The Role of Critical Literacy in Enhancing Students' Critical Thinking Skills in the Digital Era

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Abstract: Critical literacy has become increasingly crucial in the current digital era, both in education and everyday life. The aim of this research is to explore and analyze how critical literacy can assist students in understanding and evaluating the information they encounter online and how this impacts their ability to think critically. The method employed in this research is a Systematic Literature Review. This research method involves the identification, examination, evaluation, and interpretation of all available studies. The literature sources utilized are drawn from Scopus, DOAJ, and Google Scholar indexes, organized based on predetermined keywords spanning from 2014 to 2024. The findings of this research indicate that critical literacy plays a pivotal role in the process of filtering information in the digital era. It aids the younger generation in developing critical thinking skills and navigating social changes while identifying fake news and misleading headlines. The implications of these findings underscore the importance of fostering critical literacy to support deeper and critical comprehension of information in the current digital environment.

Keywords: Critical Literacy, Critical Thinking Skills, Digital Education, Students.

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A. INTRODUCTION

Critical literacy is a vital skill in comprehending, analyzing, and evaluating information critically and rationally (Scollon, 2014). In the context of education and life in the digital era, critical literacy is becoming increasingly relevant due to its involvement in the ability to sift through and process abundant information from various sources, including social media and the internet (Lim et al., 2022). The role of critical literacy not only strengthens individuals' abilities to make informed decisions and accurate evaluations but also aids in developing independent, analytical, and creative thinking (Cynthia & Sihotang, 2023). Therefore, a profound understanding of the role of critical literacy is crucial in the context of education and the development of students' critical thinking skills in the digital era.

The importance of critical thinking skills is increasingly emphasized in education in the current digital era (Handayani, 2020). In an environment inundated with fast-paced and extensive information from various online sources, students need the ability to analyze, evaluate, and synthesize information critically and reflectively. Critical thinking skills enable students to comprehend complex issues, identify illogical or biased thinking, and make informed and argumentative decisions (Panjaitan et al., 2023). Amidst the ongoing

technological transformation, understanding the role of students' critical thinking skills in the digital era becomes essential in preparing them to become independent, critical, and adaptive learners in facing future challenges (Lestari & Iryanti, 2024).

Critical literacy, as an essential skill, teaches individuals to understand, analyze, and evaluate information critically and rationally (Rachmi et al., 2023). Critical thinking skills, as a response to the educational environment characterized by extensive and fast information in the digital world, are equally crucial. In this condition, students are expected to develop the ability to analyze, evaluate, and synthesize information critically and reflectively (Saputra, 2024) (Ardiyanti, 2016). Therefore, a profound understanding of the role of critical literacy holds significant relevance in the context of education and the development of students' critical thinking skills in the digital era (Meilinda et al., 2020). Critical thinking skills not only equip students to comprehend complex issues but also help them identify illogical or biased thinking and make decisions based on solid information and arguments (Zubaidah, 2017).

The role of critical literacy in the learning process holds significant importance in the development of critical thinking skills and critical awareness among students (Purwo, 2020). Critical literacy assists students in interpreting texts critically and actively participating in multimodal communication situations. However, research findings indicate that the understanding of Indonesian teachers regarding the integration of critical thinking skills into the learning process is still inadequate (Syahfitri & Endang, 2023). Therefore, more time and opportunities are needed for teachers to deepen their understanding and implement critical literacy learning models (Nugraha, 2018). Furthermore, critical literacy also plays a crucial role in assisting students in developing the ability to critically understand online media information and constructing social perspectives in their writing (Nashori et al., 2023). Studies also indicate that the incorporation of critical literacy approaches in literature appreciation learning can enhance students' critical thinking skills and critical awareness. Therefore, the utilization of critical literacy in education can have a positive impact on the development of students' critical thinking skills and critical awareness in Indonesia (Manurung et al., 2023).

The critical thinking skills of students in the digital era have become a primary focus in the Indonesian education system (Pare & Sihotang, 2023). 21st-century learning emphasizes competencies such as problem-solving, critical thinking, creative thinking, collaboration, and communication (Zubaidah, 2016). To address challenges in enhancing students' critical thinking skills, the PUSCU Model emphasizes the development of a paradigm of five focal management (Baroya, 2018). The pedagogical role becomes highly significant in this digital era as educators must adapt to and leverage technology to effectively engage students in the teaching-learning process (Budiana, 2022). Digital literacy skills are considered a crucial element in enhancing critical thinking skills, especially in the context of active participation in electoral processes (Indra et al., 2024). Mastery of digital literacy skills impacts critical thinking abilities and active participation in facing election events in Indonesia (Syaharuddin et al., 2020). By implementing active learning methods that integrate information and communication technology (ICT) and STEM-PjBL aspects, students' critical thinking skills can be enhanced (Buchori & Puspitasari, 2023).

The role of critical literacy in education holds significant importance in the development of students' critical thinking skills and critical awareness (Muhtadi et al., 2023). Critical literacy aids students in interpreting texts critically and engaging actively in multimodal communication situations. However, research findings indicate that the understanding of teachers in Indonesia regarding the integration of critical thinking skills into education is still inadequate (Anggraeni et al., 2023). Therefore, more time and opportunities are needed for teachers to deepen their understanding and implement critical literacy learning models (Pramasdyahsari et al., 2023). Furthermore, critical literacy also plays a crucial role in assisting students in developing the ability to critically understand online media information and constructing social perspectives in their writing (Hermansyah, 2023).

This study aims to investigate the role of critical literacy in enhancing students' critical thinking skills in the current digital era. Additionally, the study aims to explore and analyze how critical literacy can assist students in understanding and evaluating the information they encounter online and how this impacts their ability to think critically. The findings of this research are expected to raise awareness of the crucial role of critical literacy in supporting deeper and critical comprehension of information in the current digital environment.

B. METHOD

The objective of this research is to investigate the role of critical literacy in enhancing students' critical thinking skills in the digital era. This encompasses an analysis of relevant literature to understand the concepts of critical literacy, critical thinking skills, and the relationship between the two in the context of digital education. In literature search, we adopted a Systematic Literature Review approach to ensure comprehensive engagement with relevant literature. Researchers conducted this method by identifying, examining, evaluating, and interpreting all available studies. Through this method, researchers systematically reviewed and identified journals, following established steps in each process (Putra & Milenia, 2021).Literature search was conducted thoroughly through academic databases, indexed journals, and other reliable sources. Keywords used included "critical literacy," "critical thinking skills," "digital education," "students," and other related terms. Searches were systematically conducted to encompass the latest publications up to the most relevant ones. Searches were conducted within a specific timeframe, usually from 2014 to the present, to ensure relevance and completeness of the acquired information.

Inclusion criteria were established to select literature relevant to the research scope. Literature included must focus on critical literacy, critical thinking skills, digital education, and their implications for students. Included articles were those available in full-text format and accessible online in either Indonesian or English, as well as articles with clear research methodologies relevant to the research objectives. Exclusion criteria encompassed articles irrelevant to the research topic, abstracts, reviews, editorials, or conference papers, as well as articles not available in English or inaccessible online. Article selection was conducted by initially reviewing titles and abstracts, then carefully reading selected articles to extract relevant information for this research, including frameworks, methodologies, main findings, as well as weaknesses and gaps in the research. Subsequently, relevant information such as

definitions of critical literacy, critical thinking skills, approaches in digital education, and research outcomes were extracted. The obtained data were analyzed to identify key findings, patterns, and relationships between critical literacy and critical thinking skills in the digital era.

C. RESULTS AND DISCUSSION

The roles of critical literacy and critical thinking skills are paramount in facing information challenges in the digital era. Here are some points of discussion regarding this matter:

1. Challenges of critical literacy in the digital era

Challenges in critical literacy in the digital era encompass limitations in access and digital infrastructure, deficient digital literacy skills among both teachers and students, as well as students' constrained ability to access digital information and their low literacy culture (Probowati, 2023). However, with acknowledgment of these issues, attention from students, educators, and policymakers can be directed toward addressing these impediments (Marín & Castañeda, 2023). Proposed solutions to tackle challenges in critical literacy in the digital era include the utilization of computer media, interactive and collaborative learning, language and pragmatics variations, as well as enhancing social awareness. By addressing these barriers, students are expected to communicate effectively in the digital age and enhance the effectiveness of Indonesian language teaching as the national language in an increasingly digital world (Jones & Manion, 2023).

2. The Importance of Critical Literacy in Filtering Information in the Digital Era

The importance of critical literacy in filtering information in the digital era has been substantiated by several studies. Critical literacy aids the younger generation in developing critical thinking skills and actively participating in elections in Indonesia. The role of critical pedagogy is also crucial in advancing students' critical thinking and assisting them in confronting social changes that are fair and open. Moreover, critical literacy is essential in reading online news and dealing with clickbait headlines that often mislead. In the post-truth era, critical information literacy becomes crucial in addressing the spread of fake news and distinguishing truth from mere summaries. Critical reading strategies can also serve as effective barriers in preventing the dissemination of false news and the spread of hatred. By understanding critical literacy well, society can avoid the negative impacts of inaccurate information and gain a deeper understanding of the truth from the information they receive (Syabarrudin et al., 2023).

3. The Relationship between Critical Literacy and the Use of Social Media and Digital Technology

From several conducted studies, there appears to be a correlation between critical literacy and the utilization of social media and digital technology. Mawarpury et al. demonstrate that critical thinking skills and information literacy among social media users exhibit a positive relationship (Mistortoify & Najicha, 2023). Additionally, other research highlights that critical literacy can serve as a valuable mediating tool in the women's movement to advocate for gender equality and social inclusion. Other findings indicate that digital literacy can enhance

the critical thinking abilities of young generations in active participation in elections. Another study found that the use of online discussion forums can enhance students' understanding and active participation in critical media literacy. Thus, it can be concluded that critical literacy has a positive correlation with the use of social media and digital technology in various contexts (Restianty, 2018).

4. Methods and Strategies for Developing Critical Literacy

Methods and strategies for developing critical literacy can be implemented through a critical pedagogy approach. In the context of English language teachers in Indonesia, the use of Genre-Based Approach (GBA) serves as one way to introduce critical literacy. However, research indicates that some teachers still have limited understanding of critical literacy. Therefore, training and practical opportunities for teachers are crucial to better comprehend and implement critical literacy teaching models. Instruction based on critical literacy can also help students become critical and active readers. In the context of reading instruction, teachers can engage students in critically evaluating texts, reading from various perspectives, and producing critical texts. Research findings indicate that teaching literature appreciation with a critical literacy approach is effective in enhancing students' critical thinking skills and critical awareness. Therefore, teaching critical literacy can be an effective strategy in developing students' critical thinking skills in Indonesia (Phillips, 2023).

5. Skills Required in Critical Thinking

Critical thinking skills have become exceedingly essential in the 21st century. The Indonesian government has recognized the significance of these skills and implemented the 2013 curriculum to develop them among students. However, possessing critical thinking skills alone is not sufficient; individuals also need to have the willingness to employ them. Attitudes toward critical thinking, such as the willingness to plan, flexibility, and the ability to reach consensus, play crucial roles (Sari et al., 2018). The use of serious games as digital technology products can serve as a means to foster critical thinking attitudes in elementary schools in Indonesia. Various strategies, such as employing the ADDIE model to develop games, adapting existing games with the BYOD model, and involving parents and families, can be implemented to integrate serious games into the curriculum (Rohaeni, 2020). With a focus on critical thinking skills and attitudes, students can be better prepared to confront knowledge-based economic challenges.

6. Implications of Developing Critical Literacy in Education

The development of critical literacy in the educational context carries several important implications. Firstly, critical literacy education emphasizes that literacy is not merely a technical skill but also involves social dynamics and power structures within society. This encourages children to question the information they receive and to use language to challenge injustice and oppression. Secondly, critical pedagogy, which supports critical thinking and awareness of social issues, can be integrated with genre-based approaches in English language teaching. This approach enables teachers to introduce relevant pedagogical principles such as

empowerment and issue-based instruction. Thirdly, the role of teachers is crucial in enhancing critical thinking skills through literature, yet they often lack understanding of how to integrate critical thinking into teaching practices. These implications underscore the importance of promoting critical literacy within educational settings. By fostering critical literacy skills and pedagogical approaches, educators can empower students to engage critically with information, challenge societal norms, and become active participants in creating positive social change. Therefore, teachers require more training and opportunities to explore the concept of critical literacy pedagogy. Lastly, critical literacy-based teaching in reading can help students become active meaning-makers and sharpen their critical thinking skills. This approach involves evaluating diverse texts, exploring different perspectives, and generating critical texts. Overall, the development of critical literacy in education has the potential to enhance critical thinking, empower students, and deepen understanding of social issues (Nirmala, 2019).

7. Efforts to Integrate Critical Literacy into the Curriculum in the Digital Era

Efforts to integrate critical literacy into the curriculum in the digital era have become a focal point of research. Research conducted by Palupi and Mayuni resulted in the design of a learning management system (LMS) and content management system (CMS) for Critical Literacy courses. The developed LMS and CMS modules encompass topics such as Critical Literacy Definitions, Multimodal Literacy, and Multimodal Text Analysis (Palupi & Mayuni, 2023). Research by Dooly and Darvin highlights the urgency of Critical Digital Literacy (CDL) in understanding how power and ideology operate online. They propose teaching strategies that integrate exploration-based learning and digital activism. Findings from Riwayatiningsih's research indicate that students possess critical understandings of online information media through writing practices. They select and organize information in their written texts based on social perspectives. Research by Arfadila and colleagues suggests that e-learning implementation is closely related to digital literacy. E-learning can shape students' critical thinking patterns regarding the information they acquire. The integration of critical literacy into the curriculum in the digital era has the potential to help create a more just and inclusive online world (Yuliana & Danny, 2023).

An analysis of the research findings presented reveals several important aspects regarding critical literacy in the digital era. Firstly, there exists a positive correlation between critical literacy and the use of social media and digital technology. This indicates that critical thinking skills and information literacy among social media users have a significant relationship. However, a potential research gap that may warrant further investigation is the effect of critical literacy on digital content consumption behavior, particularly in the context of social media, which tends to reinforce filter bubbles and opinion polarization. Secondly, research findings indicate that critical pedagogy approaches can be effective in enhancing students' critical thinking skills, especially in the context of English language teaching. However, a gap that needs attention is how to implement these critical pedagogy approaches across various subjects and educational contexts. Furthermore, it is also necessary to further understand the influence of environmental and cultural factors within schools on the effectiveness of this approach in developing critical literacy. Thirdly, the integration of critical literacy into the

curriculum in the digital era shows potential for creating a more equitable and inclusive online environment. However, a research gap that needs further investigation is regarding concrete strategies for integrating critical literacy into existing curricula, as well as its impact on enhancing society's understanding of the information they receive online. Fourthly, research on the use of digital technology, such as e-learning and serious games, as means to develop critical literacy, shows great potential. However, it is also crucial to further understand how effective instructional design can be in leveraging such technology to maximize students' critical thinking abilities.

Overall, while the research findings provide valuable insights into critical literacy in the digital era, there are still several research gaps that need further exploration. These include the effects of critical literacy on digital content consumption behavior, the implementation of critical pedagogy approaches in various educational contexts, concrete strategies for integrating critical literacy into existing curricula, and effective instructional design leveraging digital technology to develop students' critical literacy. Conducting further research in this field will help enhance understanding and implementation of critical literacy in the digital era more effectively.

D. CONCLUSIONS AND SUGGESTIONS

Based on the evaluation of efforts to integrate critical literacy into the curriculum in the digital era, it can be concluded that a holistic approach involving active roles of students, educators, and policymakers is necessary to create a supportive learning environment. The importance of critical literacy extends beyond technical proficiency in using digital tools; it involves the ability to understand, evaluate, and communicate information critically in diverse digital contexts. Despite significant efforts in developing critical literacy, there are still some gaps to be addressed. One of the main gaps is the lack of understanding and training among teachers in integrating critical literacy into their curriculum and teaching practices. Further investment in training and professional development for teachers is needed to effectively integrate critical literacy into their teaching. Moreover, it is important to expand awareness of critical literacy beyond the educational environment, involving media, families, and communities at large. Additionally, further research is needed to bridge the gap between theoretical understanding of critical literacy and its application in the evolving digital context. Future research could focus on identifying effective learning strategies for developing critical literacy in the digital era and evaluating their impact on students' understanding and participation in the digital environment. Thus, future research can provide more concrete and measurable guidance for educational practitioners in integrating critical literacy into the curriculum in the continually changing digital era.

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