

Fight Fake News: Critical Reading of Digital Texts and Spotting Fake News and Disinformation Tactics

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Abstract

Fake news and disinformation have become a pressing issue in the Philippines affecting political perceptions and choices, health information, and disaster awareness of the people. In this action research, the knowledge of pre-service teachers who majored in English were determined and an intervention was implemented in response to their knowledge needs with regard to their digital reading skills and identifying fake news and disinformation tactics. Data were gathered using a researcher-made test which underwent validation by relevant experts, reliability testing, and pilot testing. Data gathered were treated utilizing the descriptive and inferential research designs. To determine the knowledge in digital reading skills and identifying fake news and disinformation tactics, mean and standard deviation were used. To determine the difference in their knowledge between the two variables, t-test was used; and to determine the effect size and meaningfulness of the intervention, Cohen's D was used. Results show that the pre-service teachers' knowledge of critical reading and identifying fake news and disinformation tactics before the intervention was average and progressed into excellent after the intervention. T-test results showed that the outcome of the intervention is highly significant and Cohen's D results showed the large effect in the intervention providing a practical significance of the outcome. A recommendation was given to strengthen the teaching of critical reading skills of pre-service teachers in digital formats and the skill in spotting fake news and disinformation tactics.

Keywords: critical reading, fake news; disinformation tactics; pre-service teachers; campus journalism

1. Introduction

The Philippines has been labeled "patient zero" in the global fight against disinformation (The Future of Fact-Checking in the Philippines, 2023). In a span of over five years, the Philippines topped the list of countries with the biggest percentage of social media users and internet users that watch vlogs and play video games, (Howe, 2023). These tools are notorious for providing platforms to peddlers of disinformation. Unlike the USA, UK and some European countries, the Philippines does not have a social media regulation agency that policed platforms and disinformation peddlers. Although some social media platforms such as Meta have its own community standards and regulations regarding false information, propagators of fake news have become smarter and more creative in avoiding these social media regulations. Fake news peddlers are now using tactics such as deliberate changing of spelling of words, using code words, and posting vague claims to avoid consequences, (Pasion, 2023).

Social media users in the Philippines are not generally equipped with “cognitive resilience” to combat disinformation, (Khan & Chua, 2023). In a survey by Pulse Asia (2022), about 86 per cent of Filipino adults see “fake news” propagation as a pressing issue in the country. In addition, about 68 per cent of the adult population places internet and social media as leading source for fake news. In consequence to these data, several initiatives were launched to combat disinformation in the Philippines particularly about government and politics. Rappler, an online news website, launched its #FactsFirstPH movement that partnered with over 120 organizations bringing together “various sectors that are committed to promoting truth in the public space, and exacting accountability on those who harm it with lies.” Consequently, various campus publications have adopted the #FactsFirstPH format of fact-finding and fact-checking. Despite the emphasis of critical thinking and other higher order thinking skills in colleges and universities, a report said that the “youth are most vulnerable to fake news” urging the Presidential Communications Office to collaborate with the Commission on Higher Education and Department of Education in expanding the Media and Information Literacy (MIL) modules. In some Teacher Training Institutions, campus journalism as course is offered particularly in the BSEd English program. However, the course only tackles the basic principles of news reporting and opinion-writing. This does not provide adequate amount of knowledge about how to spot fake news and prevent disinformation.

This study was conducted to provide an intervention among the 46 third year BSED English students who are taking the course Campus Journalism in terms of spotting fake news and curbing disinformation as additional skills in newswriting. The familiarity of critical reading of digital texts was made a salient and requisite topic in the intervention as this hugely impacts the way students detect false stories and propaganda.

1.1 Problem Statement

This research intended to answer the following problems:

1. What is the knowledge of BSEd students in Critical Reading of Digital Texts and Spotting Fake News and Disinformation tactics?
2. Is there a significant difference in the knowledge of BSEd students on Critical Reading of Digital Texts and Spotting Fake News and Disinformation tactics?

1.2 Hypothesis

There is no significant difference in the knowledge of BSEd students on Critical Reading of Digital Texts and Spotting Fake News and Disinformation tactics.

2. Materials and Methods

2.1 Research Design

This study utilized a descriptive and inferential research design to determine the knowledge level of 46 third year BSEd English students at the University of Antique who are taking ENGL 17 or Campus Journalism. Using purposive sampling, the participants were duly selected according to their class standing, whether they are regular or irregular students. This was decided simply to ensure that the sample population would be available and present in the entire duration of the study specifically during the diagnostic stage, intervention and evaluation.

This study underwent the standard process of an action research which starts from the selection of the study focus which in the case of this study, the knowledge of pre-service English teachers on Critical Reading and Spotting fake News. The description of their knowledge goes beyond what they know about critical reading as a skill. It extends to what they completely understand about critical reading as applied

to digital texts that are mostly accessed online or in the internet. Turner and Hicks, 2015 in Wilhelm, J. et al (2023) mentioned that “digital texts function differently”. Digital texts have more cognitive demands on the reader as the page offers multiple functions and requires attention. On the other hand their knowledge on spotting fake news is described as how they can identify a published articles as a type of disinformation and mal-information content following the methods of fact-checking and verification. Following the identification of the study focus, a literature review was conducted to discover theoretical underpinnings that would provide a basis for the conduct of this study. The review also includes an examination and analysis of the existing situation, the problems, and the gaps regarding the matter being studied and its connection with the curriculum. The research questions were then crafted for the problem.

2.2 Instrumentation

The collection of data involved a diagnostic test which provides the researcher information prior to the designing and development of a learning experience. The preparation of the test also required necessary information such as the syllabus being utilized in the course, the students’ academic performance in news, feature, and opinion writing, and the students main source of news. These information were obtained through interviews with the faculty handling the course and the students participating in the study.

The diagnostic test was designed by the researcher based on the previously mentioned information. Using a table of specifications, the topics were identified and the number of items were matched as to contact time with the participants. The test totalled 30 items. The same test was administered in the post-intervention evaluation.

2.3 Validation

The test validity was evaluated by professionals whose expertise ranges from the fields of Mass Communication, Social Science, Language, and Education. These professionals acted as jury to indicate whether a test item should be accepted, revised, or rejected. The inter-rater reliability was treated using Cronbach’s alpha with 80 percent agreement ratio.

2.4 Data Collection and Analysis

The pretest and post test were administered to the 46 participants. It was made sure that those who took the pre-test were the same participants who joined in the intervention process and eventually took the post-test. The data gathered were processed and analyzed using the Statistical Package for Social Sciences (SPSS) Software. The following were the appropriate statistical tools used in this study: mean and standard deviation, t-test and Cohen’s-D.

Mean was used to determine the knowledge level of BSEd students on Critical Reading of Digital Texts and Spotting Fake News and Disinformation tactics. Standard deviation (SD) was simply used to understand how spread out the data is.

The score of each respondent in the tests were determined by adding the numerical equivalents of the option selected to which the computation of mean was derived. The mean of the scores was converted into numerical scale with the corresponding verbal descriptions:

Scale	Description	Interpretation
21.00 – 30.00	Excellent	The participants have robust understanding of the topics and are able to apply cognitive skills into reading and writing.
11.00 – 20.00	Average	The participants have foundational knowledge of the topics but unable to apply cognitive skills into reading and writing.

1.00 – 10.00	Below Average	The participants have little familiarity of the topics.
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On the other hand, t-test was used to determine the significant difference in the pre-test and post-test results. Cohen’s-D was further used to view the size of the effect between the two tests.

3. Results and Discussion

3.1 Knowledge of BSEd Students in Critical Reading and Spotting Fake News and Disinformation tactics

To determine the level of knowledge of BSEd students in critical reading and spotting fake news and disinformation tactics, mean was used.

When the pretest was computed, the data revealed that the knowledge level of BSEd students in the said subject matter is Average (mean = 14.78). this means that the BSEd students have foundational knowledge of how critical reading of digital texts is performed and how to spot fake news and disinformation tactics. However, in this level they are yet unable to apply specific cognitive skills into reading digital texts and writing a fact-check article. This data on critical reading somehow confirms the study conducted by Gagalang (2021), that explored social media use of learners, concluding that students showed “ineptitude” in their reading competence test on digital texts.

Without considering the case of teaching critical reading of digital texts as a different cognitive skill compared to reading linear texts, students may not have discovered reading strategies that would help them navigate through webpages that show a cloud of multimedia elements such as texts, hyperlinks, photos, videos, and flashing images of ads. The reading skills applied to digital text reading is extremely important in the verification of data during news gathering and fact-checking. With incidents and newsworthy events broadcast on social media in realtime, an average user may not have the necessary skill in verifying the provenance of media content and accuracy of texts that accompany the media content. Interestingly, the post-test revealed a different result. With the mean of 21.52 (SD= 3.48), it shows that after the intervention on critical reading of digital texts and spotting fake news and disinformation tactics, the students have moved from the Average level to Excellent. This means that the students have obtained a robust understanding of the topics and are now able to apply cognitive skills into reading digital texts and writing articles that debunk claims and propaganda stories..

Table 1 shows the data

Table 1 Knowledge Level of BSED Students in Critical reading and Spotting Fake News and Disinformation Tactics

Variable	\bar{x}	SD	Description
Pre-Test	14.78	2.95	Average
Post -Test	21.52	3.48	Excellent

3.2 Difference in the Knowledge of BSEd Students in Critical Reading and Spotting Fake News and Disinformation tactics

To determine the difference in the knowledge level in critical reading and spotting fake enws and disinformation tactics of BSEd students, t-test was used with alpha level of 0.05. Cohen’s D was further used to see the effect size of the intervention.

When the pre-test and post-test results were computed, it revealed that the outcome is highly significant as evidenced by the p-value of 0.000; Cohen’s D = 1.54 further showed the large effect in the intervention providing a practical significance of the outcome.

Table 2 shows the data.

Table 2 T-test and Cohen’s d Result of the Knowledge Level of BSED Students in Critical reading and Spotting Fake News and Disinformation Tactics

Variable	\bar{x}	SD	t-value	df	p-value	Cohen’s D
Pre-Test	14.78	2.95	-10.44	45	0.000	1.54 (Large Effect)
Post -Test	21.52	3.48				

*p<0.05

4. Reflections, Implications, and Recommendations

This study was conducted with a very small sample of students and should not be used to generalize a problem and solution that occur in a macro level especially in the educational setting. Due to a limited period of time to maximize the full implementation as required by an action research, performance and comprehensive paper and pencil tests were not applied. Although, it would have been better and it could have made this study more statistically testable if performance tests were given to assess the skills that go with the foundational knowledge of the students in the topics delivered during the intervention phase. However, a well-constructed test tailored to measure the knowledge of the students in the topic integrated in the syllabus was given and for this study, it served its purpose.

The knowledge improvement was assessed based on the differences between the pre-test and the post-test scores. As previously presented, the effect size of the intervention is large. If given ample time, this research work could be extended so as not to focus on the quantitative nature of data alone. The researcher believes that this study is preliminary work. It could be replicated and expanded in terms of scope, variables, and methods. A qualitative data may be required to fully understand the problem and the solution that is required based on the experiences of the students who are taking the course.

It is therefore recommended that the topics in this study is integrated into the course syllabus in the succeeding academic year for the course to be more relevant and responsive to the needs of not only the BSEd students but also the society that has little “cognitive resilience” against fake news and disinformation.

References

1. Asia, P. (2022, September). September 2022 Nationwide Survey on Fake News. Retrieved from Pulse Asia Reserach Inc.: <https://pulseasia.ph/updates/september-2022-nationwide-survey-on-fake-news/>
2. Chua, R. E. (2023, June). Countering disinformation – tools and initiatives in the Philippines. Retrieved from IMS: <https://www.mediasupport.org/publication/countering-disinformation-tools-and-initiatives-in-the-philippines/>
3. Gagalang, J.L. (2021) ‘Exploring social media use of Filipino learners’, *Linguistics and Culture Review*, 6, pp. 275–290. doi:10.21744/lingcure.v6ns2.2034.

4. Howe, S. (2023, April 4). Social Media Statistics in the Philippines (Updated 2023). Retrieved from Meltwater: <https://www.meltwater.com/en/blog/social-media-statistics-philippines>
5. Pasion, L. (2023, February 16). They're getting smarter: How disinformation peddlers avoid regulation. Retrieved from Rappler: <https://www.rappler.com/newsbreak/in-depth/they-are-getting-smarter-how-disinformation-peddlers-avoid-regulation/>
6. The Future of Fact-Checking in the Philippines. (2023, June). ISEAS Yusok Ishak Intitute. Retrieved May 16, 2024, from <https://www.iseas.edu.sg/mec-events/the-future-of-fact-checking-in-the-philippines/>
7. Wilhelm, J. D., Smith, M. W., Kesson, H., & Appleman, D. (2023). Fighting fake news: Teaching Students to Identify and Interrogate Information Pollution. Corwin Publishers.