Impact of Media and Information Literacy in Nigerian Colleges of Education Curriculum: A Case of Detecting Fake News

Mohammed Jibril Nasir and Abdulmalik Ciroma

AJP

Impact of Media and Information Literacy in Nigerian Colleges of Education Curriculum: A Case of Detecting Fake News

Mohammed Jibril Nasir[1*] and Abdulmalik Ciroma[1]

[1]Department of Language and Communication, Federal College of Education (Technical), Bichi, Kano State, Nigeria

[*]Corresponding Author's Email: el.jibrilessa@gmail.com

Abstract

Purpose: This study sought to determine if students at colleges of education in northern Nigeria had developed the psychomotor skills required to recognize fake news (i.e., picture news, video news, and written social media/blog/website news).

Methodology: This paper adopted a quasi-experimental (one group post-test only) design. A sample size of 384 was drawn from a population of 28,050 students across six randomly selected colleges of education situated in northern Nigeria for the academic year 2020–2022. The participants were selected through a mixed-methods sample (cluster and purposive). A cluster sample was used to group students into different geopolitical zones and schools (faculty), and then, the researchers selected members (64 participants) from each college using a purposive sample. Data were collected with the aid of a questionnaire, presented on tables, and analyzed using the descriptive statistic.

Findings: The study found that Nigeria Certificate in Education (NCE) students in northern colleges lack psychomotor capability to verify fake news either through a manual or automatic method. The findings showed that only 23.7% of participants verified a picture without a background, 21.9% of participants were able to verify picture with background, 16.7% of participants verified video news, and 27.9% of participants verified written blog/website/ social media news.

Unique contribution to policy: The study observed a lack of psychomotor capability in verifying fake news among NCE students in the selected colleges of education. Therefore, the authors urged curriculum planners, educators, and other stakeholders to design more practical skills, especially in the area of detecting fake news on traditional and social media, in light of the study's findings.

Keywords: *Media and information literacy, fake news, National college of education*

INTRODUCTION

Media and information literacy (MIL) is increasingly being used to equip and empower students, teenagers, and adults to critically think before sharing information provided online or offline (Abu-Fadil, 2016; Berger, 2019; Lin, Mokhtar, and Wang, 2013; Nayar, 2015; Rusiana and Naparota, 2021). This is attributed to the rapid growth and threats to lives and properties through fake news (Hunt and Matthew, 2017). Fake news has negatively impacted many aspects of our daily lives, such as education, entertainment, agriculture, and health (Santigo et al., 2021). Other impacts of fake news include global influence on democracy (i.e. elections, etc.), religion, economy, security, and tourism, among others (Chengcheng et al., 2018; Gautam et al., 2019; Kai et al., 2017).

These and many other reasons, perhaps, instigated the integration of MIL into school curricula as the spread of fake news continued to increase with the number of people using internet-enabled phones. Evidence has demonstrated a widespread movement towards MIL in various societies (Kubey, 2003; McNutty, 2021; Wilson, 2019). The inclusion of MIL is observed to have assisted today's audience, particularly students, in developing new media and information literacy abilities (Schmidt, 2012). There are also media educators and non-governmental organizations (NGOs) from all around the world sharing curriculum, research, and tactics (Martens, 2010).

Based on the aforementioned, MIL is underrepresented in some developed countries school curricula and is severely underrepresented or missing in some underdeveloped countries (Abu-Fadil, 2007; Frau-Meigs et al., 2017; Reineck & Lublinski, 2015). No wonder, Carlsson (2019) argues that MIL is more concentrated in a few nations. Britain, for example, initiated the MIL programme in 1933 (Chen, 2007). MIL was incorporated into the curriculum of every province and territory in Canada by 1988 (Wilson, 2019). The United States followed over a decade later, in the late 1960s (Chen, 2007; Kubey, 2004). By 1997, Singapore had incorporated MIL into its school curriculum (Lin, Mokhtar, & Wang, 2013). And it wasn't until 2020 that the National Commission for Colleges of Education (NCCE) in Nigeria took the first step towards mainstreaming MIL into the 2020 edition of the minimum standards for colleges of education in Nigeria. In partnership with the National Council for Colleges of Education, UNESCO organized a train the trainer workshop throughout Nigeria's six geographical zones from October 14–17, 2020. The purpose of the workshop was to instruct teacher educators on how to effectively present the material of the new general studies education course, MIL.

Given the preceding, the purpose of this article was to examine the impact of MIL on students enrolled at colleges of education in Northern Nigeria. The precise objectives of this study were to determine if students have developed the psychomotor abilities necessary to distinguish between real and fake picture news, picture news with background, video news, and written news on social media, blogs, and websites.

LITERATURE REVIEW

Concept of Media and Information Literacy and Fake news

According to Lee (2010) media and information literacy involves the development of abilities that enable people to comprehend, create, and evaluate media information. MIL is defined by the United Nations Educational, Scientific, and Cultural Organization [UNESCO] (2016) as a set of competencies to search, critically assess, use, and contribute information and media content wisely; knowledge of one's rights online; understanding of how to combat online hate speech and cyber bullying; understanding of the ethical issues surrounding the access and use of information; and engaging with media and ICTs to promote equality, free expression, intercultural and interreligious understanding, and other values. The goal of MIL is to empower individuals by teaching them about the media culture that surrounds them (Al-Zoubi, 2021). On the other hand, Hunt and Matthew (2017) define fake news as news articles that are intentionally and verifiably false and could mislead readers. Rowan et al. (2019) see fake news as news that makes up stories that are not true or that may have some truth in them but are not entirely accurate. In other words, fake news consists of stories that are false and have the potential to seriously mislead the public. Misinformation, disinformation, and mal-information all fall under the umbrella of fake news.

Impact of Media Information Literacy

Earlier studies on MIL have had a similar influence on audiences across a wide range of media and information-related topics. For instance, researchers found that MIL instruction gave students the abilities required to deal with the news of the 21st-century media, particularly in terms of news reliability and source credibility (Al-Zoubi, 2022; Dayanan, 2014; Goodfellow, 2017; International Research and Exchange Board, 2018; Van de Vord, 2010). By viewing headlines from mainstream media, students were able to verify the reliability and credibility of fake news (Guess et al., 2020). Similarly, students were more likely to doubt the accuracy of news reports depending on the social media platform. Stewart (2019) explains that students preferred news on Instagram and Snapchat more than they did on other social media sites like Twitter, WhatsApp, and Facebook. This serves as a further reminder of the need for social media platforms like Facebook and Twitter to address the problem of false news, as well as the need for more fact-checking websites (Goodfellow, 2017). In contrast, Abbasi and Huang (2020) argue that students in Pakistan struggled to recognize false news because they were unable to identify the information source. In light of this, Jones-Jang and Jingjing (2019) maintain that students with strong information literacy levels are far more likely to recognize bogus news.

Furthermore, MIL is a legitimate and trustworthy measuring tool that has given pupils the ability to access, analyze, create, respond, and communicate successfully (Al-Zoubi, 2022; Boruah, 2019; Durak & Saritepeci, 2019; Rusiana & Naparota, 2021; Zhang & Zhu, 2016). Students could recognize material offered to them through both conventional media and social networking sites (International Research and Exchange Board, 2018) and also interact critically with online news (McDougall, 2019). In addition, studies by Austin and Pinkleton (2016) and Valtonen, Tedre, and

Makitalo (2019) found that MIL has a significant impact on problem-solving and creative critical thinking. The use of media literacy has drawn students' attention to a variety of abilities, namely critical thinking, political activism, and communication (Hobbs, 2004). Elsewhere, the scope of MIL was limited to fostering societal culture and tradition (Murakami, 2014). In other places, MIL has helped students have a better understanding of how to use media and information (Lee, 2014). From a different angle, Dayanan (2014) contends that students struggle to comprehend many of MIL's ethical and legal concerns. Also, it was noted that the degree of news media literacy was moderate and that educational attainment and age were better predictors of the student's level of news media literacy (Kleemans & Eggink, 2016).

Given the aforementioned, it is obvious that the current research is relevant, since it emphasizes the influence of MIL and the abilities to obtain, evaluate, and critically analyse false and misleading news. Nevertheless, the researchers are not aware of any significant research that has been done in Nigeria to evaluate the impact of MIL on NCE students in northern colleges of education.

METHODOLOGY

This paper adopted a quasi-experimental (one group post-test only) design. A sample size of 384 (5% margin of error and 95% confidence interval) was drawn (using the survey monkey sample calculator) from a population of 28,050 students across 6 randomly selected colleges of education situated in Northern Nigeria (Taraba State College of Education, Zing-Taraba State; Federal College of Education, Zaria-Kaduna State; Niger State College of Education, Minna-Niger State; FCT College of Education, Zuba; Federal College of Education (Tech), Bichi-Kano State; Federal College of Education, Potiskum-Yobe State). The participants were selected through a mixed-methods sample. This method is adopted because it is a kind of sample that precedes another and influences the proceeding sample using a probability and non-probability sample, namely, a cluster and purposive sample (Louis, Lawrence, and Keith, 2018). Thus, a cluster sample was used to group students into different geopolitical zones and schools (faculty). Then, the researchers selected members (64 students) from each college using a purposive sample. Thereafter, data were collected with the aid of a questionnaire. Finally, using SPSS, the data collected for this study was presented on tables and analysed using the descriptive statistic.

RESULTS

This section provides a descriptive analysis of the psychomotor skills acquired through MIL among students in colleges of education situated in northern Nigeria.

Table 1: Frequency score on picture news (without background)

Response	Frequency	Percentage
Verified	91	23.7%
Unverified	293	76.3 %
Total	**384**	**100%**

Table 1 indicates that a total of 91 responses representing 23.7% verified picture news (without background), while unverified had 293 score representing 76.3%. This presentation implies that most of the participants were unable to verify picture news without background. This finding contradicts Al-Zoubi (2022) study that affirmed that the teaching of MIL has impacted on student's acquisition of skills needed to spot fake news.

Table 2: Distribution of score on picture format (with background)

Response	Frequency	Percentage
Verified	84	21.9%
Unverified	300	78.1 %
Total	**384**	**100%**

Table 2 shows that greater percentage of the participants was unable to verify picture news with background representing 78.1%. This clearly supports Kleemans and Eggink (2016) argument that media literacy programmes have only succeeded in promoting student's media literacy to a moderate level.

Table 3: Descriptive score on video news form

Response	Frequency	Percentage
Verified	64	16.7%
Unverified	320	83.3 %
Total	**384**	**100%**

As shown in table 3, majority of the participants could not verify fake news on video form. Supporting the study's findings, Abbasi and Huang (2020) discovered that students in Pakistan were likewise weak at spotting false news. This result could be attributed to the postulation of Murakami (2014) that some countries see design of MIL curriculum from a different standpoint. For instance, Chen (2007) observed that the American curriculum struggled to balance the need to prepare students for employment with the need to prepare them to be more critical members of a democratic society.

Table 4: Responses on written blog/website news

Response	Frequency	Percentage
Verified	107	27.9%
Unverified	277	72.1%
Total	**384**	**100%**

Table 4 demonstrates that participants were unable to verify fake news on Blog/Website. This outcome supports Goodfellow (2017) study, which contends that only a small number of people were able to confirm whether a narrative is real or untrue. This is not surprising because according to Hobbs (2004) there has been disagreement around the design and delivery of MIL curricula in

lower and higher education given the global state of development.

DISCUSSION

The answers to the research questions revealed that National College of Education (NCE) students were unable to authenticate false information. This suggests that NCE students at northern institutions of education lack the psychomotor capability. Students were given four puzzles (see table 1-4) to use either a manual or automatic method to determine whether the stories were true or false. Every item in the table indicated that participants could not verify the news in its different forms. The study illustrated that only 23.7% could verify a picture without a background (Table 1), 21.9% could verify a picture with a background (Table 2), 16.7% could verify video news (Table 3), and 27.9% could verify written blog/website/social media news (Table 4).

Supporting this study's findings, Abbasi and Huang (2020) discovered that students in Pakistan were likewise weak at spotting false news. This study's findings are in direct opposition to those of other studies, which found that MIL training in other settings had given students the ability to spot false news (AlZoubi, 2022; Goodfellow, 2017). It is not unexpected that this result supports the idea that educational procedures vary among societies. For example, in certain curricula, students were exposed to more course content related to the use of media and information (Schmidt, 2012; Lee, 2014), whereas others were exposed to more course content connected to media analysis (Schmidt, 2012). Others place a premium on understanding cultures and customs, as well as how technology and media influence how people live (Murakami, 2014). As a result, it is critical to emphasize that technical skills are a requirement for putting MIL into practice (Reineck & Lublinski, 2015).

CONCLUSION

According to the findings, only 23.7% of participants confirmed an image without a background, 21.9% verified a picture with a background, 16.7% verified video news, and 27.9% verified textual blog/website/social media news. This suggests that Nigeria Certificate of Education (NCE) students in the chosen colleges of education lack psychomotor skill in verifying fake news in its different forms.

RECOMMENDATION

Based on the study's findings, the authors recommend that curriculum planners, educators, and other stakeholders design more practical skills, especially in the area of detecting fake news on traditional and social media.

Author Contributions

Each author contributed to the article's concept, design, data collecting, interpretation, writing, and critical revision. The final version of the essay was approved by all writers.

Funding

REFERENCES

Abu-Fadil, M. (2016). Introduction. In Abu-Fadil and Torrent and Grizzle (eds). *Opportunities for Media and Information Literacy in the Middle East and North Africa*. Sweden: The International Clearinghouse on Children, Youth and Media.

Abu-Fadil, M. (2007). *Media Literacy – a tool to combat stereotypes and promote intercultural dialogue*. Research paper prepared for the UNESCO regional conference in support of global literacy. Doha, 12-14 March 2007

Abbasi, N. A., and Huang, D. (2020). Digital Media Literacy: Social Media Use for News Consumption among Teenagers in Pakistan. *Global Media Journal*, *18* (35), 1-7

AlZoubi, R.M. (2022). The impact of media and information literacy on students' acquisition of the skills needed to detect fake news. *Journal of media literacy education,* 14(2), 58-71https:// https://doi.org/10.23860/JMLE-2022-14-2-5

Al-Zoubi, R. (2021). The impact of media and information literacy on acquiring the critical thinking skill by the educational faculty's students. *Thinking skills and creativity, 39* https://dio.org/10.1016/j.tsc.2020.100782

Austin, E.W. and Pinkleton, B.E., 2016. The viability of media literacy in reducing the influence of misleading media messages on young people's decision-making concerning alcohol, tobacco, and other substances. *Current Addiction Reports*, 3(2), 175–181. https://doi.org/10.1007/s40429-016-0100-4

Berger, G. (2019). Whither MIL: Thoughts for the Road Ahead. In Carlsson, U. (ed). *Understanding Media and Information Literacy (MIL) in the Digital Age: A Question of Democracy*. Sweden: Department of Journalism, Media and Communication (JMG). www.jmg.gu.se/english

Boruah, M. and Bora, A., (2017). A postmodern idea of critical media literacy in the age of convergence. *Global Media Journal – Indian Edition*, 8(2), 1–8.

Carlsson, U. (2019). Media and Information Literacy: Field of Knowledge, Concepts and History. In Carlsson, U. (ed). *Understanding Media and Information Literacy (MIL) in the Digital Age: A Question of Democracy*. Sweden: Department of Journalism, Media and Communication (JMG). www.jmg.gu.se/english.

Chen, G. (2007). Media (literacy) education in the United State. *China Media Research*, 3(.3), 87-103.http://www.wwdw.chinamediaresearch.net/index.php/back-issues?id=35

Chengcheng, S., Giovanni, L. C., Onur, V., Kaicheng, Y., Alessandro F., and Filippo, M., (2018). *The spread of low-credibility content by social bots*. Retrieved from www.google.com

Frau-Meigs, D., O'Neill, B., Soriano, A. and Tomé, V. (2017). *Digital Citizenship education: Overview and new perspectives*, Strasbourg: Council of Europe Publishing.

Gautam, P., Ravinder, K. V., Vigneswara, I., and Arpan, K. K. (2019) Authenticating Fake News: An Empirical Study in India. *Hal journal*, 2(1), 44-56

Goodfellow, J. (2017, February 6). Only 4% of people can distinguish fake news from the truth, Channel 4 study finds. *The Drum*. https://www.thedrum.com/news/2017/02/06/only-4-

Guess, A. M., Lerner, M., Lyons, B., Montgomery, J. M., Nyhan, B., Reifler, J., & Sircar. N. (2020). A digital media literacy intervention increases discernment between mainstream and false news in the United States and India. *Proceedings of the National Academy of sciences, 117*(27), 15536- 15545. https://doi.org/10.1073/pnas.1920498117/

Hobbs, R., (2004). A review of school-based initiatives in media literacy education. *American Behavioral Scientist*, 48(1), 42–59. https://doi.org/10.1177/0002764204267250.

Hunt, A., and Matthew, G., (2017). Social Media and Fake News in the 2016 Election. *Journal of Economic Perspectives,* 31(2), 211–236

International Research and Exchange Board (2018). Evaluation of students' ability to detect disinformation after learning media literacy techniques in school. Retrieved from www.irex.org/resource/evaluation-of-students'-ability-to-detect-disinformation-after-learning-media-literacy-techniques-in-school

Jones-Jang, M., Mortensen, T., and Jingjing, L. (2019). Does media literacy help identification of fake news? Information literacy helps, but other literacies don't. *American Behavioral Scientist, 65*(2), 371- 388. https://doi.org/10.1177/0002764219869406

Kai, S., Amy, S., Suhang, W., Jiliang, T., and Huan, L., (2017). *Fake News Detection on Social Media: A Data Mining Perspective*. Retrieved from www.google.com

Kleemans, M. and Eggink, G. (2016).Understanding news: the impact of media literacy education on teenagers' news literacy. *Journalism education*, 5(1), 74-88 https://jpurnalismeducation.org/wp-content/uploads/2020/07/kleemans-understanding-news.pdf

Kubey, R. (2004). Media literacy and the teaching of civics and social studies at the dawn of the 21st century. *American Behavioral Scientist, 48*(1), 69-77

Kubey, R. (2003). Why U.S. media education lags behind the rest of the English-speaking world. *Television New Media,* 4 (4):351-370

Louis, C., Lawrence, M., and Keith, M., (2018). *Research Method in Education*. New York: Routledge

Lee, A. (2010). Media Education: Definitions, Approaches, and Development around the Globe. *New Horizons in Education*, *58*(3), 1-13. http://www.hkta1934.org.hk/NewHorizon/abstract/2010Dec/1.pdf

Lee, A. Y. (2014). Moving from ML to MIL: Comparison between the Hong Kong and Mainland China experiences. In S. H. Culver & P. Kerr (Eds.), *Global citizenship in a digital world* (pp. 135-148). Gothenburg, SE: Nordicom.

Lin, B.T., Mokhtar, I.A., and Wang. L, Y., (2013). The construct of media and information literacy in Singapore education system: global trends and local policies. *Asia Pacific Journal of Education,* 1-15 http://www.tandfonline.com/10.1080/02188791.2013.860012

Martens, H. (2010). Evaluating Media Literacy Education: Concepts, Theories and Future Directions. *Journal of Media Literacy Education*, 2(1): 1 – 22. Retrieved from http://www.jmle.org

McDougall, J. (2019). Media literacy versus fake news: Critical thinking, resilience, and civic Engagement. *MEDIJSKE STUDIJE (MEDIA STUDIES*), *10*(19), 29-45. http://doi.org/10.20901/ms.10.19.2

Rowan, Z., Ari, H., Hannah, R., Yonatan, B., Ali, F., Franziska, R., and Yejin, C., (2019). Defending against neural fake news. In *Advances in Neural Information Processing Systems*.

Reineck, D. and Lublinski, J. (2015). *Media and Information Literacy: A human rights-based approach in developing countries*. A discussion paper. Retrieved from https://static.dw.com/dowloads/35932528/media-information-literacy.pdf

Rusiana, M.C., and Naparota, L.C., (2021). Media and Information Literacy Skills of Senior High School Students of Andres Bonifacio College. *International Journal of Trend in Scientific Research and Development,* 5(3), 930-943, www.ijtsrd.com/papers/ijtsrd40007.pdf

Schmidt, H. C. (2012). Media Literacy Education at the University Level. *The Journal of Effective Teaching,* 12 (1) 64-77

Stewart, K. (2019). *Do You Trust Media? How Students Perceive and Identify Fake News* (M.sc Thesis, pace university New York). Retrieved from https://digitalcommons.pace.edu/honorscollege_theses/203

UNESCO (2018). *Journalism, 'fake news' and disinformation: A handbook for journalism education and training*. Retrieved from https://en.unesco.org/fightfakenews

Valtonen, T., Tedre, M., Mäkitalo, K. and Vartiainen, H., (2019). Media literacy education in the age of machine learning. *Journal of Media Literacy Education*, 11(2), pp. 20–36. https://doi.org/10.23860/JMLE-2019-11-2-2

Van de Vord, R. (2010). Distance students and online research: Promoting information literacy through media literacy. *The Internet and Higher Education, 13*(3), 170-175. https://doi.org/10.1016/j.iheduc.2010.03.001

Wilson, C. (2019). *Media and Information Literacy: Challenges and Opportunities for the World of Education*. Canada: Global Alliance for Partnerships on Media and Information Literacy

Zhang, H. and Zhu, C., 2016. A study of digital media literacy of the 5th and 6th grade primary students in Beijing. *The Asia-Pacific Education Researcher*, *25*(4), pp. 579–592. https://doi.org/10.1007/s40299-016-0285-2.