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# PREVENTING FAKE NEWS: ASSESSING CIVIC ONLINE REASONING STRATEGIES AMONG SOCIAL STUDIES EDUCATION STUDENTS IN A PHILIPPINE STATE UNIVERSITY

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## ABSTRACT

Students' extensive use of the Internet and Social Media platforms serve as their main source of news and information. This posits them to be vulnerable in acquiring and disseminating fake news and false information. This study determined the extent of utilization of methods in preventing fake news among Social Studies Education students in a state university at Antipolo City. Incorporating evidence from collected data, this study found out that evaluating the content of a source was the most widely used method by students to prevent the spread and less engagement with fake news. The study also found that the respondents' year level is significant when it comes to preventing and spotting content with fake news. Moreover, students' susceptibility to engage in fake news is reduced if they have been promoted to a higher educational level due. The study recommends applying the ideas of Civic Online Reasoning proposed by Wineburg and McGrew from the Stanford History Education Group in developing instructional plans for Social Studies students focusing on three aspects: (1) Source Evaluation, (2) Content Evaluation, and (3) Cross-Referencing.

**Keywords:** *civic online reasoning, fake news, lateral reading, media and information literacy*

## Introduction

Through the years, the internet has become the most significant avenue to access varying sources of information. It holds incredible possibilities for learning, entertainment, and socialization wherein it is considered a useful tool that allows people to be more connected. However, a significant increase and amount of misinformation and disinformation was observed despite the technological progression to access information conveniently (Magpantay, 2022; Othman, 2019). Shu et. al (2017) also mentioned that the internet also aided social media as a double-edged sword for it makes it possible to process the widespread of fake news which contains deceptive facts. The enormous amount of information that users receive and encounter as they immerse themselves on the internet can influence what they know and what they believe. As a result of the prevalence of false news in the digital era, the credibility and dependability of the news sources consumed by the public have deteriorated (Abassi & Huang, 2020). Lazer et al (2018) and Ordway (2017) defined fake news as a term that can mean different things and fabricated information that mimics news media content in any form of a news satire, clickbait and propaganda. In the context of this study, the researchers define 'fake news' to a false or misleading information presented as news by means of disinformation and misinformation focusing on social media platforms. People are expected to be aware and concerned about fake news, but lack of regulation cause social media users to share false information in different platforms like Facebook and X (or formerly known as Twitter) either intentionally or unintentionally. Bringula et al. (2022) pointed out that social media platforms

are used for misleading data which results in engagement for misinformation. Furthermore, people formulate opinions from fake information and attract other people to engage through comments and replies (Heydari et al, 2015). When people don't fully understand the content, they read, unverified opinions are created resulting to sharing personal perceived opinion of an individual (Marsh & Stanley, 2021). The distribution of false information is rooted in the pre-existing ideas, media affordances, and message structuring (Alrubaian et al, 2016; Marwick, 2018; Li & Suh, 2015). Newhoff (2018) argued that people must necessarily comprehend the information before sharing it, whereas, Calvillo (2018) pointed that people with low analytic ability, less pertinent knowledge are the most susceptible to fake news. Lee (2021) mentioned interpreting fake news has harmful effects on the individuality of the person as well as those who perceive the fake information that affects their attitudes and personal well-being.

Social media was undoubtedly evolving, as evidenced by the dominance of social media platforms with diverse functions on the internet. The findings of Tee and Murugesan's (2018) study supported the concept of media evolution by taking advantage of current media trends and the enhanced, developed, and effective use of artificial intelligence, as it can be utilized effectively as a blockchain for the online dissemination of false information. Different online trends are subjects for detecting the trends of spotting fake news on digital media (Shahzad, 2022). As the internet evolves, so does fake news. Most of the fake news targets a specific sample of the population in promoting certain ideologies and stimulating strong beliefs in polarizing society (Chen & Sharma, 2015). Fake news has become a major part of social media platforms. This also raised doubts about information credibility, quality, and verification (Tandoc et al., 2018). Several research has shown several techniques in order to limit the spread of fake news. This includes the following techniques: (1) identification and mitigation, (2) looking for verification badges, (3) assessing the information for content evaluation, and (4) content analysis of the words, phrases, concepts, ideas or presentations (Niedringhaus, 2019; Mindspun, 2020; Sharma, et. al 2019; Wang et al, 2021). Zhou and Zafarini (2020) included knowledge-based, style-based, propagation-based, and source-based methods in detecting fake news.

Gill et al. (2023) mentioned that college students might anticipate that their outgroup is more willing to act against fake news than they are, like prior studies that highlighted the tendency for individuals to evade taking responsibility in the presence of others. It means that higher education does affect how people deal with the information they see on the internet. A study conducted by Leeder (2019) observed that college students must improve their critical thinking skills, engage in lateral reading, and be mindful of the context of the news they read to prevent themselves from falling vulnerable to false news disguised as factual information. In the context of the Philippines, students only have average skills in identifying fake news, according to Deinla (2021) of BOSES Pilipinas. She also mentioned a significant discrepancy between the student's perceived ability to differentiate between fake and real news and their actual performance when confronted with fake news. The result from Pulse Asia in 2022 revealed that 58% of the Filipinos see social medial influencers and vloggers as peddlers of fake news about government and politics followed by journalists at 40%, national politicians at 37% and local politicians at 30% (Gregorio, 2022).

The study draws on the Civic Online Reasoning framework, which emphasizes individuals' ability to search for, evaluate, and verify social and political information online (McGrew et al., 2018). A key strategy relevant to this framework is lateral reading. Wineburg and McGrew (2019) describe this practice as leaving a website after a brief initial examination and consulting other online sources to assess the credibility of the original source. This theoretical underpinning is grounded in the belief that individuals must develop critical thinking skills and be able to navigate online information wisely to make informed decisions.

This approach directly contrasts with traditional digital literacy models like the CRAAP Test (Currency, Relevance, Authority, Accuracy, Purpose), which promotes Vertical Reading. Vertical reading instructs users to stay on a single webpage and inspect internal text cues, about pages, domain extensions, or self-reported credentials. In modern digital environments, vertical reading introduces severe theoretical tension: malicious actors easily fake site aesthetics, verification badges, and internal credentials to appear authoritative.

Moreover, civic online reasoning suggested the following methods in detecting false information found on the internet: identify who is behind the information; evaluate the evidence presented; and find out what other sources say. These methods were used as main indicators and variables for this study: Source Evaluation, Content Evaluation, and Cross-Referencing. Various sources, platforms, and media serve as the basis for how fake news becomes more diverse and spreads through the actions of individuals, especially students. For the

context of this study, Source Evaluation refers to the practice of determining and investigating who is behind the information; Content Evaluation focuses on the practice of analyzing evidence/s as part of evaluating online information and finally the Cross-Referencing describes the practice of corroboration and verifying information from multiple online sources (Wineburg and McGrew, 2018).

If one of the primary roles of higher education is to inspire students to use their knowledge for the greater good of society, this current study may serve as a cautionary note that student confidence in their ability has the potential to reinforce the highly polarized public discourse on fake news today.

## Methodology

The purpose of this research is to assess the methods used by Social Studies students to prevent the spread of false information, with a particular focus on methods of source evaluation, content evaluation, and cross-referencing. This study specifically focused on Social Studies Students as the participants, as the researchers were interested in evaluating their strategies for combating misinformation. This study aims to (1) determine the demographic profile of the respondents, (2) assess their level of engagement in utilizing source evaluation, content evaluation, and cross-referencing methods to prevent the spread of fake news, and (3) find the significant difference on the extent of utilization of the methods in preventing fake news in terms of the respondents given profile, (4) present a comprehensive part of the syllabus on Social Networking and Social Integration course that specifically focuses lesson about fake news. Together with the syllabus includes three distinct lesson plans that focus on source evaluation, content evaluation, and cross-referencing. The researchers hypothesized that there is no significant difference on the extent of utilization of methods in preventing fake news in terms of Social Studies Education students' profile.

This research utilized a descriptive quantitative study method and design to systematically and accurately depict a population, situation, or phenomenon. The researchers used printed survey questionnaires to collect the respondents' responses to authenticate the data collected.

This study was conducted through a probabilistic stratified sampling technique during the academic year 2022-2023. The data collected totaled 83 out of 110 Social Studies Education students enrolled in the University of Rizal System Antipolo City Campus College of Education spanning from first year to the fourth year. The researchers utilized a 4-point researcher-made survey questionnaire that underwent thorough validation by experts. The content of the survey questionnaire covered item statements for Source Evaluation, Content Evaluation, and Cross-Referencing which are lifted from the Civic Online Reasoning of Wineburg and McGrew (2018). Descriptive statistics such as frequency count, percentage, and mean scores were used in describing and analyzing the data. Moreover, inferential statistics using One-way analysis of variance (ANOVA) was used in determining the significant difference of profile and assessing the students' level of engagement to the questionnaire statements.

## Results and Discussion

### *Respondents Profile*

The respondent's profile was categorized by both sexes and year level. As mentioned earlier, there were 83 total respondents for this study. Many of those respondents are female students making up 56 or 67.5% of the overall respondents while 27 or 32.5% of the overall respondents were male students. As for the year level, 28 or 33.7% of the respondents came from the second-year level. It is followed by the first-year level making up 25 or 30.1% of the overall respondents. Third in the rank are the fourth-year students making up 21 or 25.3% of the overall respondents. Lastly, the third-year level had the fewest respondents, making up only 9 or 10.8% of the overall respondents.

*Extent of Methods of Utilization in Preventing Fake News of Social Studies majors*

A. *Source Evaluation*

**Table 1**
Extent of Method Used by Social Studies Education Students in Preventing Fake News with Respect to Source Evaluation

| Source Evaluation | Mean | Verbal Interpretation | Rank |
|---|---|---|---|
| *1. I inspect the author's background before agreeing with it.* | 3.24 | Often | 6 |
| *2. I attempt to look into the account profile of the person who posted it.* | 3.46 | Always | 3 |
| *3. I attempt to look into the account profile of the person who shared it.* | 3.23 | Often | 7 |
| *4. I inspect the author's expertise based on the written or shared post.* | 3.13 | Often | 8 |
| *5. I check the author's intention if it's biased or unbiased about the information he/she's posting or sharing.* | 3.55 | Always | 2 |
| *6. I check how the source was written and posted.* | 3.43 | Always | 4 |
| *7. I inspect the URL address and website's physical features if it's trustworthy on the source they can share or post (.com, .org, .edu, etc.).* | 3.41 | Always | 5 |
| *8. I check if the website of the source has a verified logo or mark.* | 3.60 | Always | 1 |
| ***Grand Mean*** | **3.38** | **Always** | |

Table 1 presents the computed mean, ranking, and verbal interpretation on the methods under source evaluation in preventing fake news used by Social Studies Students. It can be seen from the table that among all methods under source evaluation, statement, "I check if the website of the source has a verified logo or mark" got the highest mean of 3.60 which is verbally interpreted as Always. On the other hand, statement 4 "I inspect the author's expertise based on the written or shared post." obtained the lowest mean of 3.13, verbally interpreted as Often. Overall, the method under source evaluation obtained a mean of 3.38, which was verbally interpreted as Always. Under the methods in source evaluation, statement 8 gained the highest mean score wherein the respondents always evaluate the news or information they are exposed to by looking at the verified logo or symbol of the information source. However, statement 4 obtained the lowest mean score, indicating respondents often evaluate an author's expertise based on a written or shared post.

In contrast to the result, according to the study of Wang et. al (2021) a verification badge reduces the efficacy of identity verification raises concerns regarding badges in identity verification systems. Given the moderating effect of a verification badge in weakening the impact of identity verification and the possibility that malicious users may voluntarily verify their identities to obtain the verification badge and post more fake news, platforms should consider not disclosing verified status, particularly when users voluntarily verify their accounts. This indicates that the presence of verified logos on specific sources is not an indication that the source and news are reliable and true. This implication is illustrated by Twitter's introduction of paid verification. According to Rawling (2023), Twitter introduced a subscription service under Elon Musk's ownership that charged users US$8 per month for a blue checkmark. The report also noted that accounts associated with deceased celebrities displayed blue checkmarks, raising questions about the verification service. These developments suggest that a blue checkmark alone should not be treated as evidence of the accuracy of an account's content or the credibility of its claims.

The student respondents were also found to inspect the authors' expertise often. This implies that out of all the methods under Source Evaluation, inspecting the authors' expertise was the least they practice. However, according to the study of Pennycook and Rand (2019), an expert-facts checker is a natural approach to verifying fake news that employs professional fact-checkers to determine which content is false and then

engages in some combination of issuing corrections, tagging false content with warnings, and directly censoring false content. This was 29 also supported by the study of Collins et. al (2021), wherein they indicate that most fact-checkers have frequently been criticized for being biased and political. This implies that seeking authors' expertise and profession is an essential method for working through and confirming online and offline information.

B. *Content Evaluation*

**Table 2**
Extent of Method Used by Social Studies Education Students in Preventing Fake News with Respect to Content Evaluation

| Content Evaluation | Mean | Verbal Interpretation | Rank |
|---|---|---|---|
| *1. I check the date of the digital publication.* | 3.49 | Always | 2 |
| *2. I observe the technicalities of the content (punctuation, font, grammar, pictures, and format).* | 3.23 | Often | 6 |
| *3. I spend time thoroughly reading the contents of it.* | 3.18 | Often | 7 |
| *4. I analyze its composition (message, intended audience, and writer's purpose).* | 3.42 | Always | 4 |
| *5. I validate it using fact-checking tools or by searching the same information of the source on different websites.* | 3.06 | Often | 8 |
| *6. I examine its intended purpose if it's relevant to its intended audience.* | 3.30 | Always | 5 |
| *7. I only post it if I already checked its accuracy, credibility, and reliability.* | 3.48 | Always | 3 |
| *8. I only share it if I already checked its accuracy, credibility, and reliability.* | 3.57 | Always | 1 |
| ***Grand Mean*** | **3.34** | **Always** | |

Table 2 presents the computed mean, ranking, and verbal interpretation on the methods under content evaluation in preventing fake news used by Social Studies Students. It can be seen from the table that among all methods under content evaluation, statement 5, "I validate it using fact-checking tools (factcheck.org, etc.) or by searching the same information of the source on different websites." got the lowest mean of 3.06 which is verbally interpreted as Always. However, statement 8 "I only share it if I already checked its accuracy, credibility, and reliability." obtained the highest mean of 3.57, verbally interpreted as Always. Overall, the method under content evaluation obtained a mean of 3.34, which was verbally interpreted as Always. Hence, under the methods in content evaluation, statement 8 gained the highest mean score wherein the respondents always verify and disseminate the information's content by evaluating its accuracy, credibility, and reliability. However, statement 5 got the lowest mean score, implying that respondents often validate news using fact-checking tools or by searching the same information online.

The result shows that the respondents' least used fact-checking tools under content evaluation. The reason for this can be explained with the support of a study conducted by Nygren et al. (2021). It was stated that fact-checking initiatives have created digital tools and novel responses to infodemics, benefiting journalists. However, such tools have not widely reached the public, which has generally been 31 left to its own devices. This demonstrates that the general public is yet to maximize the usage of fact-checking tools. In addition, another study has found out that "automatic fact-checking method can deal with large volumes of information within a very short time; however, it has a lot of limitation because most automatic machines learning algorithm trained to detect fake news is based on certain lexical and textual contents as well as style" (Collins et al, 2021). It is uncertain if that's one of the reasons why some people don't use fact-checking tools provided by websites

and other apps, but it was revealed by Collins and his colleagues' study that automatic fact-checking and even manual fact-checking aren't the best options in detecting fake news.

On the other hand, without the aid or reliance on fact-checking tools, respondents also stated that they always share news they already checked the accuracy, credibility, and reliability. A study conducted by Veeriah (2021) revealed that after knowing if the news is fake, with the help of new media literacy, majority of the people would re-share the news to inform the others on the credibility of the news (60.4%) not for the intention to peddle fake news. It can still be implied that people are careful in sharing posts by checking the accuracy, credibility, and reliability of the content.

C. Cross-Referencing

Table 3 presents the computed mean, ranking, and verbal interpretation on the methods under Cross-Referencing in preventing fake news used by Social Studies Students. It can be seen from the table that among all methods under cross-referencing, statement 2, "I look for reviews, comments, captions, and replies from those who were engaged in the source or post." got the highest mean of 3.64 which is verbally interpreted as Always. However, statement 5 "I check for secondary citations to widen my understanding of the source content." obtained the lowest mean of 2.96, verbally interpreted as Often. Overall, the method under cross-referencing obtained a mean of 3.22, which was verbally interpreted as Often. Overall, under the methods in cross-referencing, statement 2 got the highest mean score revealing that the respondents always look for reviews, comments, captions, and replies from those who were engaged in the source or news. However, statement 5 received the lowest mean score, indicating that respondents often confirm their understanding of the source content through secondary citations

**Table 3**
Extent of Method Used by Social Studies Education Students in Preventing Fake News with Respect to Cross Referencing

| Cross Referencing | Mean | Verbal Interpretation | Rank |
|---|---|---|---|
| *1. I cross-check existing articles related to it and see their connection.* | 3.23 | Often | 6 |
| *2. I look for reviews, comments, captions, and replies from those who were engaged in the source or post.* | 3.64 | Always | 1 |
| *3. I compare its content to other related sources.* | 3.30 | Always | 2 |
| *4. I check further links and cited information within the source.* | 3.25 | Often | 3.5 |
| *5. I check for secondary citations to widen my understanding of the source content.* | 2.96 | Often | 8 |
| *6. I consider cross-checking to other references to add up information from the previous source that I read.* | 3.25 | Often | 3.5 |
| *7. I practice lateral fact-checking by opening other tabs to verify the credibility of the source.* | 3.24 | Often | 5 |
| *8. I confirm with experts or other people how they view the source as credible, reliable or not.* | 2.99 | Often | 8 |
| *9. I use fact-checking tools as part of cross-referencing the source that I shared or posted.* | 3.10 | Often | 7 |
| ***Grand Mean*** | **3.22** | **Often** | |

The results infer that many of the student respondents are looking at the reviews, comments, captions, and replies of the source or post that they have encountered. People's participation in various information sources influences the accuracy of other individuals' comments, reviews, and replies. As mentioned by the study

of Heydari et. al (2015), focusing on the comments and replies provided to the receiver is dependent on the source's popularity. The more engagement it requires, the more people will visit and leave their thoughts and opinions regarding specific information, resulting in a variety of opinion consultations from different people. In addition, Yue et. al (2019) mentioned in their study that there are three types of people's opinions about news which are known as support, neutrality and opposition. This only means that the accessibility of information, particularly news, frequently leads to intense discussions among individuals, which may even result in a shift in their own ideas or beliefs due to the exposure of a person to different presented viewpoints.

People could accept information from a source of fake news as true without realizing that the source lacks credibility. Marsh and Stanley (2021) claim that even when people don't fully understand the content they've read, they frequently create opinions about it. Secondary citations, on the other hand, according to Lai (n.d.) state that it functions as the information that everyone perceives based on the first-hand knowledge of the creator of the original source. which is frequently used in academic settings when it is impossible to locate or access the information's original source. Which means that confirming what the other author says about certain information needs to be verified to avoid fake news widespread that was started by being an information bias.

A summary of the perceived methods was presented in Table 4. It can be seen from the table above that among all the perceived methods, the source evaluation got the highest mean of 3.38 which was verbally interpreted as "Always". While the content evaluation obtained a grand mean of 3.34, verbally interpreted as "Always" and the Rank 2 among all the perceived methods. However, cross-referencing obtained the lowest mean of 3.22 which was verbally interpreted as "Always".

**Table 4**
Composite Table of the Extent of Method Used by Social Studies Education Students in Preventing Fake News

| Methods | Mean | Verbal Interpretation | Rank |
|---|---|---|---|
| *Source Evaluation* | 3.38 | Always | 1 |
| *Content Evaluation* | 3.34 | Always | 2 |
| *Cross-Referencing* | 3.22 | Often | 3 |
| ***Grand Mean*** | **3.31** | **Always** | |

The results show that the students always do a source evaluation before going beyond the text or article they will read to avoid wasting time and engaging in fake news. This is connected to the journal at the University of Washington (2015) that says it is important to critically evaluate sources because using credible or reliable sources makes them more informed readers or writers. The students can think of unreliable sources as pollutants to credibility; if they include unreliable sources in their work, it could lose credibility as a result. This supported the findings of Revez and Corujo (2021) that in libraries' position on issues like authority and source evaluation is considered through an information literacy perspective. Also, Niedringhaus (2018) argues that "Learning how to make a logical argument and how to recognize one when we hear it is critical. We need to empower the students by giving them the tools they need to assess the information they are receiving. They need to be able to assess authority and expertise. They need to understand the difference between correlation and causation. It can also be inferred from the table that the students always do a content evaluation to make sure that it is a valid and reliable source. The respondents make sure that deepening through reading and relying on the content is very important to prevent fake news. Content analysis is crucial in relation to Mindspun (2020) because it reveals how receptive audiences are to specific words, phrases, concepts, ideas, images, works, programs, or presentations. And since content is always changing, new content analysis is always needed. It is supported by the findings of Luo (2022) that content analysis is important for students to do because it can be applied to a broad range of texts and is used in a variety of fields, including marketing, media studies, anthropology, cognitive science, psychology, and many social science disciplines, to prevent fake news. It can be seen from the results that, in terms of cross-referencing, the respondents frequently do it to determine how reliable the resources or material are when it comes to preventing fake news. This can imply that cross-referencing is not the focus of the respondent when they try to read and go beyond the text. In connection to the study of Himdi et. al (2022) Over the years, social media has had a considerable impact on the way we share information and send messages. With this comes the problem of the rapid distribution of fake news which can

have negative impacts on both individuals and society. Given the potential negative influence, detecting unmonitored 'fake news' has become a critical issue in mainstream media.

*Significant Difference on the Extent of Utilization of the Methods in Preventing Fake News*

With the given results from demographics and frequency level of utilizing the perceived methods, it led to the important idea to determine significant differences with respect to given profile of the Social Studies Education students.

A. *Significant Difference on Sex*

**Table 5**
Significant Difference on the Extent of Utilization of the Methods in Preventing Fake News in Terms of Respondent's Sex

| Methods | Sex | Sum of Squares | df | Mean Square | f-value | p-value | Decision* |
|---|---|---|---|---|---|---|---|
| Source Evaluation | Male | .001 | 1 | .001 | .003 | .953 | FR |
| | Female | 18.274 | 81 | .226 | | | |
| Content Evaluation | Male | .040 | 1 | .040 | .189 | .665 | FR |
| | Female | 17.181 | 81 | .212 | | | |
| Cross-Referencing | Male | .174 | 1 | .174 | .604 | .439 | FR |
| | Female | 23.318 | 81 | .188 | | | |

**FR-Failed to Reject*

From the result of the data gathered, Table 5 states that there is no significant difference between the methods of preventing fake news and the sex of the respondents. This was proven wherein source evaluation, content evaluation, and cross-referencing obtained their respective p-values of .953, .665, and .439 which are greater than the 0.05 level of significance. This implies that the obtained values are insufficient to reject the null hypothesis. Thus, there is no significant difference in the perceived methods with respect to the sex of the respondents. The result as shown in the table implies that sex is not a factor that affects the utilization of the methods in preventing fake news. Regardless of sex, source evaluation, content evaluation, and cross-referencing can still be either utilized or not. Male and female have general interests and work preferences similar to their general engagements on social media and fake news as they scroll on to different platforms. The results of a study by Shu et al. (2018) show that both men and women may be likely to read fake news. The results of their study on how fake news is prevented and how users' profiles are exposed suggest that sex is not a factor in how people interpret the information they can obtain. The study's findings were supported by the results obtained by Almenar et. al (2021), where it was discovered that men and women just have the same issues with spotting fake news and preventing it, and that they utilize the same standards for determining authenticity and obtaining fake news. This shows that an individual's sexual orientation cannot be utilized for assessing how capable they are of thinking differently from one another. Based from the gathered result from table 6 it can be inferred that the way a man or woman thinks cannot be defined by their sexual orientation since people think based on what they know rather than what their sexes are. In general, the researchers confirm that there are several elements that should be focused on to indicate the importance of indicators in connection with preventing fake news, independent of the sex of the respondents.

B. *Significant Difference on Year Level*

**Table 6**
Significant Difference on the Extent of Utilization of the Methods in Preventing Fake News in Terms of Respondent's Year Level

| Methods | Year Level | Sum of Squares | df | Mean Square | f-value | p-value | decision |
|---|---|---|---|---|---|---|---|
| Source Evaluation | First Year / Second Year | 17.399 | 79 | .220 | 1.324 | .272 | FR |
| | Third Year / Fourth Year | .875 | 3 | .292 | | | |
| Content Evaluation | First Year / Second Year | 15.535 | 79 | .197 | 2.859 | 0.42 | R |
| | Third Year / Fourth Year | 1.687 | 3 | .562 | | | |
| Cross-Referencing | First Year / Second Year | 21.966 | 79 | .278 | 1.830 | .148 | FR |
| | Third Year / Fourth Year | 1.526 | 3 | .509 | | | |

**FR-Failed to Reject / R - Reject*

As seen on Table 6, it was noticeable that there is no significant difference between the year level of respondents to the Source Evaluation and Cross-referencing methods. In contrast, the content evaluation revealed a significant difference between the respondents' methods and year level. It also shows that source evaluation and cross-referencing obtained their respective p-values of .272 and .148 which are both greater than the 0.05 level of significance. This tells us that the obtained values are insufficient to reject the null hypothesis. Thus, there is no significant difference in the perceived methods (source evaluation and cross-referencing) with respect to the year level of the respondents. However, the result was different for content evaluation. The table below shows that the cross-referencing method got a p-value of .042 which is lower than the 0.05 level of significance. This implies that the obtained values are sufficient to reject the null hypothesis. Thus, there is a significant difference in content evaluation with respect to the year level of the respondents.

The result on Source Evaluation implies that regardless of the year level of the student respondents, it is not a significant factor as a method in preventing fake news. In contrast with the study of McGrew et. al (2018), they infer that students rarely ask who created online sources. Instead of evaluating information by seeking who was behind the source, students made trustworthiness judgments based on factors such as the content of a post and the page's appearance. This was supported by the claims of Sparks et. al (2021) that the absence of explicit textual and metatextual indicators of credibility or authors' information in some source texts may have also hindered students' ability to perform the expected evaluations or appropriately judge the source's expertise. The findings confirmed that source evaluation can be done by any respondents regardless of their year level. Therefore, this result simply implies that the year level of the Social Studies students is not significant in utilizing source evaluation as a method in detecting fake news found online.

The findings from the table revealed that there is a significant difference between the respondents' year levels and method of content evaluation. It indicates that as the respondents' year level progresses, they become more conscious of the information supplied to them, whether it was false news or not. In addition, it can be concluded from the results that the respondents are dependent on the nature of the news they are reading as they reach higher years in their tertiary education. Thus, it indicated that the year level of the Social Studies students is significant in utilizing content evaluation as a method in detecting erroneous and fake news found online. As stated from the study of Gill et al. (2023), college students might anticipate that their outgroup is more willing to act against fake news than they are, like prior studies that highlighted the tendency for individuals to evade taking responsibility in the presence of others. It means that higher education does affect how people deal with the information they see on the internet. In connection with the study conducted by Auberry (2018), many individuals, including students, believe they recognize false or satirical stories and reports written by respectable journalists. When these same individuals are presented with a challenge, such as evaluating a poor

source that measures their ability to distinguish between real and fabricated stories, the truth emerges. College students are just as likely to be incapable of articulating what is lacking from the fake story or news that requires them to determine whether a story is real, or fake based on its headline and source information. College students are still susceptible to getting misinformed and disinformed once presented by a content but they're more likely to avoid it as well considering their knowledge of information analysis.

According to Bringula et al. (2022) previous study, students believe that social media platforms are used for spreading misleading data because they encounter such articles frequently in their accounts. Thus, to verify the authenticity of news articles, students utilize technology and seek the opinions of others, ultimately consulting their family members and closest friends. Bringula also added that although family members and friends may provide a convenient source of information, it is important to acknowledge that the information gathered from them may be based solely on personal opinions rather than empirical evidence. Therefore, it is advisable to provide an additional layer of verification to establish complete trust in their recommendations. 43 In this digital age, preventing the spread of fake news or disinformation requires extensive fact-checking skills. Due to the evidence-based nature of fact-checking (Chua, 2021) mentioned that fact-checking decreases the foundation upon which disinformation is constructed. It is where the convenience of access to these fact-checking resources makes them the most preferred sources for verification. In addition, the accessibility of fact-checking resources implies that they are the most preferred sources for verification. According to Murungi et. al (2019) the efficacy of technology-driven verification tools is hindered not only by confirmation bias but also by the inherent limitations of the technology. Even though students utilize Google to verify the authenticity of news, they may encounter numerous web pages reiterating the same article, thereby augmenting its credibility as a bonafide one (Pennycook and Rand, 2019). Despite the fact that all materials are available to students, this data shows that library resources are not being fully used to counter fake news because people and students' primary source of information today was the internet. Hence, the study's findings and results indicate that the year level of the Social Studies students is not significant in utilizing cross-referencing as a method in detecting fake information found online. The research findings confirmed that respondents often used cross-referencing to prevent fake news; however, there was no significant difference based on the students' year levels. This further implies that regardless of the respondents' year levels, cross-referencing can still be used to seek further verification of the news or information they are reading based on their own perceived ways, which may not vary to teach at every year level in tertiary education.

*Proposed Instructional Plan*

As the research findings revealed, developing an instructional plan covering the three methods aims to prevent the proliferation of fake news online. Such lesson plans include instruction and strategies on how students of Social Studies Education can foster themselves in developing their sense of knowing which news is fake or not by applying the three perceived methods namely source evaluation, content evaluation, and cross-referencing.

## Conclusions and Recommendations

The findings of this study conclude and recommends that among all the methods under source evaluation, the respondents always trust a source based on the external indicators in examining the news specifically if a source's account bears a mark of a verified logo. Whereas the respondents do not usually check for the author's expertise when evaluating a source. Researchers recommend that students may consider visiting the author's social media profile or page. This means that with further checking on the author's profile, students can verify the relevance of the shared posts. For content evaluation, the respondents always verify the information's content by checking its accuracy, credibility, and reliability. However, they do not usually maximize the use of fact-checking tools by validating news or sources content that can be accessed online. The students may explore the internet to utilize fact-checking tools. Students can also ask their teachers and experts to check the legitimacy of the news or information being posted or shared. In terms of cross-referencing, the respondents always look for reviews, comments, captions, and replies from those who were engaged in the source or post. Yet, the respondents only often check for secondary citations to widen their understanding of the source content. Practicing lateral reading allows students to view and read different sources and websites. This can help students to match details, find similarities, and compare the contents of the sources which develop their critical thinking.

The Social Studies Education students' methods in preventing fake news have nothing to do with their sex. Thus, the sexes of students of Social Studies Students have no significant difference in utilizing the methods to prevent fake news. When it comes to preventing fake news, the content evaluation method and the respondent's year level are significantly different. This indicates that what students learn during a year level has a big impact on their exposure to facts when it comes to evaluating the content of news. The mere fact that course subjects help in teaching fundamental concepts from what is true and not exposes students to fake news awareness more as their year level advances. Using the Source Evaluation, Content Evaluation and Cross Referencing before, during and after reading and evaluating an information is important to prevent the spread of fake news.

Since this study heavily relied on descriptive and inferential data, it can be a base on further studying how Social Studies Education students can prevent fake news. An in-depth interview toward Social Studies Education students, classroom observations, incorporating lessons on fake news or how students can apply and practice the mentioned methods in this research can expand the results of this study. Furthermore, the effectiveness of instructional plan applying the methods can contribute on understanding how teachers help students to develop their critical and analytical skills in preventing fake news.

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