMP	Knowledge	production	Production Knowledge	Related
57	evaluates the reliability and validity of motion information and media and its/their sources using selection criteria	UE	Skill	consumption	Consumption Skill	Significant
58	synthesizes overall knowledge about different information and media sources by producing and subsequently evaluating a creative multimedia form (living museum, electronic portfolio, others)	MMP	Skill	production	Production Skill	Significant