INFLUENCE OF INFORMATION SKILLS AND MEDIA LITERACY INSTRUCTION TO MISINFORMATION EVALUATION SKILLS AMONG COLLEGE STUDENTS

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ABSTRACT

Accurate information is vital to the lives of every student. Thus, being able to distinguish between correct and erroneous information is a necessity. Hence, this descriptive-correlation research aimed to determine whether information skills and media literacy instruction can significantly influence the misinformation evaluation skills. The researchers administered adapted and patterned survey questionnaires to one hundred forty-one (141) BLIS college students from Regions XI and XII. Results revealed that students-respondents have high proficiency in information skills, namely computer skills, information literacy skills, and browsing and navigation skills. They have also received outstanding media literacy instruction, and they are highly skilful in evaluating and identifying misinformation. Moreover, using Multiple Linear Regression Analysis, findings revealed that both of the two independent variables, namely Information Skills and Media Literacy Instruction, can significantly influence the respondents' misinformation evaluation skills. These findings serve as basis to further strengthen the students' information skills, and the media literacy instruction as these variables positively affect college students' skills in evaluating misinformation.

***Keywords**: Library and information science, Misinformation, Fake news, Descriptive-correlation, Philippines*

INTRODUCTION

Accurate, reliable, and complete information is vital to the success of each one of us. Specifically, in the academe, information is pivotal because faculty and students use information daily in every way possible, in their various academic endeavours (Reid-Smith, 2012; Kumah, 2015). Information also helps in attaining effectiveness in educational systems (Kumah, 2015). However, with the rise of misinformation, the academic circle is concerned.

Information consumers like students have difficulty in distinguishing real or fake information. Stanford University conducted a study from middle school to college and found out that students have a hard time identifying real and unreal stories (Shellenbarger, 2016). Moreover, they have difficulty differentiating quality information sources from questionable ones (Stecula, 2017). In addition, they are most likely to trust what they read on social media without checking and verifying the credibility of the information and its source (Safieddine, Dordevic, & Pourghomi, 2017). What happened in Mindanao, specifically Region XI is a proof of the said findings. It was evident that many people (educated or not) were misled by the false tsunami alert, after the 6.3 magnitude earthquake had struck the said region. El Rayess, et al. (2018) also noted that students might be well-versed in technology, the internet, and social media. However, their skills in assessing information and identifying fake, inaccurate, and deceptive

sources are still questionable. These pieces of evidence affirmed that students are easily fooled and tricked by misinformation.

Due to the vast proliferation of information with the advent of technology, it is difficult to determine what is real and not. Thus, this study came to light to determine if the information skills and media literacy instruction can help students effectively identify misinformation. Since there has been no research conducted in the said area about how information skills and media literacy instruction influence the evaluation of misinformation among college students, this research attempts to fill the literature gap. The study's findings will also serve as a basis to create an effective media literacy instruction to develop the library science students' information skills as they will become information professionals in the future wherein they will play a significant role in educating the next generation.

Theoretical and Conceptual Framework

This study is anchored on the Seven Pillars of Information Skills Model developed by The Society of College, National and University Libraries (SCONUL, 1999).

Information Skills Model explains that information skills signify competent students and information literate person. These seven pillars of information skills are (1) the ability to recognize the need for information; (2) ability to distinguish ways of addressing gap; (3) ability to construct strategies for locating; (4) ability to identify and access; (5) ability to compare and evaluate; (6) ability to organize, apply and communicate; (7) ability to synthesize and create. This model emphasized that skills in higher education is a combination of information technology skills and information skills. It demonstrates the importance of both information literacy and digital literacy in becoming an information literate person who can effectively use information technology, and at the same time, can think critically about the entire information enterprise.

In the context of this study, it emphasized that both information skills and media literacy instruction are essential in evaluating misinformation. When an information literate person possessed the seven pillars of information skills and has received effective media literacy instruction, they can effectively compare and evaluate information at hand. Moreover, the media literacy instruction helps them become digital literate; hence, they would be able to know how to interpret media messages and evaluate media content. Employing information skills and media literacy instruction, a college student can successfully evaluate mediated information such as misinformation.

Figure 1 shows the study's conceptual framework that depicts how information skills and media literacy instruction are associated with misinformation evaluation skills. The independent variables are information skills and media literacy instruction that serve as bases to influence misinformation evaluation skills.

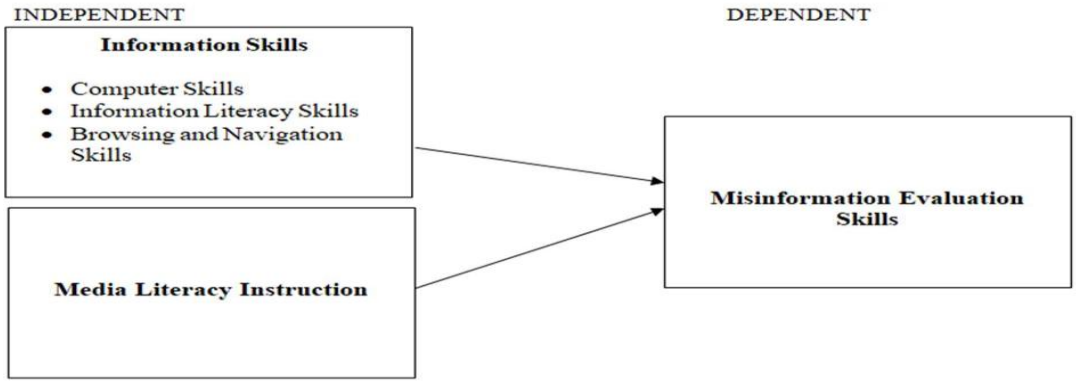

Fig. 1. Conceptual framework of the study

Statement of the problem

The study aimed to determine the influence of information skills and media literacy instruction on misinformation evaluation skills among college students.

Specifically, this study sought answers to the following questions:

1. What is the level of misinformation evaluation skills of college students?
2. What is the level of information skills of college students in terms of:
   - 2.1 Computer skills;
   - 2.2 Information literacy skills; and
   - 2.3 Browsing and navigation skills?
3. What is the extent of media literacy instruction of college students?
4. Can the level of information skills and the extent of media literacy instruction significantly influence the college students' misinformation evaluation skills?

Null Hypothesis

The following null hypothesis was formulated and tested at 0.05 level of significance:

Ho_1 The level of information skills and extent of media literacy instruction cannot significantly influence the college students' misinformation evaluation skills.

Review of Related Literature

This section presents thoroughly researched and verified information covering the information skills, media literacy instruction, and misinformation evaluation skills.

Information Skills

Nowadays, technological advancements are rapid and information environments are quickly changing. Hence, students must be equipped with skills to surf the ocean of information. It is essential to develop information skills to cope with today's digital problems like misinformation (Keshavarz, 2014). Skills such as ability to locate, access correctly, critically evaluate, and use the information are necessary for lifelong learning (Thanuskodi, 2019), and in using today's electronic information resources (Israel & Nsibirwa, 2018). Moreover, information skills are crucial for detecting misinformation. People with better information skills evaluate the information's quality before they believe it, while people with lower information skills trust the data quickly (Lucassen, et al., 2012). Thus, it is evident that information skills are necessary for the critical appraisal of the retrieved information.

In this study, there are three indicators of the information skills variable. These include computer skills, information literacy skills, and browsing and navigation skills. The following literature and studies discuss each indicator's importance to the information consumers, particularly students.

Computer Skills. Computer skills, as indicator of information skills, are considered essential in students' academic life. Results revealed that the higher the students' computer skills, the better their use of the internet and electronic resources (Adeagbo, 2011; Ismaila, 2019; Israel, 2015). While the students with inadequate computer skills lead to not fully retrieving e-resources (Abubakar & Adetimirin, 2013). Moreover, computer literate students perform better academically than those non-computer literate, because computer skills enhance the academic performance of students (Aitokhuehi & Ojogho, 2014).

Information Literacy Skills. As the second indicator of information skills, information literacy skills help information consumers like students find, seek, and use information rightfully. A study on banking personnel in Ogun State, Nigeria, revealed that having information literacy skills facilitates them to seek and identify the information they need, find and identify information sources, retrieve data from relevant sources, and evaluate the retrieved information (Bello, et al., 2016). Likewise, a study at Lagos State revealed that information literacy skills significantly predict medical students' use of information sources. They find the use of print and e-resources easy because they found information literacy skills to

be high (Akpovire, et al., 2019). Adeleke and Emeahara (2016) recorded the same findings that there is a significant relationship between information literacy skills and electronic resource usage among the University of Ibadan's postgraduate students. Moreover, information literacy skills influence undergraduate students' electronic information resources in Nigeria (Ismaila, 2019). These findings implied that information literacy skills help one to become expert in locating, accessing and evaluating quality electronic information.

Browsing and Navigation Skills. Browsing and navigation skills as the third indicator of information skills enable an individual to expertly browse and navigate the internet in accessing information using different browsers and search engines. Yebowaah (2018) found that students' ability to access the internet positively influences their academic performance. Browsing and navigation skills represent fluency on the internet and its various features and functions. In contrast, when a person does not possess the necessary skills in browsing and navigating the internet, they would have a difficult time working in today's era. The study in Delta State University Distance Learning Centers revealed that some respondents could not navigate and access relevant information and download course work materials because of the low level of Information and Communication Technology (ICT) literacy skills (Oyeniran & Olajide, 2016). This result signifies that ICT literacy skills such as internet browsing and navigation skills are essential in seeking, downloading/uploading, and using relevant information from online resources to improve one's academic performance.

Overall, information skills, which comprise computer skills, information literacy skills, and browsing and navigation skills, are fundamental in students' academic life since they help them perform better academically. Comparatively, information skills are essential in evaluating and distinguishing quality and relevant information. These skills help the students critically evaluate the quality and credibility of information before trusting and using the obtained information for their assignments, research, and personal interests.

Media Literacy Instruction . Today, information consumers access their information through complex combinations of text, images, and sounds. To be knowledgeable and skilful in navigating this complex media environment is inevitability (Montana Office of Public Instruction, 2017). Hence, media literacy instruction is an essential tool. Media literacy instruction refers to the education or teaching that trains and teaches students to use media devices properly, understand media languages, and create, use, present, and evaluate media content. This media literacy instruction is a curriculum that introduces learners to engage in the media critically (Leaning, 2019). Media literacy instruction helps to develop critical thinking and active participation in the media culture. The goal is to make the students become independent learners by teaching them to access, analyze, evaluate, and create media (Montana Office of Public Instruction, 2017).

Media literacy instruction has several benefits to students in their academic endeavours. One significant advantage is that the said instruction enables students to become independent learners. A study in Ateneo de Manila Grade School revealed that the Media Instruction Program is an excellent intervention to teach students to become independent users of information (Dela Cruz, 2016). It was also shown in the survey that college students who had taken a media literacy course had significantly higher levels of media literacy compared to those who did not take it. It was further revealed by the said survey that students have more excellent knowledge on current news and events compared to those students who did not take media literacy instruction (Maksl, et al., 2017). The said instruction also develops the information consumers' skills to distinguish fact from opinion (Gallagher & Magid, 2017). Thus, media literacy instruction enables an individual to make sound and reasonable decisions as it develops one's ability to analyze and evaluate the information, may it be in the aspect of personal, academic, or professional.

Moreover, media literacy instruction teaches students how to effectively use Google and social media platforms in their daily lives (Burkhardt, 2017). It also develops both the students' primary and more advanced competencies to obtain accurate and quality information (Quijano, 2019). Media literacy instruction helps students access and use the stream of media messages with accuracy and quality, since media literacy instruction develops their ability to critically analyze and evaluate media content and messages (Hobbs & Moore, 2013; Rogow, 2015). Thus, media literacy instruction is an essential strategy in combating the spread of misinformation (Burkhardt, 2017). Bates, et al. (2017) affirmed that information consumers could easily recognize fake information by developing media literacy skills. These statements proved that media literacy instruction is inextricably relevant to increasing students' literacy and the ability to evaluate information and information sources (El Rayess, et al., 2018). These pieces of evidence affirmed that media literacy instruction will help one to effectively analyze and critically evaluate between real and fake information.

Misinformation Evaluation Skills

The abundance of misinformation has been evident in recent years. As seen nowadays, misinformation is a problem in our societies and media environments (Alemanno, 2018). Misinformation is inaccurate information, which might be a result of an honest mistake (Walsh, 2010). It may appear like real news, but it contains erroneous information (Bates, et al., 2017).

Hence, skills are pivotal to be able to identify misinformation. It is vital for students to effectively criticize or assess information's credibility and other information sources (Schulten, 2015). However, studies revealed that students lack skills in evaluating misinformation. It has been attested in a study by Negi (2018) wherein there is a significant skill gap among respondents to distinguish between real and fabricated news. Moreover, a study by the Stanford Graduate School of Education revealed that more than 80% of middle and high school students could not recognize between real and fake information (Gallagher & Magid, 2017). Students who lack the skills to evaluate and acknowledge misinformation lead them to believe and trust phony details, resulting in poor decision-making (Farmer, 2019). Thus, the rise of misinformation across the internet, remarkably calls everyone to obtain skills in misinformation evaluation (Kiernan, 2017).

The reviewed literature explored the importance of media literacy instruction and information skills in effectively evaluating the stream of information. In other words, by possessing the knowledge and skills to assess the reliability and quality of the information, students may be able to critically appraise the information at hand, whether it is accurate or not. However, it is stated in the reviewed literature that students are easily deceived by misinformation due to lack of evaluation skills. Thus, in this context, the researchers want to determine whether information skills and media literacy instruction can significantly influence the skills in detecting misinformation among the college students.

METHODS

Research Design

The study employed a descriptive-correlation design. According to Calderon (2000), this research method involves describing, recording, analyzing, and interpreting conditions and relationships between non-manipulative variables. Correlation design measures the relationship between two variables in which they are related (McLeod, 2008). Correlation design is best to check if an increase or decrease in one variable corresponds to an increase or decrease in the other variable. This study described the relationship between information skills and media literacy instruction to college students' misinformation evaluation skills.

Respondents

The respondents of this study were the college students taking up Bachelor of Library and Information Science (BLIS) in Region XI and Region XII, the School Year 2019-2020, specifically Cor

Jesu College, Inc., Notre Dame of Dadiangas University, Ramon Magsaysay Memorial Colleges, Southern Christian College, and the University of Southern Mindanao respectively. The researchers chose them as the respondents since they were exposed and avid users of social media platforms. Besides that, they have information literacy and media literacy as part of their curriculum, which are necessary to become future information specialists. There were nine (9) respondents from Cor Jesu College, Inc.; 11 respondents from Notre Dame of Dadiangas University; three (3) from Ramon Magsaysay Memorial Colleges; 63 from Southern Christian College; and 55 from University of Southern Mindanao; with an overall total of 141 respondents.

Sampling Procedure

This study employed universal or census sampling. A universal or census sampling technique means including the entire population if the whole population is tiny. A census sample gathered data on every member of the population. This sampling technique enables researchers to collect accurate data for it takes the entire population into account (Paredes, 2017). In this study, the researchers employed a universal sampling procedure as it covered the total population of BLIS students of each institution.

Measures

This study used research instruments that were well structured. It consists of three sets. The first set of the questionnaire is the Information Skills Questionnaire, adapted and patterned from the American Library Association (ALA) and Old Dominion University. The second set of the questionnaire was from Simons, Meeus, and T'Sas' (2017) Questionnaire on Assessing Media Literacy Education. The third questionnaire was self-constructed and patterned from three different research articles of Stein-Smith's (2017) How to Recognize Misinformation, El Rayess, et al. (2018) Fake news judgment: the case of undergraduate students at Notre Dame University-Louaize, Lebanon, and Constitutional Rights Foundation's (2017) Understanding Fake News. These three sets of questionnaires were subjected to pilot-testing and validation by three experts for content validity and reliability. Each set of questionnaires got a Cronbach Alpha value of .934 for Computer Skills, .948 for Information Literacy Skills, and .932 for Browsing and Navigation Skills for the first set; .933 for the second set; and .893 for the third set, respectively.

Procedure

The researchers undertook the following procedures to investigate the study: First, the researchers secured an approval letter addressed to the School President of each institution to conduct the study. After securing the approved letter, the researchers coordinated with the BLIS Program Head to distribute and retrieve the survey questionnaires to the target respondents, for the second semester, SY 2019-2020. Lastly, data gathered were tallied and interpreted as a basis for analysis and findings.

Ethical considerations

In conducting the survey, the researchers ensured that the respondents voluntarily participated in the study, and that no harm inflicted to the respondents. The survey questionnaire used in this study did not ask for any personal information from the respondents to ensure the anonymity of the data. Also, the gathered data were treated with confidentiality.

Data Analysis

The data gathered from the respondents were analyzed and interpreted with the use of the following statistical tools: Mean Score was employed to determine and establish the mean scores on the level of information skills in terms of computer skills, information literacy skills, and browsing and navigation skills, the extent of media literacy instruction, and level of misinformation evaluation skills. Mean Score is the most common measure of central tendency and refers to the average value of a group of numbers (Asaad, 2008; Syke, Gani, & Vally, 2016). Multiple Regression Analysis was utilized to test whether information skills and media literacy instruction significantly influence the respondents'

misinformation evaluation skills. Regression analysis is a powerful method of analyzing a dependent variable's variability by resorting to information available on one or more independent variables (Asaad, 2008; Lund Research, 2018). When two or more independent variables were used, the analysis referred to multiple regression analysis.

Results

The researchers presented the results of the study in four parts, namely level of misinformation evaluation skills, level of information skills in terms of computer skills, information literacy skills, and browsing and navigation skills, the extent of media literacy instruction, the significant influence of information skills and media literacy instruction to misinformation evaluation skills.

Level of misinformation evaluation skills

Table 1 presents the data on the extent of media literacy instruction by the Bachelor of Library and Information Science students. Shown are the mean scores of the respondents with a corresponding descriptive rating and verbal interpretation.

Table 1. Level of misinformation evaluation skills

Weighted Mean	Descriptive Rating	Interpretation
4.00	High	At this level, the respondents have proficiency in checking, comparing, and visiting other reliable information sources in evaluating information.

Results revealed that the mean Score of the students-respondents is 4.00, which is in the high descriptive rating. It signifies that the respondents at this level have the proficiency in checking, comparing, and visiting reliable information sources in evaluating information.

Level of information skills

Table 2 presents the data on information skills, including computer skills, information literacy skills, and browsing and navigation skills by the Bachelor of Library and Information Science students. Shown are the mean scores of the respondents with a corresponding descriptive rating and verbal interpretation.

Table 2. Level of information skills

Indicators	Weighted Mean	Descriptive Rating	Interpretation
Computer Skills	4.19	High	The respondents at this level have proficiency in computer skills.
Information Literacy Skills	4.03	High	The respondents at this level have proficiency in information literacy skills.
Browsing and Navigation Skills	4.12	High	The respondents at this level have proficiency in browsing and navigation skills.
Overall Mean	4.11	High	The respondents are proficient in computer skills, information literacy skills, and browsing and navigation skills.

Table 2 shows the mean scores of each indicator of information skills wherein computer skills got 4.19, followed by browsing and navigation skills with 4.12, then information literacy skills with a mean score of 4.03. Further, the overall mean score is 4.11, which is a high descriptive rating. The students-respondents have proficiency in computer skills, information literacy skills, and browsing and navigation skills.

The extent of media literacy instruction

Table 3 presents the data on the extent of media literacy instruction by the Bachelor of Library and Information Science students. Shown are the mean scores of the respondents with a corresponding descriptive rating and verbal interpretation.

Table 3. The extent of media literacy instruction

Weighted Mean	Descriptive Rating	Interpretation
4.06	High	The instruction given very satisfactorily increased the media and information skills of the students.

Results show that the mean score of the students-respondents is 4.06, which has a high descriptive rating. It means that media literacy instruction is very satisfactorily, which consequently increased their media and information skills.

A significant influence on information skills and media literacy instruction to misinformation evaluation skills

Table 4 presents the significant influence on information skills and media literacy instruction to misinformation evaluation skills by the BLIS college students with their corresponding regression and beta coefficient values.

Table 4. A significant influence on information skills and media literacy instruction to misinformation evaluation skills

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	.798	.353		2.262	.025
	Information Skills	.405	.106	.321	3.812	.000
	Media Literacy Instruction	.379	.085	.378	4.484	.000

a. Dependent Variable: Misinformation Evaluation Skills
b. Anova Table: Sig. Value = .000
c. Model Summary: R2 = .396
d. Model Summary: Adjusted R2 = .387
f. Anova Table: DF =140

Table 4 shows that when regression equation MES = β0 (constant) + β1IS + β2MLI + €1 was tested using multiple linear regression analysis, results from the ANOVA table show that the sig-value is .000, which is found to be below the .05 level of significance set for this study. It signifies that overall, the model is significant and that the model fits the data. It also indicates a substantial relationship between the three variables being studied: information skills, media literacy instruction, and misinformation evaluation skills.

Moreover, when looking at each of the independent variables' regression coefficients, both were significant with p-value =.000. It signifies that the study's two independent variables, namely information skills and media literacy instruction, had a positive relationship with the college students' misinformation evaluation skills. With these results, the researchers hypothesized that the respondents' information skills and media literacy instruction matter in identifying and evaluating misinformation. Furthermore, the Coefficient Table results show that the beta coefficient value of information skills is equal to .405, while media literacy instruction has a beta value equal to .379. Thus, the estimated regression model can be mathematically presented as:

MES= .798 (constant) + .405 (Information Skills) + .379 (Media Literacy Instruction) + €i

Furthermore, as manifested in the Model summary table, it shows that the value of Adjusted R Square is equal to .387. It signifies that the explanatory and predictive power of significant independent variables is low because it could account for 38.7 percent of the misinformation evaluation skills variation.

Discussion

Investigating the influence of information skills, media literacy instruction, and misinformation evaluation skills among college students could be essential for students, librarians, and faculty. The results of the study could increase their awareness vis-à-vis these variables.

Level of misinformation evaluation skills

As to the level of misinformation evaluation skills, the result revealed that it is in the high rating. It signifies that the respondents have proficiency in checking, comparing, and visiting reliable information sources in evaluating information. This finding agrees with the result of a survey by Druckman and Vogt (2020) that students performed better on identifying facts and opinions, false stories, hate speech and demonstrated a more profound knowledge of the news media sector. On the contrary, Negi (2018) stated a significant skill gap among research respondents to distinguish between real and fabricated news. Moreover, the students' proficiency in evaluating information is limited and unsystematic. They seemed surprised and pleased when discussing the searching strategies and accessing and checking sites for authority, currency, or relevance (Al-Qallaf & Al-Mutairi, 2016). Gallagher and Magid (2017) also affirmed in the study conducted at Stanford Graduate School of Education, which revealed that more than 80% of the students could not recognize real and fake information. However, this study's result cannot reconcile with the contradictory findings because this study was administered to the students who have received highly-effective media literacy instruction and are well-honed information skills. These two variables are the core subjects of the LIS program. In contrast, the study conducted by Al-Qallaf and Al-Mutairi (2016) and Gallagher and Magid (2017) was administered to non-BLIS students, who were primary and middle-high school students, respectively.

Level of information skills

As to the level of information skills, the result found out that it is in the high descriptive rating, which means that the students-respondents have proficiency in computer skills, information literacy skills, and browsing and navigation skills. This finding agrees with the study of Malliari, Korobili, and Togia (2012) that LIS students have high information skills in terms of computer competence and efficacy. Moreover, LIS students have high information skills in terms of information literacy skills and browsing and navigation skills. They are comfortable developing search strategies, choosing search terms, and finding relevant resources in libraries and the Web (Saunders et al., 2015). However, this finding contradicts the result of a study conducted on the undergraduate students at the University of Mines and Technology (UMaT), Tarkwa, Ghana, wherein findings revealed that the levels of information literacy skills and browsing and searching skills among the first-year students were low and below standard (Kavi, et al., 2019).

Nonetheless, this contradictory finding cannot be overemphasized since it was conducted on first-year undergraduate students, not specifically from the LIS program. This study was administered to the well-equipped students with information skills in terms of computer skills, information literacy skills, and browsing and navigation skills since the LIS program's focus is to produce information skilled/expert librarians. Saunders et al. (2015) stated that the primary focus of LIS programs is developing information skills to navigate the vast world of information.

Extent of media literacy instruction

Concerning the extent of media literacy instruction, it is also rated as high, which indicates that media literacy instruction given to the students was very satisfactory, which consequently increased their media and information skills. It agrees with the finding at Stony Brook University that revealed the effectiveness of media literacy course, which helped the college students have significantly higher media literacy levels (Maksl, et al., 2017). Also, the result revealed that those students who have not taken the media literacy program have low media literacy and have insufficient knowledge of current events and news (Maksl, et al., 2017). Moreover, the study of Dela Cruz (2016) found out an increase in the number of passers after going through media instruction sessions. Hence, it confirms that students have a better understanding of critically comprehending and analyzing media messages than students who did not receive instruction in media literacy (Jacobson, 2017).

Significant influence on information skills and media literacy instruction to misinformation evaluation skills

The study revealed a significant relationship between the three variables. Findings revealed that two predicting variables significantly influenced misinformation evaluation skills among the college students, namely Information Skills and Media Literacy Instruction. Moreover, the coefficient value of Information Skills, which is .405, indicates that holding all other variables in the regression constant, its coefficient indicates that for every one unit change in the level of information skills would give a corresponding .405 unit increase in the level of misinformation evaluation skills among the college students. It entails that the higher the level of information skills, the higher it would be to misinformation evaluation skills. The low positive beta coefficient with a p-value of .000 for information skills confirms the empirical findings, claiming a reasonably positive correlation between information skills and misinformation evaluation skills among the respondents. It signifies that when the students-respondents' information skills increase, misinformation evaluation skills will also increase. Hence, the two variables have a significant linear correlation.

Possessing adequate information skills enables students to detect misinformation. It was revealed that information consumers with better information skills evaluate the quality of the information before they believe, while those with more inadequate information skills trust the data quickly (Lucassen, et al., 2012). Therefore, it was affirmed that the higher the information skills, the higher it would also be for misinformation evaluation skills. Hence, developing information skills is essential to cope with today's digital problems (Keshavarz, 2014).

Moreover, concerning the Media Literacy Instruction, its coefficient value of .379 signifies that holding all other variables in the regression constant, its coefficient indicates that for every one unit change in the extent of media literacy instruction would give a corresponding .379 unit increase in the level of misinformation evaluation skills among the college students. It implies that the higher the extent of media literacy instruction, the higher it would be to misinformation evaluation skills. The low positive beta coefficient with a p-value of .000 for media literacy instruction confirms the empirical findings, claiming a reasonably positive correlation between media literacy instruction and misinformation evaluation skills among the respondents. It signifies that misinformation evaluation skills will increase when the students-respondents receive excellent and comprehensive media literacy instruction. Hence, the two variables have a significant linear correlation. Thus, the researchers rejected the null hypothesis.

This finding agrees with the other studies that media literacy instruction or education equips the students to interpret media messages critically. The said instruction helps the students to evaluate information with accuracy and quality (Hobbs & Moore, 2013; Rogow, 2015). Moreover, media literate students seem to do a better job of selecting good news (Maksl, et al., 2017). Further, by developing media literacy skills, students can easily recognize fake information (Bates, et al. (2017). It was also found that media literacy instruction highlighted fake information or news evaluation is the best strategy. It helps students become more media literate or skillful in evaluating misinformation to avoid misleading (Burkhardt, 2017). Therefore, it is safe to conclude that the much in-depth and comprehensive media literacy instruction to be given to the students, the more they become experts and skilful in misinformation evaluation.

In its entirety, however, the combined explanatory and predictive power of information skills and media literacy instruction is considered to be low as manifested in the value of Adjusted R Square, which is equal to .387, which indicates that the variations of the independent variable can explain around 38.7% of the variations of the dependent variable. The variations of the misinformation evaluation skills among college students can be explained by the variations of their level of information skills and media literacy instruction. The remaining 61.3% can be explained by other variables not included in the model.

Overall, the study's findings validate the anchored theory used in this study: the Seven Pillars of Information Skills Model. The significant influence of information skills and media literacy instruction can be best viewed and explained by this theory, which speculates that possessing the seven pillars of information skills and being able to critically process information as a product of the effectiveness of media literacy instruction can influence the skills in identification and evaluation of misinformation among college students.

Limitation of the Study

This study covered the level of information skills, extent of media literacy instruction, and misinformation evaluation skills among college students from the Bachelor of Library and Information Science (BLIS) program in Regions XI and XII. BLIS students were selected as respondents since their core subjects are heavily focused on information and media literacy.

In conducting the study, the researchers came across a limitation. All institutions in Davao City that offered BLIS program were excluded due to their strict research policy and long external research application processes. Thus, the researchers had difficulty conducting her investigation. Also, the analysis was only limited to the respondents' answers.

Conclusions

Due to the rapid spreading of misinformation online, the access to right information is in jeopardy. Hence, distinguishing fact and fake information is essential in students' lives. Based from the findings of the study, the researchers concluded that the students-respondents are highly skilful in evaluating the retrieved information. They can effectively identify fact or fake information because they possessed high information skills, as a result of a very satisfactory media literacy instruction conducted to them. This signifies that information skills and media literacy instruction did matter in evaluating information. Ultimately, students can win this battle of misinformation if they possessed information skills and received a highly effective and comprehensive media literacy instruction. In the end, it still lies in the hands of the teachers-librarians in honing the students' skills in accessing and using accurate, reliable, and complete information.

Recommendations

Based on the study's findings, the researchers offered the following recommendations to heighten the levels of information skills, media literacy instruction and misinformation evaluation skills among college students. First, school administrators may support the LIS faculty and librarians by sending them

to seminars/training related to today's digital information to update their skills and knowledge. In this way, our LIS faculty and librarians can impart these newly-acquired knowledge and skills to the students. Second, LIS Faculty may intensify the classes concerning computers, browsing, navigation, and information literacy, subjects explicitly like reference and information sources, indexing and abstracting, and research subjects. Third, LIS Faculty and librarians may put emphasis the proper use of media devices, understand and evaluate media content, and accessing fact-checking sites, cross-referencing, etc., in their annual media literacy program. Fourth, college students may regularly practice their skills and experience from media literacy instruction by giving them more innovative and real-life exercises. Lastly, future researches may conduct a follow-up study to generate qualitative data regarding college students' information skills, media literacy instruction, and misinformation evaluation skills, to deeply find out how information skills and media literacy instruction help students in detecting misinformation.

REFERENCES

Abubakar, D. & Adetimirin, A. (2013). Influence of computer literacy on postgraduates' use of e-resources in Nigerian University Libraries. *Library Philosophy and Practice*, 1-17. Retrieved from https://search.proquest.com/pqrl/docview/1739062860/fulltext/FB3D85F56BAA4721PQ/1?accountid=37714

Adeagbo, O. O. (2011). Influence of locus of control and computer skills on the use of internet resources by undergraduate students in Nigerian universities. *Library Philosophy and Practice*, 1-20. Retrieved from https://search.proquest.com/docview/900094094?accountid=37714

Adeleke, D., & Emeahara, E. (2016). *Relationship between information literacy and use of electronic information resources by postgraduate students of the University of Ibadan*. Retrieved from https://search.proquest.com/pqrl/docview/1795686242/fulltext/1D8F6BB0375643CEPQ/1?accountid=37714

Aitokhuehi, J. & Ojogho. (2014). The impact of computer literacy on students' academic performance in senior secondary schools in Esan West Local Government Area, Edo State, Nigeria. *Journal of Education and Human Development, 3*(3), 265-270. Retrieved from http://dx.doi.org/10.15640/jehd.v3n3a21

Akpovire, E., Olawoyin, O., Adebayo, A., & Esse, E. (2019). *Role of information literacy skills on the use of information resources by medical students in Lagos State*. Retrieved from https://search.proquest.com/pqrl/docview/2173553298/fulltext/FA4EEC9F9CE6400APQ/1?accountid=37714

Alemanno, A. (2018). How to counter fake news? A taxonomy of anti-fake news approaches. *European Journal of Risk Regulation*, 1; HEC Paris Research Paper No. LAW-2018-1257. Retrieved from https://ssrn.com/abstract=3143147

Al-Qallaf, C. & Al-Mutairi, A. (2016). Digital literacy and digital content support learning: The impact of blogs on teaching English as a foreign language. *The Electronic Library, 34*(3), 522-547. Retrieved from https://search.proquest.com/pqrl/docview/1826442530/fulltext/7E136C101BF5497BPQ/1?accountid=37714

Asaad, A. (2008). *Statistics: Made simple for researchers*. Rex Book Store.

Bates, J., McKeever, C., Reilly, J., & Roulston, S. (2017). *Fact or fiction: How to spot fake news.* Retrieved from https://www.ulster.ac.uk/faculties/social-sciences/schools/education

Bello, T., Amusa, O., Omotoso, A., & Osunrinade, O. (2016). Influence of information literacy skills on information needs and use among banking personnel in Ogun State, Nigeria. *Library Philosophy and Practice*, 1-26. Retrieved from https://search.proquest.com/pqrl/docview/1795686377/Fulltext/32138F2112C341A1PQ/1?accountid=37714

Burkhardt, J.M. (2017). Combating fake news in the digital age. *Library Technology Reports, 53*(8). Retrieved from https://journals.ala.org/index.php/ltr/article/viewFile/6497/8631

Calderon, J.F. (2000). *Methods of research and thesis writing*. Great Books Trading.

Constitution Rights Foundation (2017). *Understanding fake news*. Retrieved from https://www.crf-usa.org/images/pdf/challenge/Understanding-Fake-News1.pdf

Dela Cruz, M. V., E. (2016). The media and information literacy program of the Ateneo de Manila grade school. International Association of School Librarianship. *Selected Papers from the Annual Conference*, 1-48. Retrieved from https://search.proquest.com/docview/1928619547?accountid=37714

Druckman, M. & Vogt, K. (2020). *Evaluation of students' ability to detect disinformation after learning media literacy techniques in school*. Retrieved from https://www.irex.org/sites/default/files/node/resource/evaluation-learn-to-discern-in-schools-ukraine.pdf

El-Rayess, M., Chebl, C., Mhanna, J., & Hage, R. (2017). Fake news judgment: The case of undergraduate students at Notre Dame University-Louaize, Lebanon. *Reference Services Review, 46* (1), 146-159. Retrieved from DOI 10.1108/RSR-07-2017-0027.

Farmer, L. (2019). Visualizing fake news. *Information Outlook, 23*(2). Retrieved from https://search.proquest.com/pqrl/docview/2275884180/fulltext/22C39C95CB5F498CPQ/1?accountid=37714

Gallagher, K., &Magid, L. (2017). *Media literacy and fake news*. Retrieved from https://www.connectsafely.org/wp-content/uploads/Media-Literacy-Fake-News.pdf

Hobbs, R. & Moore, D.C. (2013). *Discovering media literacy: Teaching digital media and popular culture in elementary school*. Retrieved from http://dx.doi.org/10.4135/9781506335445

Ismaila, Y. (2019). Information literacy skills on the use of electronic resources by undergraduates students of the University Of Ilorin And Kwara State University Malete, Kwara State, Nigeria. *Library Philosophy and Practice*, 1-21. Retrieved from https://search.proquest.com/pqrl/docview/2236131055/Fulltext/714E43E7C2884ADEPQ/1?accountid=37714

Israel, O. (2018). An assessment of computer literacy among undergraduate students of Delta State University, Abraka. *International Research: Journal of Library and Information Science, 8*(2). Retrieved from https://search.proquest.com/docview/2133920120?accountid=37714

Israel, O. (2015). Undergraduates' computer skills and the use of online information resources: A case study of library and information science students of Delta State University, Nigeria. *International Research: Journal of Library & Information Science, 5*(4), 770-782. Retrieved from https://search.proquest.com/docview/1808192775?accountid=37714

Israel, O., & Nsibirwa, Z. (2018). Information literacy skills in using electronic information resources. *Library Philosophy and Practice,* 1. Retrieved from https://search.proquest.com/pqrl/docview/2165580640/fulltext/6B1595FAB5AD42AFPQ/1?accountid=37714

Jacobson, L. (2017). Assessing news literacy in the 21st century. *Literacy Today, 35*(3), 18-22 Retrieved from https://search.proquest.com/pqrl/docview/1966007432/fulltext/E873BE06ABEA48BDPQ/1?accountid=37714

Kavi, R. K., Anafo, P., Bugyei, K. A., & Ofori, Y. (2019). Assessing the information literacy skills among undergraduate students at the University Mines and Technology (UMaT), Tarkwa, Ghana. *Library Philosophy and Practice,* 1-21. Retrieved from https://search.proquest.com/pqrl/docview/2299764189/fulltextPDF/81AB773041F7449APQ/8?accountid=37714

Keshavarz, H. (2014). How credible is information on the web: Reflections on misinformation and disinformation. *Infopreneurship Journal, 1*(2), 1-17. Retrieved from https://www.researchgate.net/publication/275037363_How_Credible_is_Information_on_the_Web_Reflections_on_Misinformation_and_Disinformation

Kiernan, R. (2017). *With the rise of fake news on social media, can Information Literacy impact how students evaluate information on their social media channels?* Retrieved from https://esource.dbs.ie/bitstream/handle/10788/3319/msc_kiernan_r_2017.pdf?sequence=1&isAllowed=y

Kumah, C. (2015). A comparative study of the use of the library and the internet as sources of information by graduate students in the University Of Ghana. *Library Philosophy and Practice (e-journal)*. Retrieved from http://digitalcommons.unl.edu/libphilprac/1298

Lee, N. M. (2018). Fake news, phishing, and fraud: A call for research on digital media literacy education beyond the classroom. *Communication Education, 67*(4), 460-466. Retrieved from https://search.proquest.com/pqrl/docview/2099587195/abstract/94C0375996C4D95PQ/1?accountid=37714

Lund Research. (2018). *Multiple regression analysis using SPSS statistics*. Retrieved May 27, 2020, from https://statistics.laerd.com/spss-tutorials/multiple-regression-using-spss-statistics.php

Lucassen, T., Muilwijk, R., Noordzij, M.L. & Schraagen, J.M. (2013), Topic familiarity and information skills in online credibility evaluation. *Journal of the American Society for the Information Science and Technology, 64*, 254-264. Retrieved from https://search.proquest.com/pqrl/docview/1277971841/abstract/4ACD3405D53C4A75PQ/1?accountid=37714

Maksl, A., Craft, S., Ashley, S., & Miller, D. (2017). The usefulness of a news media literacy measure in evaluating a news literacy curriculum. *Journalism & Mass Communication Educator, 72*(2), 228-241. Retrieved from https://search.proquest.com/pqrl/docview/2224303800/fulltext/24986B4586FB460BPQ/1?accountid=37714

Malliari, A., Korobili, S., & Togia, A. (2012). IT self-efficacy and computer competence of LIS students. *Electronic Library, 30*(5), 608–622. Retrieved from http://dx.doi.org/10.1108/02640471211275675

Mcleod, S. (2008). *Research methods*. Retrieved from https://www.simplypsychology.org/research-methods.html

Montana Office of Public Instruction. (2017). *Introduction to Media Literacy*. Retrieved from opi.mt.gov

Leaning, M. (2019). An approach to digital literacy through the integration of media and information literacy. *Media and Communication, 7*(2), 4-13 DOI: 10.17645/mac.v7i2.1931

Negi, U. (2018). Fake news and information literacy: A case study of Doon University, Dehradun. *Journal of Library & Information Science, 8*(2), 202-214. Retrieved from https://search. proquest.com/pqrl/docview/2133903413/abstract/3BE3307FB9747FDPQ/1?accountid=37714

Oyeniran, K., & Olajide, A. (2016). The influence of ICT literacy skills on electronic resources uses by distance learning students of Delta State University, Aabraka. *International Research: Journal of Library and Information Science, 6*(4) Retrieved from https://search.proquest .com/docview/1865585455?accountid=37714

Paredes, K.S. (2017). *Participants of the study*. Retrieved from https://www.slideshare.net/Mayang Colcol/participants-of-the-study

Reid-Smith. E. (2012). E-reference context and discoverability in libraries: Issues and concepts. *The Australian Library Journal, 61*(3), 237-238. Retrieved from https://doi.org/10.1080/00049670.2012. 10739042

Rogow, F. (2015). Media literacy in early childhood education: Technology and digital media in the early years. *Tools for teaching and learning*. 92-103. Retrieved from http://teccenter.erikson.edu/wp-content/uploads/2017/05/Rogow_MediaLiteracyREV-copy.pdf

Safieddine, F., Dordevic, M. & Pourghomi, P. (2017). *Spread of misinformation online: Simulation impact of social media newsgroups*. Retrieved from https://www.researchgate.net/publication /322436730_Spread_of_misinformation_online_Simulation_impact_of_social_media_newsgroups

Saunders, L., Kurbanoglu, S., Boustany, J., Dogan, G., Becker, P., Blumer, E.,… Todorova, T. Y. (2015). Information behaviors and information literacy skills of LIS students: An international perspective. *Journal of Education for Library and Information Science, 56*, S80-S99. Retrieved from https://search.proquest.com/docview/1708167897?accountid=37714

Schulten, K. (2015). Skills and strategies, fake news vs. real news: Determining the reliability of sources. *The New York Times*, 1-10. Retrieved from https://learning.blogs.nytimes.com/2015/10/02/skills-and-strategies-fake-news-vs-re al real-news-determining-the-reliability-of-sources/

SCONUL (1999). *Information skills in higher education*. Retrieved from https://www.sconul.ac.uk/ sites/default/files/documents/Seven_pillars2.pdf

Shellenbarger, S. (2016). Most students don't know when the news is fake, Stanford study finds. *The Wall Street Journal*. Retrieved from https://www.wsj.com/articles/most-students-dont-know-when-news-is-fake-stanford-study-finds-1479752576

Simons, M., Meeus, W., & T'Sas, J. (2017). Measuring media literacy for media education: Development of a questionnaire for teachers' competencies. *Journal of Media Literacy Education 9*(1), 99–115. Retrieved from http://digitalcommons.uri.edu/cgi/viewcontent.cgi?article=1276&context=jmle

Stecula, D. (2017). The real consequences of fake news. *The Conversation Media Group*. Retrieved from http://theconversation.com/the-real-consequences-of-fake-news-81179

Stein-Smith, K. (2017). Librarians, information literacy, and fake news. *Strategic Library* (37). Retrieved from http://www.libraryspot.net/SL/SL_Mar17_1.pdf

Sykes, L.M., Gani, F., & Vally, Z. (2016). The meaning of the mean and other statistical terms commonly used in medical research. *South African Dental Journal, 71*(6). Retrieved from http://www.scielo .org.za/scielo.phpo?script=sci_serial&pid=0011-8516&lng=en&nrm=iso

Thanuskodi, S. (2019). Information literacy skills among library and information science professionals in India. *Library Philosophy and Practice*, 1-24. Retrieved from https://search. proquest.com/docview/2173481796?accountid=37714

Quijano, G. (2019). Information literacy (IL) of college freshmen: Implications for an IL program in academic libraries. *Library Philosophy and Practice*, 1-12 Retrieved from https://search.proquest. com/pqrl/docview/2234441836/fulltext/690D74A9FEC6454CPQ/1?accountid=37714

Walsh, J. (2010). Librarians and controlling disinformation: Is multi-literacy instruction the answer? *Library Review, 59*(7), 498–511. Retrieved from https://search.proquest.com/pqrl/docview/74018 4955/Fulltext/B682E16A11D5432EPQ/1?accountid=37714

Yebowaah, F. A. (2018). Internet use and its effect on senior high school students in Wa Municipality of Ghana. *Library Philosophy and Practice*, 1. Retrieved from https://search.proquest.com/docview/21 63341445?accountid=37714