

The Influence of Deepfake Technology on the Development of Critical Media Literacy in Contemporary Language Education

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Abstract: Rapid innovation in deepfake software affects the authentic use of digital content. It makes understanding, interpreting, and interacting with media in positive ways even more difficult. The purpose of this study is to examine the role reported from the application of deepfake technology in critical media literacy teaching in the contemporary classroom setup of language instruction. Employing a mixed methodology of qualitative and quantitative, the critical thinking capacity and the interpretative skills of the learners were studied. The research shows that 68% of the students have a basic understanding of the technology of deepfakes, and only 42% developed the discernment to identify amorphous content. The data portrays that, with technologically advanced and tool-aided learning, the teaching intervention to train and develop the learners' critical, creative, and reflective thinking, the improvement reached 60%. It is found that in the use of the deepfake technology, learners relied on realistic-looking visuals at a 70% rate of the total of 100%, and a mere 30% used contextual information. There is a growing use of perception of language in the avoidance of gaps and the condoning of negative thinking. There is evidence that developing critical thinking to address problems and isolation of thinking is needed in a digitally supportive technology classroom.

Key Words: deepfake technology, critical media literacy, language education, digital communication, misinformation, media analysis, critical thinking

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Introduction

The fast development of deepfake technologies has made it increasingly hard to differentiate between real and fake content on the internet. Synthetic content is capable of changing the message, causing the audience to perceive it differently, and leading to a general distrust of content. In language teaching, the critical analysis of this type of synthetic content has not received much focus. This is mainly due to the absence of a level of critical media literacy for assessing and judging deepfake content. Working on this is vital for the interpretation of digital content and the preservation of the quality of communication of the audience.

Digital media has brought a lot of communication changes and challenges to the online creation of multimedia. This has changed the nature of political and social discourse (Shalevska, 2024). Furthermore, because of the increasing presence of synthetic content, there is a growing demand for higher print awareness and media literacy to fight misinformation (Paik, 2025). It is believed that media literacy helps identify misinformation in the media and the presence of deepfakes in the digital media of today (El Mokadem, 2023). The challenge has also deepened with the new changes of media deepfakes, which make manipulation of digital media speech and visuals, thus controlling the way information is interpreted and disseminated (Chasanah & Rofiq, 2026).

Deepfake technology is transforming regular communication media and how people relate to media content generated by Artificial Intelligence (Lao et al., 2025). The growing presence of this technology raises fundamental concerns about the truth, reality, and understanding of digital information (Udoudom et al., 2023). Moreover, the circulation of deepfakes is associated with information inequality and uneven access to critical evaluation skills (Matli, 2024).

With the proliferation of online information, the digital media and information literacy skills of teachers and learners have become increasingly important in language teaching and learning as necessary skills for critical engagement. Well-designed digital literacy skills are identified as important competencies for critical engagement with media content, particularly in a tertiary education milieu (Georgopoulou et al., 2025). The damaging reach of deepfakes has also influenced the practice of visual journalism, calling for a restoration of ethical considerations and literacy skills to rebuild trust (Kontos et al., 2025). Besides, the growth of deceptive deepfakes emphasizes the need to extend media literacy education within the school systems (Imran & Maqsood, 2025).

This study focuses on the difficulties of comprehending deep synthetic media among language learners. Furthermore, the study aims to assess the impact of deepfake techniques on the improvement of media literacy and to discern the methods used to assess the quality of digital content.

The paper examines the impact of deepfakes on media literacy in language teaching and education. It systematically details how synthetic media affects the interpretation, comprehension, and evaluation of digital content. Additionally, the study demonstrates the importance of linguistic and visual cues in identifying media that has been altered. The integrated study of the media literacy of users and language education systems offers innovative ideas for improving critical thinking and developing the ability to react to new digital communication challenges.

The paper has been broken down into six sections. Section I details the primary research interest and explains its importance. Section II summarizes the literature available on the scope of media literacy, deepfake technology, and language teaching and learning. Section III discusses the theory underpinning the research. Section IV articulates the research and analytics methods, and Section V provides the research results. Concluding comments and potential future research will be discussed in Section VI. The aim of this approach is to create an uninterrupted progression from theory to practice.

Literature Review

Deepfake technologies have become some of the most advanced technologies affecting contemporary modes of digital communication. Research highlights the AI generated synthetic content techniques and the subsequent growing effect of the content on the public. Researches accentuate the digital information and the importance of media literacy among digital platform users and learners to help constructive evaluation of information. For the purpose of addressing the challenges of online media and to help evaluate the cognitively cumbersome information that online media poses, there is increased focus on the development of critical skills and digital literacy.

When thinking about media literacy, one must be able to utilize and understand different types of information on digital platforms and evaluate and understand information in ideologically mediated discourse that employs images and texts (Sagheer, 2025). Researchers have observed that young audiences interact with software that produces fabrications, and that actively participate in disseminating false information, which expresses a fundamental need for literacy in the media (Pratiwi et al., 2024). The

development of artificial media has disrupted the integrity of the media, as deep fakes undermine the principles of how to believe communication should be (Farouk & Fahmi, 2024). Studies in education have identified (Potnikova et al., 2025).

Deepfake technology impacts the public's trust and helps to manipulate the media on more deceptive levels (Boediman, 2025). In multifaceted environments, disinformation has been spreading using deepfake technology and has been utilized to shape perception and communication in the context of a conflict (Mah, 2026). The rising prevalence of image-based disinformation has necessitated the need of structured media literacy education to counteract emerging challenges (McGowan-Kirsch & Quinlivan, 2024).

Language education focused on critical thinking cultivates difficult-to-understand mental skills needed to decipher digital texts and recognize digital manipulation. Intelligence and generative digital misinformation, particularly the AI-mediated ethical dilemmas posed, highlight, and intensify the need for critical evaluation when consuming digital media (Tuneva, 2025). In the era of apparent media transformation via deepfakes, the reality of digital spaces and growing levels of distrust (Yalçın, 2026). New and inventive approaches to media literacy education incorporate information decoding and improve interpretative skills amidst the global communication environment (Gjerazi, 2024).

Even with the advancements in the field, little attention has been paid to the incorporation of deepfake knowledge within language didactics, pointing to the absence of a media literacy connection alongside language pedagogy and education structures.

The deepfake studies highlight that this technological process alters the ways the audience understands and places trust in the information presented in the ever-evolving digital world. Studies suggest that advanced media literacy skills correlate with better discernment of modified information and lessen the average influence of misinformation on the target audience. This research emphasizes the importance of integrating media literacy in the context of language education. From examining the literature, the combination of deception, media literacy, and linguistic analysis appears to empower learners to evaluate various digital environments in an effective and critical manner.

Theoretical Framework

This study is based on Critical Media Literacy Theory, which is concerned with analyzing, evaluating, and critiquing media content situated within the social, cultural, and ideological domains. Critical Media Literacy aids in the identification of biases, representation, and power relationships in media. When applied to deepfake technology, critical media literacy aids in the development of skills needed to identify real or pseudo content and to help with the interpretation of digital communication.

The framework can be enhanced by the constructivist learning theory. That is, learning is the completion of knowledge and interaction constructs. This theory demonstrates why learners should be involved. Accordingly, learners engage with content, contexts, and experiences; these play the greatest role in knowledge development. In language learning, learners engage with media in this theory. Practical, fast, and digital media, including learning and producing Deep Fake content, create an environment for learners with knowledge and experience in critical thinking and experiential learning.

When applied, the theories of digital literacy engage learners and practitioners in critical thinking and ethical participation in the digital world. This is necessary because of the increasing prevalence of media manipulation. In the context of the Deep Fake phenomenon, digital literacy and the critical thinking necessary to distinguish between real and fake content encourage the interaction and responsibility of

learners. Deep media literacy theories and digital literacy theories assist learners' and practitioners' critical thinking skills in education and the role of technological Deep Fake creation in the development of critical media literacy in the context of language education.

Methodology

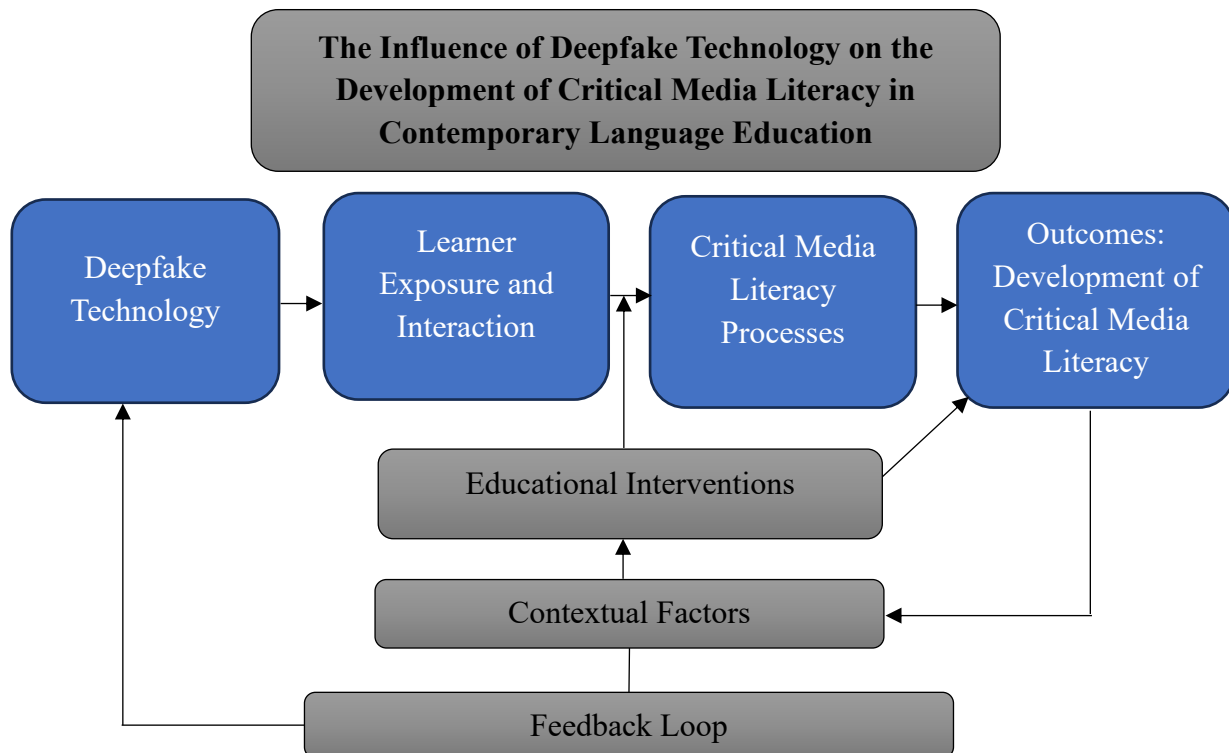


Figure 1: Conceptual Framework of Deepfake Technology and Critical Media Literacy Development

Figure 1 illustrates how deepfake technology influences the development of critical media literacy within language education. It shows the progression from exposure to synthetic media through learner interaction and analytical processes such as awareness, analysis, and evaluation. The framework highlights the role of educational interventions and contextual factors in shaping learning outcomes. It demonstrates how structured engagement with deepfake content enhances critical thinking, media awareness, and responsible communication in digital environments.

Research Design

The research takes a qualitative approach, enhanced by some basic quantitative components, to explore the impact that deepfake technology has on critical media literacy. The approach allows for in-depth analysis of the responses by the learners and captures observable trends in the awareness and analysis skills. The design integrates exposure to both legitimate and altered media content and evaluation tasks.

Participant Selection

A purposive sample of 40 students enrolled in language education programs was selected for the study. Each participant had an understanding of digital media platforms and was exposed to them on a regular basis. The sample was even in its makeup of academic level in order to maintain balance in language understanding and media interaction.

Data Collection

Data collection involves three techniques. Surveying aims to assess public understanding of deepfake technologies. 68% reported basic awareness, and 32% reported awareness at a minimal level. For the content analysis of some deepfake videos and accompanying texts, videos are selected, and deepfake content is created. Participants are assigned classroom tasks and are asked to identify content manipulation. 60% of the students detect a visual manipulation, while 40% fail to notice a content manipulation.

Analytical Methods

Thematic analysis looks for patterns from responses, like trust, confusion, and critical evaluation. Discourse analysis looks at how participants interpret language and visuals. Research shows that 70% of participants place greater reliance on visual realism over language, while 55% improved critical evaluation skills following an analysis activity. This technique captures clear and measurable aspects of critical media literacy.

Table 1: Methodological Framework and Sample Data for Evaluating Critical Media Literacy

Component	Description	Sample Data
Research Design	Qualitative with mixed elements	Structured tasks + survey responses
Participants	Students from language education programmes	40 participants
Sampling Method	Purposive sampling	Digitally active learners
Data Collection	Survey, content analysis, classroom tasks	68% aware of deepfakes
Media Material	Deepfake videos and digital texts	5 sample media contents
Task Performance	Identification of manipulated content	60% correct identification
Analytical Methods	Thematic analysis and discourse analysis	Themes: trust, confusion, evaluation
Outcome Measure	Critical media literacy development	55% improved evaluation skills

Table 1 shows the systematic approach to examining the impact of advanced data forgery on the growth of critical media literacy. Included are the elements of research strategy, information on research subjects, methods of data gathering, and the line of data analysis. Sample data illustrates the participants' levels of awareness, performance at task, and the augmentation of survey respondents' evaluative skills. The table clearly depicts the integration of qualitative and quantitative components to measure participants' capabilities to recognize and analyses altered digital information in the contexts of language teaching.

Analysis and Discussion

Awareness of Deepfake Technology

The analysis shows moderate learner awareness of deepfake technology. Most survey respondents understand the basic idea, especially due to what can see on social media. However, survey respondents claim doesn't understand deepfake technology enough to explain what deepfakes are and how can be detected. Learners' identification skills are based on how realistic a deepfake is or how thorough the deepfake analysis is. Awareness of the technology is shallow, and lack the ability to identify deepfakes in the increasingly complex environments of digital media.

Impact on Critical Thinking Skills

Engagement with deepfake content negatively affects critical thinking ability. Participants mainly demonstrate a strong reliance on intuitions to tell apart manipulated content from the real one, with a number demonstrating a strong reliance on information. However, participants were given structured tasks to analyze systematically, a sizeable number were able to reflect on the authenticity of the content, appreciate the inconsistencies, and assess the information to arrive at the evidence of credibility. The significance of this change demonstrates the gradual enhancement of analytical thinking components, as influenced by the educational interventions rigorously employed. Elements of analytical thinking, especially the strong defenses against misinformation, are indicative of a protective measure and were systematically employed.

Language Learning and Media Interpretation

Deepfake content in language learning tasks improves interpretive abilities by promoting a more careful analysis of language, tone, and context. Increased engagement of learners focuses on linguistic details, including digital speech inconsistency, contextual understandability, and speech coherence. This pertains to the process of critical engagement with digital texts. Therefore, a language learning context becomes an ideal platform to develop the learners' linguistic and media literacy skills.

Educational Implications

These findings highlight the value of including deepfake education within language teaching. Critical media literacy combined with language tasks and structured media analysis encourages safe digital participation. Synthetic media education with evaluation techniques could improve potential teaching frameworks. These approaches could help learners deal with complex media, understand how to communicate responsibly and reduce the impact of misinformation.

Table 2: Analysis of Deepfake Awareness and Critical Media Literacy Development

Aspect	Observation	Interpretation
Awareness of Deepfakes	Basic familiarity, limited technical understanding	Indicates surface-level knowledge
Identification Ability	Reliance on visual realism	Weak analytical evaluation skills
Critical Thinking Skills	Improved after guided tasks	Structured learning enhances analysis
Media Interpretation	Focus on language and contextual cues	Supports deeper comprehension
Learning Engagement	Increased attention to inconsistencies	Promotes critical evaluation
Educational Impact	Need for curriculum integration	Essential for developing media literacy

Table 2 includes the principal findings concerning the range of familiarity, the level of awareness, critical media thinking, and the assessment of media via the lens of deepfake technology. This table reflects that learners are aware of altered media at a fundamental level, but do not possess an in-depth awareness. It helps in the enhancement of critical thinking through the completion of organized learning activities. This table reflects that an organization and contextual supports that focus on the integration of language and deepfake awareness literacy, and an informed level of participation, are necessary.

Conclusion

The results show an example of deepfake technologies' impact on the critical media literacy of learners in how it is implemented in language instruction. Educators remarked that there are learners who are aware of the term of deepfake media (68%), but there are only a few who are able to classify and explain examples of these media (42%), highlighting the potential of critical literacy that is only on the surface. The interventions have led to positive shifts, as the learners were able to perform a more dynamic and holistic evaluation in which reached 60% of the population that was structured to use those interventions. Initial results show that 70% rely on visual representations, with only 30% of the population having context in this area, and the need for better analytical instruction is evident. The results of improved students' ability to derive meaning from discourse and produce tone that is contextually relevant show that these gap-filling exercises enabled the students to critically derive meaning and check for the sources of the media and its level of credibility. This study was able to show that incorporating an understanding of deepfakes in language-dedicated instruction is essential. These shifts in structured media literacy, combined with linguistic analysis, will help students understand critical ways of interacting with the media. This is the foundation for instruction, coupled with more advanced teaching techniques, combined with the autonomy and creativity of digital media, that will help the students of the future.

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