

Factors Affecting Students' Level of Believability and Online Disinformation

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ABSTRACT

The recent proliferation of online disinformation has affected the way people perceive news items. The factors that affect the audiences' belief of false information are bots, cyber troops, length of information/full news item, scrolling, skepticism, social media bubbles/echo chambers and sources. The main purpose of this study was to determine the relationship between the factors affecting participants' level of believability and online disinformation. The descriptive correlational method was used with 66 AB Com. freshmen and seniors enrolled in the Academic Year 2023-2024 as participants. The researchers collected responses through online surveys including their demographic profile, the frequency of exposure to the factors and their level of believability on online disinformation. The results showed that the participants were mostly 18 to 24 years old, female and media literate. The factors bots, cyber troops, full news item, echo chambers or social media bubbles and the source correlated with the participants' level of believability on online disinformation increasing their ability to enhance their media literacy while the factors scrolling, and skepticism did not correlate with the participants' level of believability on online disinformation decreasing their ability to enhance their media literacy.

INTRODUCTION

Nowadays, there are increasingly more people consuming news through social media which can provide timely and comprehensive multimedia information on the events taking place all over the world (Zhang et al., 2018). Social media are becoming the dominant source of news and political tools. This is best observed among the younger generation. In 2016, roughly 50% of Americans aged 18–29 used online platforms as their primary source of news. Only 27% watched the news on television, and as few as 5% read print newspapers (Mitchell et al., 2016).

In recent times, the ability to evaluate information from news sources is a new challenge to the news readers in the digital environment because of the proliferation of fabricated news, often referred to as “fake news” (Asubario et al., 2017).

The Enoch Pratt Free Library (2018) simply defines fake news as information that cannot be verified, without sources, and possibly untrue. Lazer et al. (2018) indicated that the rise of fake news highlights the erosion of long-standing institutional bulwarks against misinformation in the internet age and that the concern over the problem is global. However, little is known regarding fundamental issues about the vulnerabilities of individuals, institutions, and society to manipulations by malicious actors.

Moreover, the rise of fake news and online disinformation affected the perception of people on news items and it has posed problems on people’s capacity to identify legitimate over fake news. Conversely, fake news deceives its readers into thinking a false story is real, many times with malicious intent (Sydell, 2016). According to Horne & Adah (2018), readers’ assessment of information plays a significant role in decisions to disseminate it and even though the abundance of information leads to limited attention given to each article, users engage with social media with the intention to find and share information, the reason why the capability of distinguishing false news is crucial.

However, Silverman & Singer-Vine (2016) conducted research that showed many people who see fake news stories report that they believe them. Disinformation causes damage to journalism’s reputation because it has dressed up as news. It has consequences for journalists, news media, citizens and open societies (Wardle & Derakhshan, 2017).

In many cases, as cited in Niklewicz (2017), Ellis described the tendency of fake news is often to dress up, sometimes from a pretend news outlet, it looks like a legitimate news item. Some fake news sources imitate trustworthy, independent institutions. Moreover, there must be a distinction between fake news and satirical content, making up absurd details and claims that do not meet the definition of satire (Gillin, 2017).

Correspondingly, there are online features that affect the consumers’ tendency to believe in fake news. These include social media bubbles, also known as echo chambers (Niklewicz, 2017). Bubbles are groups of users who consume – whether consciously or not – identical content and are essentially not offered alternative information or opinions. In the same way, they are generated automatically based on the previous online behavior of a given user. Social media

algorithms decide on the content that is shown to the user and that which is buried deep in the newsfeed, making it effectively non-existent (Niklewicz, 2017). The main purpose of this study was to determine the relationship of the factors affecting the level of believability of the 1st year and 4th year Bachelor of Arts in Communication (BA Comm.) students enrolled in Palompon Institute of Technology in the academic year 2018-2019 on online disinformation.

Specifically, this study sought to answer: (1) the demographic profile of the students in terms of age, gender and year level, (2) the frequency of the students' exposure to the following factors: bots, cyber troops, length of information or news feed, scrolling, skepticism, social media bubbles or echo chambers, and source, (3) the level of students' believability on online disinformation, and (4) the significant relationship between the factors affecting the students' level of believability and online disinformation.

LITERATURE REVIEW

In Asia, Facebook is the largest social network with a market share of 78 percent (Social Media Stats Asia, 2019). Facebook can therefore be a major source for news in Southeast and South Asia along with Asia as a whole. An example of this would be in the Philippines where as much as 97% of all internet traffic is through Facebook (Stevenson, 2018). Another example would be in Indonesia where Facebook is the main and only way to get information in Indonesia and has been used for political activities (Massola, 2018). Massola (2018) also reports that companies like Cambridge Analytica which have a history of misusing Facebook data has used Facebook to target voters in multiple countries like Thailand and Malaysia.

Facebook became popular due to the fact that it was preinstalled on phones (Kuhn, 2018), along with using personal contacts to suggest connections to other users (Honan, 2017). In some countries like the Philippines, Facebook partnered with cell phone network providers to provide free data to only Facebook which makes going to other websites on the internet cost money with expensive data plans (Swearingen, 2018). Honan (2017) also reports that Facebook partnered with telecoms to have unlimited Facebook day passes to increase users instead of only offering hard to understand plans with megabyte usage limits.

Due to these advantages Facebook became the main platform to get news and information from in many countries. This caused a major problem to emerge due to Facebook having lax policies on not limiting or removing widely shared fake news or images (Swearingen, 2018). Swearingen (2018) notes that another problem was that with so much control on what users would see that changes like in 2017 to Cambodia could cause visitors to legitimate news sites to decrease and more people see fake news due to friends sharing the content.

Much of the fake news that flood people nowadays have also affected the students of Palompon Institute of Technology. For example, during the 46th Charter Anniversary Celebration, a number of students thought that the celebration would be held at the Oval grounds and even went there, when in fact, it was held in front of the administration building.

The researchers, as members and advisers of the Institute's College Student Publication Fulcrum and chair of the Bachelor of Arts in Communication program, have long been searching to determine the relationship of the factors affecting the level of believability of online disinformation as perceived by students because of the problems they posed in the field of communication and journalism. They have also long been yearning for ways to help in seeking for answers to combat disinformation. It is in this light that the researchers conducted this study.

METHODOLOGY

To attain the objectives of the study, the descriptive correlational method was used in this research where sixty-six (66) AB Com. freshmen and senior students enrolled in the Bachelor of Arts in Communication program in the Academic Year 2023-2024 participated. The researchers collected responses from them through surveys conducted online.

In gathering the 1st, 2nd, 3rd and 4th data sets of the study, the researchers used online survey questionnaires as research instruments.

The researchers employed the quantitative survey instrument for the first phase with varying choices for the subjects to answer. The platform used by the researchers for the survey is Survey Monkey since the study revolved around the internet.

There were 10 news articles posted on a Facebook page. Seven news items came from fake news outlets while the other three were collected from credible media companies and institutions. Students were given independence in scrolling through reading and verifying the articles.

In gathering the data of the last phase, the researchers used SurveyMonkey as a platform that determined the factors why students misconceived fake from legitimate and vis-à-vis. The factors were then correlated with the level of the students' level of believability on online disinformation.

The researchers administered three phases of the study by giving the students the freedom to choose where they can respond to the survey comfortably using their mobile phones, computers, and laptops through accessing the Survey Monkey links which were created from an online survey development cloud-based software that provides free, customizable surveys and by answering what's required of the three surveys.

The participants of this research were the 1st year and 4th year Bachelor of Arts in Communication students who had a background in media as budding communicators. All in all, out of the 75 BA Comm. students enrolled in the 2nd semester of the A.Y. 2013-2024 66 students participated in the conduct of this study.

RESEARCH RESULT AND DISCUSSION

Demographic Profile of the Student Participants. The first research problem examined the demographic profile of the students who responded to the study.

Age. Age of the participants was one of the most important characteristics in understanding their level of believability towards online disinformation; the

age distribution of the participants who joined the study is provided in Table 1 where they were asked to tick the age category appropriate to them.

Table 1. Respondents' Profile in Terms of Age

Age (in Years)	N	Percentage
12 – 17	1	1.52%
18 – 24	61	92.42%
25 – 34	4	6.06%
35 – 44	0	0.00%
45 – 54	0	0.00%
Total	66	100.00%

It is evident in Table 1 that on average, 92.42%, which is 61 out of 66 respondents are about 18-24 years of age which constituted the mass of the total number of respondents. Mitchell et al., (2016) indicated that social media are becoming the dominant source of news and political tools. This is best seen among the younger generation in 2016 wherein roughly 50% of Americans aged 18-29 used online platforms as their primary source of news.

Gender. Participants were asked to indicate their gender by placing a tick next to the relevant option provided (male, female, gay, lesbian, bisexual and queer). Of the 66 participants, 11 were male (16.67%), 46 were female (69.70%), three were gay (4.55%), one was lesbian (1.52%), four were bisexual (6.06%) and one was queer (1.52%).

Table 2. Respondents' Profile in Terms of Gender

Gender	N	Percentage
Male	11	16.67%
Female	46	69.70%
Gay	3	4.55%
Lesbian	1	1.52%
Bisexual	4	6.06%
Queer	1	1.52%
Total	66	100.00%

Table 2 reflects that most people, regardless of gender are predisposed to online disinformation. Silverman & Singer-Vine (2016) conducted research that showed many people who see fake news stories report that they believe them. Year Level. Table 3 shows that most of the participants came from the first year

which was 42 (63.64%) of the 66 respondents while 24 (36.36%) came from the fourth year.

Table 3. Respondents' Profile in Terms of Year Level

Year Level	n	Percentage
First Year	42	63.64%
Fourth Year	24	36.36%
Total	66	100.00%

On Frequency of Exposure to Factors Affecting Believability of Online Disinformation. Tables 4.1-4.7 display the frequency of the students' exposure with the factors that affect the level of believability on online disinformation.

Table 4. Respondents' Frequency of Exposure to Bots

Frequency	N	Percentage
Never	3	4.55%
Rarely	8	12.12%
Sometimes	29	43.94%
Usually,	21	31.82%
Always	5	7.58%
Total	66	100.00%

Table 4. shows that the most number of participants (29) which is 43.94% of the total participants were exposed to bots sometimes. This entails that social bots mislead audiences by generating an accord towards pieces of disinformation spread online. Perhaps the reason why respondents do not see that they exist and find themselves come across this factor at times only since social bots front as legitimate news. Bots in social media sites post continuously and spread non-curated content using trending topics and hashtags so the audience do not recognize that they are exposed to this factor online.

The creation and spread of false information is complex and fueled by the use of nefarious actors which act independently or on a large-scale using a network of social media bots deceive readers by creating an illusion of consensus towards the false piece of information, for instance by echoing it multiple times or expressing direct support for it (Weninger et al., 2018).

On Respondents' Frequency of Exposure to Cyber Troops. Table 5 illustrates that 25 responses (37.88%) set up the most number of answers made for the option, usually. This is because cyber troops by nature manipulate some content in social media, which is done by different parties that support varying parties. This explains why some news items do not appear to be created by cyber troops to the respondents especially when they support a cause, a government and/or a political party actor. Participants only encountered this factor

sometimes because, on occasion, they were also not aware that they bumped into them.

Table 5. Respondents' Frequency of Exposure to Cyber Troops

Frequency	N	Percentage
Never	4	6.06%
Rarely	6	9.09%
Sometimes	20	30.30%
Usually,	25	37.88%
Always	11	16.67%
Total	66	100.00%

Moreover, in 2017, the first Global Cyber Troops inventory shed light on the global organization of social media manipulation by government and political party actors and the 2018 report analyzes the new trends of organized media manipulation, and the growing capacities, strategies and resources that support this phenomenon.

On Frequency of Exposure to Length of Information

Table 6 indicates that 29 participants viewed the full news item sometimes only which results in 43.94% of the total 66 responses. This implies that participants did not often click the full news item because social media users did not usually have an internet connection that could open them.

Table 6. Respondents' Frequency of Exposure to Length of

Frequency	N	Percentage
Never	3	4.55%
Rarely	11	16.67%
Sometimes	29	43.94%
Usually,	16	24.24%
Always	7	10.61%
Total	66	100.00%

Another factor that explains this is perhaps the respondents do not have the time or do not have the drive to open certain news items because the articles do not interest them. So whether or not the content is true, they would believe them, without clicking the length of information.

On Frequency of Exposure to Scrolling. The results in the Table 4.4 show answers that suggest scrolling does affect their belief of online disinformation sometimes only which makes up 59.09% of the 66 respondents.

Table 7. Respondents' Frequency of Exposure to Scrolling

Frequency	N	Percentage
Never	4	6.06%
Rarely	1	1.52%
Sometimes	39	59.09%
Usually,	14	21.21%
Always	8	12.12%
Total	66	100.00%

It can be derived from here that the participants were not conscious that scrolling affected their belief of an online disinformation because one of the functions of social media is continuous scrolling and this is the reason why they are not aware that this is one of the reasons why they unwittingly get wronged by the spread of fake news knowing that in social media sites, the format has a bearing on how users scroll.

On Frequency of Exposure to Skepticism. In Table 7, it can be derived that 34 respondents (51.52%) only have been a skeptic to a news item sometimes. This marks skepticism as a factor having an impact on the believability of news. Conceivably, the reason behind this is the respondents' disinterest and the lack of fundamental knowledge on certain news items that don't stir their curiosity making them skeptic at times only. The adverse effects of excessive skepticism, however, have had an impact on society that is similar in scope (Batchelor, 2017).

Table 8. Respondents' Frequency of Exposure to Skepticism

Frequency	N	Percentage
Never	4	6.06%
Rarely	2	3.03%
Sometimes	34	51.52%
Usually,	14	21.21%
Always	12	18.18%
Total	66	100.00%

Frequency of Exposure to Echo Chambers. Results show that 25 (37.88%) answered sometimes when asked about how frequently they encounter echo chambers. It can be gleaned that participants could not admit or distinguish which echo chamber they belonged. This posits a problem on their ability to believe a news item because if they were part of an echo chamber they would trust every single news item that confirmed their information biases. Moreover, they could only determine their existence from time to time since echo chamber is an environment in which a person encounters standpoints or opinions that coincide with their own, hence, reinforcing their existing views and neglecting

the consideration of alternative ideas which include their belief of online disinformation. Online social networks are strongly polarized and segregated along political lines. Resulting echo chambers provide selective exposure to news sources, biasing people's view of the world (Gu et al., 2017).

Table 9. Respondents' Frequency of Exposure to Echo Chambers

Frequency	N	Percentage
Never	5	7.58%
Rarely	6	9.09%
Sometimes	25	37.88%
Usually,	22	33.33%
Always	8	12.12%
Total	66	100.00%

On Frequency of Exposure to Sources

Table 10 shows that sources affected the perception of students towards online disinformation. Twenty-four (36.36%) responses put forward that they only checked the sources sometimes.

Social media is an open book. Anyone can post anything and probably the participants did not have enough knowledge about the credible news organizations where they could get verified news from. They may also find the sources irrelevant in confirming or distinguishing whether or not a news item was legitimate because of how it was posted online, particularly its format.

Table 10. Respondents' Frequency of Exposure to Sources

Frequency	N	Percentage
Never	3	4.55%
Rarely	6	9.09%
Sometimes	24	36.36%
Usually,	21	31.82%
Always	12	18.18%
Total	66	100.00%

As individuals prefer to receive information that confirms their pre-existing views, information coming from unfamiliar sources and/or contradicting their pre-existing views tends to be ignored and believe something that is of their preference (Tufekci, as cited in Niklewicz 2017).

On Level of Students' Believability of Online Disinformation. The third research question intended to know the participants' level of believability of

online disinformation by letting them distinguish whether a news item was fake or legitimate.

Table 11. shows the classification of the respondents into media literate or media illiterate

Score Interval	n	Percentage	Weighted Mean	Sd	Description
0 – 4	16	24.24%	3.88	0.34	Media Illiterate
5 – 10	50	75.76%	6.06	0.91	Media Literate
Total	66	100%	AM: 5.53	1.24	Media Literate

Results show that the participants were media literate with 75.76%, out of 66 total participants who were able to distinguish fake from legitimate news and vice versa. This implies that perhaps five out of seven factors affecting their believability had statistical significance to them, thereby fostering media literacy. Another factor explaining this was that they were Communication students who had a background in media literacy. In relation to this, Kumar and Shah (2018) indicated that humans are able to identify false information with accuracies between 53% and 78% only across experiments with different types of false behaviors, including hoaxes, fake reviews, and fake news. They have perceived that both trained and casual readers get fooled into believing false information when it is well written, long, and is well-referenced.

On Correlation between Participants' Believability of Online Disinformation and the Different Factors. Table 6 shows the relationship between the factors and the level of believability of online disinformation.

The table illustrates that the values with no asterisk are not statistically significant (i.e. no relationship was found between believability and the identified factors). Values with asterisks are significant using .01 level of significance (i.e. 99% sure that the correlation/relationship exists).

The significant positive correlation means that as participants' frequency of exposure to the different factors increases, their ability to determine whether the item is fake or legitimate also increases and vice versa. A significant negative correlation implies that as participants' frequency of exposure to the different factors increases, their ability to determine whether the item is fake or legitimate decreases or vice versa.

Table 12. Correlation between Participants' Believability of Online Disinformation and the Different Factors

Dependent Variable	Factors						
	Bots	Cyber Troops	Full News Item	Scrolling	Skepticism	Echo Chambers	Source
The believability of Online Disinformation	-.61**	.72*	-.73**	.34	-.33	-.62**	-.64*
n							

Note: ** = $p\text{-value} < .01$

Using a 0.01 level of significance, it can be derived from the table that there is a significant relationship between the believability of online disinformation and bots, with a -.61 value. This entails that social bots have a bearing on the proliferation of online disinformation because the more they are exposed to social bots, the more they are prone to believe in online disinformation. Shao et al., (2017) found evidence that social bots play a key role in the spread of fake news.

Moreover, it also revealed that there was a significant correlation between cyber troops and the believability of online disinformation, having a .72 significant value. This may be because the frequency of the participants' exposure to cyber troops determines their capacity to distinguish legitimate from fake news. This holds true when Gillin, as cited in Niklewicz (2017), explained that the sharing of fake news on social media is deliberately undertaken by an organization or an individual, with the aim of fabricating and disseminating information that is wholly or partially misleading in nature in order to influence opinion or stir controversy, or for financial gain and these are what cyber troops are.

Furthermore, there was no relationship between believability and scrolling and skepticism factors with .34 and -.33, values respectively. This implies that believability was not affected by these factors. Perhaps, the participants were not accustomed that scrolling affected their belief of online disinformation.

The second factor that had no statistical bearing entails that participants did not practice skepticism in evaluating the accuracy of a news item. When an undesirable piece of information confronted them, individuals may adopt a skeptical stance for self-serving purposes.

In other words, they could deny the information they did not like in order to avoid responsibility (Batchelor, 2017). Hence, the results show that the participants did not find not being skeptics as one factor to believe online disinformation.

Another factor also explains that people quickly scroll down the so-called newsfeed, ignoring the actual sources of the information (Lalolux, 2017), which the respondents found uncorrelated to one's ability to distinguish disinformation

from a legitimate news item. Echo chambers, on the other hand, had a significant negative correlation with the believability of online disinformation having a $-.62$ significant value which suggests that the more the participants got involved with echo chambers, the more they were prone to believe in online disinformation. This illustrates that one of the online features which affect consumers' tendency to believe in fake news is social media bubbles also known as echo chambers (Niklewicz, 2017).

In the same way, the source of a news item also had a significant negative relationship with the believability of online disinformation because of a significant value of $-.64$. Due to the different sources that the participants encountered online, they had become swamped with the number of sources that needed further verification. In many cases, as cited in Niklewicz (2017), Ellis described the tendency of fake news to dress up in order to look like a genuine news item, sometimes from a pretend news outlet. Some fake news sources imitate trustworthy, independent institutions, which makes it one factor that brands one ineffectual in distinguishing fake from legitimate news.

In addition, the positive significant correlation between cyber troops and online disinformation means that as participants' frequency of exposure to the cyber troops increased their ability to determine whether the item was fake or legitimate also increased or vice versa, hence, the more cyber troops they saw online, the more they were exposed to online disinformation, thus making them more susceptible to believe in online disinformation.

On the other hand, factors that had a negative significant relationship with online disinformation, namely, bots, full news item, skepticism, and the source mean that as the participants' frequency of exposure to these factors increases, their ability to determine whether the item is fake or legitimate decreases or vice versa. Consequently, the results show that the production and proliferation of online disinformation are stirred by the factors that influence believability. The recurrent exposure to the factors directly or indirectly shape the beliefs of the audiences towards online disinformation. This implies that the more frequent consumers of online news content run into these factors, the more they influence and affect the propagation of online disinformation since they have the final say in deliberating the news content posted online.

CONCLUSIONS AND RECOMMENDATIONS

The following conclusions were drawn on the basis of the findings of this study: 1) Factors such as bots, cyber troops, full news item, echo chambers or social media bubbles, and the source correlated with the participants' level of believability on online disinformation. Awareness on these factors increases their ability to enhance their media literacy; and 2) Factors such as scrolling and skepticism do not correlate with the students' level of believability on online disinformation. The lack of awareness on these factors decreases their ability to enhance their media literacy.

ADVANCED RESEARCH

This study opens avenues for further research on the multidimensional nature of online disinformation and its link to media literacy. Future studies may

use mixed methods to analyze both correlations (e.g., bots, echo chambers, skepticism, scrolling behavior) and the cognitive or socio-cultural mechanisms shaping believability. Longitudinal and experimental designs can assess the long-term impact of disinformation and test interventions like digital literacy training, fact-checking, or algorithmic transparency. Comparative studies across cultural or educational contexts may also clarify whether these patterns are universal or context-specific, contributing to a stronger framework for media literacy in the digital era.

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