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An Action Research Evaluating Artificial Intelligence (AI) Consumption among Learners of San Vicente National High School as Online Scaffold to Academic Endeavor: Experiences and Practices

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ABSTRACT

Despite the overwhelming use of the internet as an educational or informational resource, research has found that learners are woefully in need of guidance on how to use this resource effectively and subsequently identify reliable sources of information from unreliable. This study aims to determine the practices of students at San Vicente National High School in evaluating the reliability of online sources. This study employed the quantitative research design and utilized a questionnaire developed by the researchers of this study as a tool for gathering the data. The respondents of the study are 81 out of 324 digitally literate high school students enrolled at San Vicente National High School, San Vicente, Loreto, Agusan del Sur, of the academic year 2023-2024. The researchers used a stratified random sampling technique to obtain the sample size of the respondents. The findings revealed that the strategies employed by the students in evaluating the reliability of online sources are fairly practiced. It was recommended that students of San Vicente National High School be trained to critically evaluate the reliability of online sources by focusing on key factors such as consistency, authority, currency, objectivity, references, and language. Teachers should support this by providing curated lists of trustworthy sources and teaching simple practices for cross-checking information. Parental involvement is also essential in helping students develop better assessment skills, while school administrators are encouraged to organize digital literacy programs in collaboration with policymakers. Additionally, peer reviews should be encouraged to foster collaborative learning, and AI integration into the curriculum is suggested to prepare students for a future driven by Artificial Intelligence.

KEYWORDS

Artificial Intelligence (AI) consumption; online scaffold; academic endeavor; experiences and practices; descriptive; Philippines

INTRODUCTION

Networked digital media has been rapidly progressing through the years, and it is continuously expanding. The rapid expansion of networked digital media has offered a vast quantity of accessible information online, opening new opportunities for societal interconnectivity, recreation, self-development, and education. The dynamic changes in society as a result of the advancement of technology influence the way on how people

search for information. Meanwhile, there is a significant transformation as rapidly developed technology plays an important role in providing a convenient platform to access information through electronic media. It is in line with Pratiwi et al. (2023), who mentioned that advanced technology helps people to maximize the use of the internet and digital media to gain abundant sources of information. However, with the massive flow of information that the internet brings, the amount of misinformation and non-trustworthy parties has risen rapidly too, invoking concerns among the users of networked digital media about the credibility of online sources. The uncertainty of more or less online sources has left a heavy load on the users of networked digital media, particularly students who rely on the information they gather online to pursue their academic endeavors (Metzger et al., 2013). The reliance on searching for information on the internet, on the other hand, leads people to the problematic situation in identifying misleading information since the availability of varied sources on the web has led to confusion in determining the reliability and credibility of information taken from various online platforms.

Moreover, online information sources are being used more, whereas traditional ones are being less used. According to the study conducted by Jones (2002), it is estimated that 73% of students say they use the internet more often than libraries. However, studies have shown disappointing facts pertaining to students' capacity to assess the content of online resources. According to a significant online civic reasoning evaluation of middle school, high school, and college students in the United States of America done by McGrew et al. (2018), students had trouble determining the authenticity of the information. Most students did not consider the source of information. Instead, they concentrated on the internet platform's visible characteristics. It supported Sundar's research finding that young people judged the veracity of information found on websites based primarily on its exterior qualities (Sundar, 2008).

In recent years, the convergence of huge computing power, massive amounts of data and improved machine learning algorithms have led to remarkable advances in Artificial Intelligence (AI) based technologies, which are set to be the most socially and economically disruptive technologies ever developed (Russell and Norvig, 2021). The irruption of AI-based technology in our daily lives (e.g., robot, vacuum cleaners, real-time location and search systems, virtual assistants, etc.) has generated a growing social and political interest in educating citizens about AI. It is worth noting that AI education addresses not only the learning of the scientific and technological foundations of AI, but also the knowledge and critical reflection on how a trustworthy AI should be developed and the consequences of not doing so.

Furthermore, students' difficulties in evaluating the credibility of online sources not only lead to misinformation but also result in struggles in their academic performance. Seeking information online is not an easy task for the reason that it requires motivation, deep evaluation, and experience to prove the trustworthiness of an online source (Metzger et al., 2010). This dilemma of students on whom to believe online prompts concerns them as the internet is a vast place where anyone can freely post any unfiltered information they like (Sundar, 2008).

As a result, the experiences and practices of students in evaluating the reliability of online sources must be evaluated to determine the factors that influence students' ability to assess the trustworthiness of an online source. This study is conducted at San Vicente National High School, San Vicente, Loreto, Agusan del Sur, because, based on the researchers' observation, the majority of the respondents are digital natives who are struggling about their ability to determine trustworthy online sources, and this requires

further research to address the respondents' difficulties on evaluating the reliability of online sources.

This study aimed to determine the experiences and practices of students at San Vicente National High School on evaluating the reliability of online sources.

RESEARCH METHODS

The Research Design

This study made use of quantitative research design as a means of gathering and interpreting data findings. This design helped the researchers in deriving comprehensive data on the respondents' practices in evaluating online sources.

Respondents of the Study

The respondents of the study are the 81 out of 324 digital literate high school students enrolled at San Vicente National High School, San Vicente, Loreto, Agusan del Sur of the academic year 2023-2024. The respondents are randomly selected from all grade levels, including grade 7 to 12 to ensure a credible and reliable result. The researchers use the 81 respondents to collect the necessary data. Stratified random sampling is utilized in the study. According to Lohr (2017), Stratified random sampling is a sampling technique that involves dividing a population into non-overlapping, homogeneous subgroups called strata, and the selecting a random sample from each stratum.

Instrument of the Study

This study utilized questionnaire as research instrument to measure the practices of high school students on evaluating online sources. The questionnaire is developed by the researchers of this study. The questionnaires are consisted of 13 statements regarding students' practices on evaluating the reliability of online sources. A four-point Likert scale was used to classify the data.

Likewise, the instrument underwent a validation process, the researchers consult validators, which means the instrument is valid and reliable for the conduct of the study.

Statistical Treatment

The study used several statistical procedures to interpret the data. First, proportional allocation was applied to determine the sample size for each subgroup, ensuring a representative sample from the population. Second, the weighted mean calculated the average response, considering the frequency of each response. This provided a more accurate representation of the central tendency in the data. Lastly, standard deviation measured the variability of responses around the mean, indicating how consistent or dispersed the reactions were.

RESULTS AND DISCUSSION

The data reveals a negative outcome in students' practices regarding evaluating online sources, particularly in terms of consistency, authority, currency, objectivity, references, and language used. The weighted means for these indicators are 2.1914, 2.3580, 2.2222, 2.2222, 2.1049, and 2.1358, respectively. The overall weighted mean is 2.20576, with a descriptive level of "disagree," which indicates that students' practices in evaluating the reliability of online sources are fairly implemented. This further implies that students moderately employ practices related to evaluating the consistency, authority, currency, references, objectivity, and language used in online sources.

These findings align with Zhao et al. (2016), who found that users typically need to evaluate the similarity between features, assuming that information is trustworthy if its features do not conflict with those of reliable sources. Similarly, Fogg et al. (2003) concluded that most people do not assess the reliability of online information based on the source's authority. Additionally, research by Fogg et al. (2003), Rieh (2002), Eysenbach and Kohler (2002), and Scholz-Crane (1998) indicated that users often do not consider the currency of online information when making credibility judgments, despite many web pages providing updates on when the information was last revised. The study by Chen and Chaiken (1999) also suggests that people do not generally evaluate site navigability or verify the legitimacy of cited references, such as checking for broken links.

Further analysis of the data shows that the "references" indicator has the lowest weighted mean of 2.1049, with a descriptive level of "disagree," indicating that students only moderately consider references when evaluating online sources. This supports Hong's (2015) findings, where people rarely pay attention to citations in online materials. On the other hand, "authority" has the highest weighted mean of 2.3580, with a descriptive level of "disagree," suggesting that students are more likely to consider authority in their evaluations.

The overall standard deviation of 0.00034 suggests that responses were not widely spread and were relatively consistent. Table 8 shows that "consistency" has the lowest standard deviation (0.00011), meaning student responses were highly uniform. As shown in Table 2, the majority of responses fall under "strongly disagree," with a total of 61 responses. Conversely, "authority" has the highest standard deviation (0.00363), indicating more varied responses. Table 3 shows that 64 responses fell under "strongly disagree" for this indicator.

The findings suggest that consistency is a significant concern in students' practices for evaluating online sources, as it had the lowest standard deviation. Johnson's (2009) research highlights that reliability is closely tied to consistency, meaning the same conditions should yield the same results over time. Consistency is critical in fact-checking and ensuring the reliability of online information. Without evaluating consistency, there is a high risk that retrieved information may be misleading (McGrew et al., 2018).

Additionally, the findings suggest that authority plays a key role in students' evaluations of online sources, despite having the highest standard deviation. Thomas (2009) emphasizes that authority is crucial in determining the reliability of online content, referring to authority as individuals or entities perceived as dependable and consistent in quality, such as experts and professionals. Thomas also argues that authority should not be defined solely by experience but by a successful track record in applying that experience.

Furthermore, indicators like currency, references, objectivity, and language used are also essential factors influencing students' practices in evaluating online sources, with standard deviations of 0.00044, 0.00055, 0.00022, and 0.00153, respectively.

Lastly, the students' practices in evaluating the reliability of online sources are only moderately applied. The overall weighted mean of 2.20576, with a descriptive level of "disagree," suggests that students moderately employ strategies for assessing the reliability of online sources. This finding implies that practices such as evaluating consistency, authority, currency, references, objectivity, and language used are fairly applied in the evaluation of online content.

CONCLUSION

Based on the findings of the study, it is therefore concluded that most of the respondents fairly employ strategies for evaluating the reliability of online sources. Also, it is

concluded that most of the respondents need more practice in evaluating the reliability of online sources. This further implies that most respondents are vulnerable to misleading information from online sources.

Recommendation

After thorough assessment and consideration of the foregoing findings and conclusions of the study, the following recommendations are presented:

1. Train students to critically evaluate the reliability of online sources: The students of San Vicente National High School that fairly employ practices on evaluating the reliability of online sources should be taught with strategies on how to critically evaluate online sources. Specifically, students should include the evaluation of consistency, authority, currency, objectivity, references, and language used when evaluating the reliability of online sources. This can be most effective with the active participation and support of school administrators, and teachers.
2. Reliable online source lists: The teachers may also find ways to assist students by sharing reliable online sources that students can trust, promoting familiarity with trustworthy online sources.
3. Parental involvement: The Parents may support their children in developing better online source assessment skills as they became aware of the incorrect digital practices of their children.
4. The School Head may organize some digital literacy programs with the partnership of policy makers on practical evaluation of online sources for students considering their difficulties indicated in this study.
5. The Teachers may also find ways to assist students by suggesting simple practices for evaluating reliable online sources and encouraging students to question the information they find online, cross-check sources, and identify red flags. Also, the teachers may share curated lists of reliable online sources that students can refer to for different subjects, promoting familiarity with trustworthy platforms.
6. The Parents may support their children in developing better online source assessment skills as they become aware of their children's digital challenges.
7. The students should do peer reviews, encouraging collaborative learning where students evaluate each other's sourced information, fostering a culture of shared responsibility for information accuracy. Students should pay attention on the presence of references and citations on the website. Also, students should review the credibility of the sources cited within the source. Moreover, students should also consider the publication date of online sources.
8. School administrators should integrate AI into curricula to train learners who must increasingly live and act in a world with a significant presence of AI.
9. Teachers should also raise awareness of the importance of learning about AI from an early age, emphasizing the critical aspects of this training and fueling the debate that needs to be fostered in the community.

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