

CULTURAL RESPONSIVENESS AND DIGITAL TOOLS IN LITERACY INSTRUCTION: INSIGHT FROM INDONESIAN HIGH SCHOOL TEACHERS

Lungguh Halira Vonti

English Language Education Study Program, FKIP, Universitas Pakuan, Bogor, Indonesia
Email: lungguh@unpak.ac.id

Abdul Rosyid

English Language Education Study Program, FKIP, Universitas Pakuan, Bogor, Indonesia
Email: lungguh@unpak.ac.id

Indriyani

English Language Education Study Program, FKIP, Universitas Pakuan, Bogor, Indonesia
Email: lungguh@unpak.ac.id

Adam Khalsia Muchtar

English Language Education Study Program, FKIP, Universitas Pakuan, Bogor, Indonesia
Email: lungguh@unpak.ac.id

APA Citation: Vonti, L. H., Rosyid, A., Indriyani., & Muchtar, A. K. (2025). Cultural responsiveness and digital tools in literacy instruction: Insight from Indonesian high school teachers. *English Review: Journal of English Education*, 13(1), 145-154.
<https://doi.org/10.25134/erjee.v13i1.11195>

Received: 04-10-2024

Accepted: 20-12-2024

Published: 28-02-2025

Abstract: The pivotal role of the students' literacy skills in academic and professional achievement is well recognized in this globalization era. However, conventional teaching methods often fail to address cultural diversity and essential 21st century skills. This study analyzed the practices done by senior high school English teachers and the challenges that they encountered in integrating culturally responsive teaching (CRT) and also digital tools into literacy instruction. Data were collected through structured questionnaires, and interviews, revealing current practices, barriers and teachers' preferences for module design. This study reveals that English teachers of Senior High School have diverse teaching experiences which resulted in diverse common use of culturally relevant texts and encouragement of students to share cultural perspectives despite the challenges such as lack of resources and diversity of cultural background. To enhance the literacy instructions, digital tools are frequently used though barriers issues persist. Instructional challenges include incorporating cultural contexts and managing time constraints while the students also struggle with speaking, reading comprehension, and vocabulary development due to limited exposure to English outside the classroom. As the recommendation, the professional development and developing localized digital materials are expected to support innovative teaching methods.

Keywords: *culturally responsive pedagogy; digital tools in literacy; 21st century skill.*

INTRODUCTION

In the era of globalization and rapid technology advancement, equipping students with strong and relevant literacy skills has become increasingly urgent. High schools (SMA) as a crucial level of education must adapt to holistically meet students' needs. This includes addressing not just academic content but also the diverse cultural contexts and essential skills required for the 21st century.

One promising approach to improving students' literacy is through the development of teaching modules that integrate the principles of Culturally Responsive Teaching (CRT) and 21st-century

skills. CRT is a pedagogical approach that emphasizes the importance of recognizing, appreciating, and utilizing students' cultural background in the learning process (O'Leary et al., 2020; Wojuade, 2025). For example, incorporating culturally relevant texts can make learning more relatable and engaging for students from diverse backgrounds. Additionally, 21st-century skills such as problem-solving, creativity, collaboration, and communication are essential for success in today's world. These skills help students navigate and thrive in a complex interconnected global society.

In light of this observation, it becomes clear that innovative approaches and teaching pedagogy are

essential to meet the evolving education demands, especially in high schools. The integration of culturally responsive teaching (CRT) and 21st century skills can play a pivotal role in addressing these challenges. By acknowledging and incorporating students' diverse cultural backgrounds and essential modern skills, educators can create a more inclusive and effective learning environment (Guberina, 2023; Lau & Shea, 2024).

In today's era of globalization and modern technology, literacy extends beyond reading and writing to include the ability to understand, analyze, and synthesize information from various sources, and apply it in different situations (Acquah & Szelei, 2020). In education, literacy is no longer limited to the ability to read and write; it also includes the ability to understand, analyze, and synthesize information from various sources and apply it in different situations (Abidin et al., 2021). This broader definition of literacy emphasizes critical, creative, collaborative, and communicative thinking, which are foundational for successful literacy. Each student brings different values, cultures, and experiences into the classroom, and this diversity must be reflected and recognized in learning. The integration of CRT and 21st-century skills addresses these complexities, fostering a holistic approach to literacy that prepares students for the challenges of the modern world (Diniya et al., 2024).

By placing the experiences, values and needs of students at the center of the learning process, culturally responsive teaching (CRT) effectively accommodates cultural diversity (Rahmawati, 2020). In today's globalized and technologically advanced era, 21st century skills such as critical thinking, creativity, collaboration, and communication are essential for success. However, in efforts to enhance students' literacy, teachers still face some challenges. This is especially true in combining the CRT approach with the development of 21st century skills in the learning context (Salma & Yuli, 2023). To achieve holistic literacy goals, culturally sensitive teaching materials and the lack of integration between relevant skills and the needs of the times can be obstacles (Azizan et al., 2022). Therefore, the purpose of this research is to explore the challenges faced by English teachers in senior high schools in integrating cultural pedagogy and digital tools as one of the elements of 21st century skills into teaching modules.

There has been a considerable interest in recent years in integrating CRT and digital tools into literacy teaching to create inclusive, relevant, and

effective learning environments for a diverse student population (Choi & Lee, 2020). Research has shown that CRT, when combined with digital integration, supports students in developing their literacy and essential 21st century skills such as critical thinking, collaboration, creativity, and digital literacy. For example, teachers often struggle with limited access to culturally relevant texts and digital resources, making it challenging to connect students' cultural knowledge to the subject matter. Inderawati et al., (2022) presented the argument that additionally, insufficient training in using digital tools effectively hampers teachers' ability to integrate these technologies into their lessons. This study aims to address these specific challenges by exploring the experiences of senior high school English teachers in integrating cultural pedagogy and digital tools into teaching modules.

In literacy instructions, culturally responsive teaching (CRT) involves using culturally relevant texts, varied teaching strategies, and classroom environments that affirm students' cultural identities. By understanding and appreciating the cultural dynamics that influence students' learning, teachers can create more inclusive and interactive classrooms (Abdukadirova & Mirzajonova, 2021). One key benefit of CRT is that it helps engage students in literacy skills that they can relate to their own experiences, making learning more relevant and meaningful.

Integrating digital tools into CRT further enhances literacy instructions. For example, using digital storytelling platforms like story bird allows students to create and share stories that reflect their cultural backgrounds, fostering creativity and critical thinking. Additionally, a platform learning management system like canvas enables students to work together on projects and share diverse perspectives. These digital tools not only support literacy development but also help students build essential 21st-century skills such as collaboration and digital literacy.

Whole numerous studies such as Hoytt et al., (2022) have demonstrated that culturally responsive teaching (CRT) can significantly improve literacy performance among marginalized students by fostering higher levels of engagement and achievement, there remains a gap in understanding how CRT can be effectively integrated with digital tools to enhance 21st-century skills. This study aims to address this gap by exploring the experiences and challenges faced by senior high school English teachers. Specifically, it investigates how these educators incorporate cultural pedagogy and digital tools into

their teaching modules, and unique contributions of this integration to student literacy and skill development in a globalized, technologically advanced era.

Culturally Responsive Teaching (CRT) is a learning approach that recognizes and leverages the cultural diversity, backgrounds, and experiences of students as an integral part of the teaching and learning process (Rahman et al., 2021). Its main objective is to create an inclusive learning environment, build strong relationships between students and teachers, and enhance the learning motivation and academic performance of the students from diverse cultural backgrounds. By applying a culturally responsive teaching approach, teachers can create a supportive, stimulating, and relevant learning environment for all students, increasing their motivation, engagement, and academic achievement (Irwan et al., 2024; Wati et al., 2023).

Meanwhile, 21st century skills are a set of skills considered essential for personal success in today's information technology era (González-Salamanca et al., 2020). These skills are applicable not only in an academic context but also in daily life, the workplace, and society at large. Some important 21st century skills to learn include critical thinking, communication, collaboration, creativity, character development, and cultural application.

With the rise in the integration of technology within the education setting, the role of digital tools within literacy instruction has also broadened. Digital tools, such as but not limited to tablets, computers, and online platforms, provide students with interactive learning and multimedia experiences that can engage them in ways traditional methods cannot. According to Djonov et al., (2021), digital media have the potential to enhance literacy skills through active learning and critical engagement with context.

Currently, research on how to enhance students' literacy through the creation of teaching modules integrated with CRT approaches and 21st century skills has become an increasingly interesting topic for educational researchers. Surayya & Patonah, (2024) mentioned in their study that CRT could enhance students' ability to think critically which is one of 21st century skills. They did experimental research in elementary school. This finding strengthens the idea that the integration of CRT is effective enough to increase students' critical thinking. Meanwhile, Eguchi et al., (2021) focuses on the impact of implementing CRT on students' literacy achievement. The result of his research shows that CRT can increase students' desire to

learn, reduce literacy achievement gaps between students' groups, and enhance students' engagement in learning. Combining the impact of integration of CRT and 21st century skills in teaching and learning process, the research conducted by Robbia & Fuadi, (2020) resulted of indication that skills such as creativity, problem-solving, and information and communication technology (ICT) can help students read, write and critically understand the texts. In teachers' point of view investigated by Cheng et al., (2022) stated that the teachers consider the integration of these two approaches very beneficial for students' literacy development. However, he also mentioned that there are some challenges in implementing those two approaches.

Though research into CRT and digital integration has remained largely parallel, recent scholarship suggests that together they will serve to make literacy instruction more complete regarding the development of 21st-century skills. The integration of CRT and digital tools lets the instructor create a much more engaging and inclusive environment that fosters greater depth in addressing the needs that students must face in the contemporary world (Romijn et al., 2021).

Culturally responsive classrooms are further enhanced with the incorporation of digital tools that facilitate critical thinking and problem-solving. Online forums, interactive games, and other digital tools involve students in higher-order thinking activities that require multiple perspectives, the analysis of digital content, and decision-making based on evidence (Ladson-Billings, 2021). Such activities respond to the development of critical thinking and creativity, which is foundational in 21st-century skills.

The integration of CRT and digital tools, furthermore, leads to global awareness: Digital resources can introduce students to global concerns, make them interact with their fellows across the world, and access information and resources which might not be provided by a regular classroom environment. Such exposure helps nurture the ability of students to navigate diverse frames and engage in an interdependent world (Rodrigues, 2020).

This research is expected to provide a better understanding of the challenges and meet the needs for improving student literacy through an integrated approach with culturally responsive teaching (CRT) and 21st-century skills. Therefore, the problem statement is as follows: (1) What are the barriers and challenges faced in integrating the Culturally Responsive Teaching (CRT) approach

into the development of teaching modules to strengthen student literacy? (2) What are the barriers to effectively incorporating digital tools into literacy instruction in culturally diverse classrooms? (3) What challenges do educators face in integrating CRT and 21st century skills in a classroom, and how can these challenges be addressed through professional development?

METHOD

To obtain the data, the study employed a descriptive approach, chosen for its ability to systematically collect, analyze, and present detailed information (Taherdoost, 2022) about teachers' practices, challenges, and preferences in integrating culturally responsive teaching (CRT) and digital tools in literacy instruction. This approach is appropriate for this study as it focuses on describing existing phenomena, such as the extent of CRT and digital integration, barriers faced by the teachers, and their expectations for effective teaching modules. The data was collected through survey-based methods and included both quantitative and qualitative analysis.

The instruments used were questionnaires distributed to four English teachers teaching in international classes in a senior high school in Bogor Regency, lesson plans as documentation, and interviews conducted with the teachers. The questionnaire was developed based on existing literature on CRT and digital integration. It captured data on teachers' practices, challenges, and preferences. The interview questions were designed to complement the questionnaire and provide deeper insights into teachers' experiences.

Lesson plans were collected as part of the documentation and analyzed to identify the extent of CRT and digital tool integration. This analysis involved examining the content, teaching strategies, and activities outlined in the lesson plans to determine how well they incorporated culturally responsive and digital components.

To ensure reliability and validity, the study used a consistent data collection process, triangulated data sources, and conducted member checks during interviews to verify the accuracy of the findings (Meydan & Akkas, 2024). This comprehensive approach provides a thorough understanding of the challenges and practices related to integrating CRT and digital tools in literacy instruction.

Participants included practicing high school teachers currently engaged in literacy teaching. The teachers came from diverse backgrounds to ensure a variety of experiences with both the challenges and benefits of combining CRT and

digital tools practice. A purposeful sampling technique was utilized to select teachers with prior experience in the implementation of CRT and digital tools within their literacy instructions. This sampling methodology ensured that the selected participants possessed the relevant knowledge and experience to provide meaningful insights into the research questions (Huda, 2023).

Quantitative data from the questionnaire was analyzed using statistical tools such as descriptive statistics to identify patterns and trends in teachers' practices, challenges, and preferences. Qualitative data from the interview and lesson plan was analyzed using thematic analysis, where recurring themes and categories were identified and coded. According to Braun and Clarke (cited in Lochmiller, 2021), thematic analysis is mainly used to identify, analyze and report the theme or patterns within the data obtained. This technique can systematically code the data and organize them into meaningful themes that capture the important aspects of the research questions. Thus, the researchers are able to integrate the quantitative and qualitative data, findings from the statistical analysis were cross-validated with the themes from the qualitative data.

RESULTS AND DISCUSSION

To answer the research questions, the questionnaire was designed to extract data on teaching experiences, and module preferences for English teachers. This instrument provided quantitative data that highlighted key trends and patterns. The interviews, on the other hand, offered qualitative insights into the barriers and challenges of integrating digital tools and the CRT approach in improving students' literacy skills. The data from both instruments were analyzed through thematic analysis, which revealed three main themes: the importance of culturally relevant pedagogy, the effectiveness of digital tools in literacy instruction, and the barriers to integration.

Based on these responses, this study is supposed to provide key trends that may emerge the data and actionable insights to support strategies for improving English education, especially in senior high schools.

First, the data taken from the questionnaire resulted in the insights from high school English teachers about their experiences, challenges, and preferences in regard to integrating culturally responsive teaching into literacy instruction with digital tools. With diverse participant backgrounds in terms of teaching experience and educational qualification, there was a wide purview of representation on current educational perspectives.

Their major trends or indicators are about the use of digital tools, class sizes, and the imperative requirement for embedding CRT combined with 21st-century skills in enhancing student literacy, and all the information were well reflected.

For the demographic information, the participants' years of teaching experience ranged widely, with 25% having 1-3 years of experience, 50% having more than 10 years, and 25% having less than 1 year. This diversity in teaching experiences can influence the practices of integrating CRT and digital tools in literacy instructions as it is also confirmed by the result of the interview. Experienced teachers with more than 10 years of teaching experience are likely to have a deeper understanding of pedagogical approach and may be more adapt at recognizing the urge of integrating CRT into their teaching practices. However, this is in contrast with the use of digital tools in teaching practices, the younger teachers seem to have more adequate training and interest in implementing variation of digital tools in their teaching practices while the older teachers mentioned that they 'often' use digital tools in their teaching process. Dash, 2022) highlighted in his study that digital media can help the teaching and learning process more engaging since it conveys information through both audio and visual means. This approach effectively transforms the literacy instructions from the abstract and incomplete principles, concept, processes, and procedures into more concrete and comprehensive forms. To strengthen the idea, (Irasuti & Bachtiar, 2024) suggest that teacher development programs of integrating visual literacy training for teachers will significantly enhance the quality of instructional materials to improve students' engagement and also learning outcomes, especially in literacy. This is also inline with the result of the interview which stated that all the respondents (English teachers in senior high school) think they might benefit greatly from targeted professional development programs that focus on combining these approaches to enhance student literacy outcomes. Overall, the variation in teaching experience among the respondents highlights the necessity for diverse support and professional development to ensure that they, regardless of their experience level, can effectively integrate CRT and digital tools into their literacy instructions.

The findings provide a number of insights into the practices and perspectives of senior high school English teachers regarding literacy education. It follows that digital tools and multimedia are well-embedded among teachers, with considerable

variance that is related to teaching experience. Less experienced teachers—that is, those who have taught “1–3 years” or “less than 1 year”—always reported using digital tools during lessons. From this perspective, technology implementation seems interesting for newer teachers. Teachers with “above 10 years” of experience are more prone to using digital tools “often” rather than “always,” pointing to possible gaps between the technology integration practices of old and new generations of teachers.

The second indicator is the educational levels which were equally split in the result: half of the respondents held a Bachelor's degree in English Education, while the other half had a Master's degree in the same field or a related one. After analyzing the result of the questionnaire and combine it with the result of the interview, it is found that the diversity in educational attainment might significantly influence the integration of CRT and digital tools in literacy instructions. Yet, this contradicts with the fact that the experienced teachers with only bachelor degree apparently understand more about pedagogy approach such as CRT and others since they have already acknowledged and implemented them in academic community or other professional development programs. The presence of interactive technology in schools, along with teachers' personal and professional experiences with technology, positively and significantly influenced their perceptions of CRT (Cheng et al., 2022). Younger teachers may have solid foundational knowledge of educational theories but might require additional training and support as well as experience in integrating CRT into their teaching practices. It was also held that culturally responsive teaching practices are quite frequent, i.e., whether there is a variety of texts included, a student response to the books and their implications for the classroom material, and whether students could bring their culture into the teaching and learning equation. Most of the teachers report that they “often” or “always” promoted critical thinking and the development of real-life communication skills; some of them reported back that they sometimes did this, and thus further development remains a widely open perspective.

As Carter Andrews et al., 2021) suggested that promoting a pedagogy of connection in teacher education serves a valuable strategy for supporting educators throughout their careers. Such comprehensive and encompassing classwork, innovative clinical experiences, and online professional communities will ensure students'

academic success and overall well-being.

For the third indicator about the class size, all respondents reported an average class size of 31-40 students. This data suggests that teachers manage relatively large classroom. The class size can present both pitfalls and potentials in the integration of CRT and digital tools in literacy instructions. Regarding the integration of digital tools in literacy instruction, 50% of the respondents stated they "Always" use digital tools, while the remaining 50% indicated they use them "Often." This fact reflects a high level of digital tool integration and it can be beneficial in managing large class sizes, as technology can facilitate personalized learning, provide interactive and engaging resources. It also enables teachers to effectively approach and support all the students. When it is combined with technology supported personalized learning, the student-centered teaching approaches enhance the cognitive engagement of students (Schmid et al., 2022). Kem (2022) asserted in his study that as learner-centered education has significantly impacted the acquisition of personalized knowledge, without leveraging new technology, the current teacher-student rations in the school's education system seem to face challenges in providing personalized learning experiences for every student.

From the qualitative data obtained from interview and documentation, a thematic analysis resulted in three emerging themes; the importance of culturally responsive teaching (CRT), the effectiveness of digital tools in literacy instructions, and the barriers to integration.

Importance of Culturally Responsive Teaching (CRT)

The result of the interview with four teachers teaching in different levels of class highlighted the importance of culture-based instruction in order to absorb those instructions into the literacy teaching and at the same time, to make the students understand the phenomenon from the perspective of a wider social and cultural context. The findings communicated that the use of culturally relevant reading materials in the lessons not only makes them relatable but also considerable for the students coming from diverse backgrounds. In relation to this, it is notable that most participants emphasized the text's relevance to their own backgrounds and experiences, though they did not highlight the cultural aspect (Tan & Mante-Estacio, 2021).

One of the respondents said, for instance: "Utilizing narratives and examples derived from

students' own cultures will stimulate their interest and make them more dynamic in the class." It means that blending personal examples with the content, which helps students to identify themselves in the story, increases their overall engagement and success, and the classroom atmosphere becomes more inclusive and supportive. However, issues will also emerge since teachers may face students from diverse cultural backgrounds. In his study, Hossain, (2024) stated that to address this issue, teachers should incorporate a wide range of texts that showcase various cultural perspective. This strategy not only helps all students feel seen and represented but also fosters intercultural understanding by introducing learners to diverse stories and viewpoints (Any, 2021).

The findings also revealed the positive structure of the CRT program that built an all-inclusive atmosphere where the students felt valued and perceived and thus, they shared their views and thus the classroom discussions were enriched. However, the teachers also acknowledged that the significant challenges of finding the source for culturally diverse resources and aligning them with the existing curriculum does exist. This condition indicates that additional support and resources to overcome the barriers are actually needed. Discussing students' diversity in the classroom and learning process in general, Rowan et al., (2021) drew a tripartite definition to capture the major forms of teaching to diverse students:

Teaching about diversity. This point aims to build a knowledge base about various forms of diversity. The literature typically provides facts and figures intended to highlight the students' heterogeneity.

Teaching to diversity. This focus highlights the assumptions derived from what we understand about diverse learners. These assumptions pertain to the type of skills, knowledge approaches, pedagogies, and practices those teachers must have in order to effectively address, respond to, and differentiate for diverse students in their specific context.

Teaching for diversity. The consistent trends in student success and failure suggest the need for greater focus on what it means to teach for diversity. To advance this discussion, teachers must not only recognize various literatures but also engage with them confidently.

According to the interview, the teachers mentioned that professional development opportunities which focused on culturally responsive teaching would be very beneficial.

Dealing with this, (Romijn et al., 2021) suggested that teachers participating in the interventions of professional development reported significant personal development in their knowledge, skills, and belief systems concerning English language learners. This includes workshops, training sessions, and collaborative learning communities that are able to enhance their skills and confidence in integrating CRT into literacy instructions.

They also need access to many resources of culturally diverse texts as well as digital resources. It is then recommended that the schools and educational institutions should invest in comprehensive library resources and digital platforms that offer a wide range of culturally relevant resources. This will indeed help the teachers to incorporate the CRT into their lessons. In implementing CRT, the teacher also encouraged students to choose topics related to their local wisdom to preserve the students' cultural heritage. It also promotes the sharing of diverse perspectives and practices from various cultures (Nurbatra & Masyhud, 2022).

From the study, it is also revealed that the teachers suggest the develop guidelines and framework that will help them to align culturally diverse resources with the existing curriculum. (Hidayati et al., 2024) affirmed that the emancipated curriculum implemented in Indonesia, provides a solid basis for incorporating CRT into English teaching as it emphasizes the development of a comprehensive Indonesian identity. This could involve the process of developing lesson plans, providing curriculum maps, and support from the experts to ensure that CRT materials are effectively integrated into the standard curriculum.

The effectiveness of digital tools in literacy instruction

As for the use of digital tools in literacy instruction, the study identified that providing and implementing digital tools in literacy instructions are valuable assets in providing diverse and interactive learning materials (Jaya et al., 2024). It has already been confirmed in previous study that instructions which integrates technology has been shown to positively impact literacy outcomes, outperforming traditional methods that do not utilize technology (Lee et al., 2022). According to the questionnaire and also the interview, it is expected that the use of digital tools will be able to support the students' literacy development and thus the students will be able to be engaged in creative activities. One of the responses given by

the respondents highlighted that the use of digital tools helps students to build their critical 21st-century skills such as creativity, collaboration and also digital literacy. Furthermore, these skills are essential for success in today's globalized and technologically advanced world. The study also reflected that the use of digital tools gives a positive impact on students' engagement and learning outcomes underscore their importance in modern literacy instruction. According to the research conducted by (Kalyani, 2024) it is also stated that technology's personalized learning pathways and interactive aids have greatly enhanced student engagement and critical thinking. These pathways are provided to fulfil the students need, and the materials also are required to be relevant and challenging for each learner. Furthermore, the interactive aids by integrating technology such as multimedia resources can actively involve students in learning process (Pramesworo et al., 2023). This is expected to make the students more motivated to participate in their learning.

However, the most challenging thing related to digital literacy came from the habit of teachers. The questionnaire also revealed that younger teachers with shorter teaching experience tend to use digital tools as their teaching media to help them get engaged with the students. Whereas, during the pandemic, the teachers were forced to integrate technology during the teaching and learning process. This obviously affected the teachers perceive the use of digital tools. Beardsley et al., (2021) also assured that the teachers' confidence in utilizing digital technologies for lesson preparation, classroom instruction, feedback and support, and communication has increased. It is found out that most teachers frequently integrate culturally relevant digital tools in their lessons.

The barriers to integration

Although teachers acknowledge the importance of CRT and digital tools in the teaching and learning process, they face pitfalls and barriers to their integration. (Jackson et al., 2021) stated that some teachers reported of not using technology due to the lack of the access of technology devices or the problem with the devices used by the students. Furthermore, it also described by Idrus & Sohidi, (2023) about the challenges faced by teachers who implemented CRT in language teaching. They said that misinterpretation could emerge due to the unresolved cultural differences between teachers and also students. The most frequently mentioned

challenges gained from the data are time for lesson planning and curriculum analysis. Teachers mentioned that a focus on standardized testing as one of the assessment processes often leaves small space for culturally responsive practices. Sometimes it is difficult for teachers to use the assessment within the implementation of CRT due to the cultural bias. It might happen when the students are from diverse culture (Kelly et al., 2021). Another major hindrance is the lack of access to resources—specifically, digital infrastructure and materials relevant to the subject matter that would allow them to practice these strategies. The possibilities emerge might be related to teachers and also students' competence in incorporating digital tools in teaching and learning process even though they have enough resources (Kaimara et al., 2021). Some respondents also refer to the need for development programs in order to improve confidence and competence in using digital tools and CRT methodologies. The teachers stated that they need training and also an updated workshop on digital tools that can help them improve their teaching. This is expected to help them to prepare the innovative and also interactive and interesting teaching plan. Thus, the consideration of investing in comprehensive teachers' development programs such as updated workshop is pivotal to enrich teachers with such needed skills and also to boost their confidence in creating innovative, interactive, and engaging teaching plans using digital tools and CRT.

CONCLUSION

This study shows that English teachers are actually aware of the importance of incorporating CRT, 21st-century skills, and digital tools into their reading and writing classrooms regarding the literacy instructions. However, they also face a lot of challenges, such as differences in students' cultural backgrounds which result in difficulties of integrating the diverse culture of the students, a lack of resources both of culturally relevant texts and access to relevant digital tools, few opportunities for professional development, and a lack of time which interrelated to each other. The teachers found that it was difficult to adjust the time constraint with the necessity to improve their professional development by joining valuable and relevant training as well as workshops of updated issues. Teachers pointed out the need for materials related to students' cultures, engaging activities, and technology to improve students' reading and writing. While many recognize the needs,

limitations in access to quality teaching resources, inadequate training on CRT approaches, and pressures of balancing time demands stifle their efforts.

In this regard, professional development in CRT and digital literacy must take precedence in light of these challenges. Through such programs, teachers shall be available with hands-on strategies to smoothly implement both the cultural diversity and 21st-century skills requirements into their practice of teaching. The creation of flexible, interactive, and culturally aligned learning modules will contribute toward developing this capacity in handling the diverse nature of student needs. In the long run, that would lead to improved English literacy outcomes among the students of these culturally diverse classrooms.

ACKNOWLEDGEMENT

This study was supported financially by LPPM Pakuan University in collaboration with SMA Plus PGRI Cibinong that provides the information and necessary data from the participants of the research.

REFERENCES

- Abdukadirova, L. Y., & Mirzajonova, E. T. (2021). The importance of reading competencies in the context of the “industry 4.0” industrial revolution. *Academicia: An International Multidisciplinary Research Journal*, 11(1), 205–210.
- Abidin, Y., Mulyati, T., & Yunansah, H. (2021). *Pembelajaran literasi: Strategi meningkatkan kemampuan literasi matematika, sains, membaca, dan menulis*. Bumi Aksara.
- Acquah, E. O., & Szelei, N. (2020). The potential of modelling culturally responsive teaching: pre-service teachers' learning experiences. *Teaching in Higher Education*.
- Any, U. (2021). Critical race pedagogy for more effective and inclusive world language teaching. *Applied Linguistics*, 42(6), 1055–1069.
- Azizan, N., Surya, E., & Johannes, M. A. L. (2022). Model experience berbasis budaya angkola untuk mengembangkan keterampilan mengajar mahasiswa di abad 21. *Forum Paedagogik*, 13(1), 75–88.
- Beardsley, M., Albó, L., Aragón, P., & Hernández-Leo, D. (2021). Emergency education effects on teacher abilities and motivation to use digital technologies. *British Journal of Educational Technology*, 52(4), 1455–1477.
- Carter Andrews, D. J., Richmond, G., & Marciano, J. E. (2021). The teacher support imperative: teacher education and the pedagogy of connection. In *Journal of teacher education* (Vol. 72, Issue 3,

- pp. 267–270). SAGE Publications Sage CA: Los Angeles, CA.
- Cheng, M.-M., Chuang, H.-H., & Smith, T. J. (2022). The role of teacher technology experiences and school technology interactivity in teachers' culturally responsive teaching. *Computers in the Schools*, 39(2), 163–185.
- Choi, S., & Lee, S. W. (2020). Enhancing teacher self-efficacy in multicultural classrooms and school climate: The role of professional development in multicultural education in the United States and South Korea. *Aera Open*, 6(4), 2332858420973574.
- Dash, B. B. (2022). Digital tools for teaching and learning English language in 21st century. *International Journal Of English and Studies*, 4(2), 8–13.
- Diniya, D., Muslim, M., Rusdiana, D., Hermita, N., Wijaya, T. T., & Oshima, R. (2024). An investigation into critical thinking and creative thinking skills for science pre-service teacher in fluid mechanics course. *IJIS Edu: Indonesian Journal of Integrated Science Education*, 6(2), 190–198.
- Djonov, E., Tseng, C.-I., & Lim, F. V. (2021). Children's experiences with a transmedia narrative: Insights for promoting critical multimodal literacy in the digital age. *Discourse, Context & Media*, 43, 100493.
- Eguchi, A., Okada, H., & Muto, Y. (2021). Contextualizing AI education for K-12 students to enhance their learning of AI literacy through culturally responsive approaches. *KI-Künstliche Intelligenz*, 35(2), 153–161.
- González-Salamanca, J. C., Agudelo, O. L., & Salinas, J. (2020). Key competences, education for sustainable development and strategies for the development of 21st century skills. A systematic literature review. *Sustainability*, 12(24), 10366.
- Guberina, T. (2023). Cultivating inclusive learning environments: Incorporating diversity through culturally responsive pedagogy. *Social Science Chronicle*, 2, 1–14.
- Hidayati, A. F., Yuliati, Y., & Hutagalung, F. D. (2024). The implementation of culturally responsive teaching in ELT classrooms within the concept of emancipated curriculum. *ELT Forum: Journal of English Language Teaching*, 13(2), 150–162.
- Hossain, K. I. (2024). Literature-based language learning: Challenges, and opportunities for English learners. *Ampersand*, 13, 100201.
- Hoytt, K., Hunt, S., & Lovett, M. A. (2022). Impact of cultural responsiveness on student achievement in secondary schools. *Alabama Journal of Educational Leadership*, 9, 1–12.
- Huda, M. (2023). Between accessibility and adaptability of digital platform: investigating learners' perspectives on digital learning infrastructure. *Higher Education, Skills and Work-Based Learning*, 14(1), 1–21.
- Idrus, F., & Sohidi, M. (2023). Teachers' expectations and challenges in using culturally responsive teaching (CRT) strategies in the ESL classroom. *Journal of Language Teaching and Research*, 14(3), 629–635.
- Inderawati, R., Susanti, S., Nurhayati, N., & Sitingjak, M. D. (2022). Developing instructional reading materials with local culture-based narrative texts for the tenth grade students. *English Review: Journal of English Education*, 10(2), 749–760.
- Irasuti, I., & Bachtar, B. (2024). Empowering Indonesian EFL teachers: The transformative impact of visual literacy training on teaching materials. *International Journal of Learning, Teaching and Educational Research*, 23(8), 116–136.
- Irwani, I., Arnadi, A., & Aslan, A. (2024). Developing critical thinking skills of primary school students through independent curriculum learning. *Indonesian Journal of Education (INJOE)*, 4(3), 788–803.
- Jackson, V., Delacruz, S., & Harry, D. (2021). Culturally relevant teaching for the 21st century: the success and challenges of pre-service teachers when using technology in critical ways. *Georgia Journal of Literacy*, 44(1), 5.
- Jaya, H. P., Sofendi, S., & Mirizon, S. (2024). Bridging culture and language: Indonesian preservice teachers' perspectives on integrating local wisdom in english language courses. *English Review: Journal of English Education*, 12(3), 1275–1288.
- Kaimara, P., Fokides, E., Oikonomou, A., & Deliyannis, I. (2021). Potential barriers to the implementation of digital game-based learning in the classroom: Pre-service teachers' views. *Technology, Knowledge and Learning*, 26(4), 825–844.
- Kalyani, L. K. (2024). The role of technology in education: Enhancing learning outcomes and 21st century skills. *International Journal of Scientific Research in Modern Science and Technology*, 3(4), 5–10.
- Kelly, L. B., Wakefield, W., Caires-Hurley, J., Kganetso, L. W., Moses, L., & Baca, E. (2021). What is culturally informed literacy instruction? A review of research in P-5 contexts. *Journal of Literacy Research*, 53(1), 75–99.
- Kem, D. (2022). Personalised and adaptive learning: Emerging learning platforms in the era of digital and smart learning. *International Journal of Social Science and Human Research*, 5(2), 385–391.
- Ladson-Billings, G. (2021). *Culturally relevant pedagogy: Asking a different question*. Teachers College Press.
- Lau, W. S., & Shea, M. (2024). Empowering English learners in the classroom through culturally responsive social-emotional teaching practices.

- Journal of Multilingual and Multicultural Development*, 45(7), 2880–2897.
- Lee, S., Kuo, L.-J., Xu, Z., & Hu, X. (2022). The effects of technology-integrated classroom instruction on K-12 English language learners' literacy development: A meta-analysis. *Computer Assisted Language Learning*, 35(5–6), 1106–1137.
- Lochmiller, C. R. (2021). Conducting thematic analysis with qualitative data. *The Qualitative Report*, 26(6), 2029–2044.
- Meydan, C. H., & Akkaş, H. (2024). The role of triangulation in qualitative research: Converging perspectives. In *Principles of Conducting Qualitative Research in Multicultural Settings* (pp. 98–129). IGI Global.
- Nurbatra, L. H., & Masyhud, M. (2022). Infusing culturally responsive teaching in higher education: Insights for multicultural education in Indonesia. *Journal of Innovation in Educational and Cultural Research*, 3(4), 722–730.
- O'Leary, E. S., Shapiro, C., Toma, S., Sayson, H. W., Levis-Fitzgerald, M., Johnson, T., & Sork, V. L. (2020). Creating inclusive classrooms by engaging STEM faculty in culturally responsive teaching workshops. *International Journal of STEM Education*, 7, 1–15.
- Pramesworo, I. S., Fathurrochman, I., Sembiring, D., Bangkara, B. A., & Sudrajat, D. (2023). Relevance between blended learning and students' independent learning curriculum: An overview of digital age education, student and teacher engagement, technological resources. *Jurnal Kependidikan: Jurnal Hasil Penelitian Dan Kajian Kepustakaan Di Bidang Pendidikan, Pengajaran Dan Pembelajaran*, 9(3), 858–869.
- Rahman, M. N. A., Malek, A. A., & Mansor, M. A. (2021). Aplikasi pendekatan interpretive structural modelling dalam pembangunan model pedagogi responsive budaya menerusi cerita rakyat untuk kemahiran literasi awal anak-anak. *Journal of Educational Research*, 39, 1–12.
- Rahmawati, Y. (2020). Integrasi culturally responsive transformative teaching dalam pembelajaran kimia: tantangan dan peluang dalam program merdeka belajar. *Prosiding Seminar Nasional Pendidikan Dan Sains Kimia (SNP-SK) FKIP-Undana*, 3(1), 7–15.
- Robbia, A. Z., & Fuadi, H. (2020). Pengembangan keterampilan multimedia interaktif pembelajaran ipa untuk meningkatkan literasi sains peserta didik di abad 21. *Jurnal Ilmiah Profesi Pendidikan*, 5(2), 117–123.
- Rodrigues, A. L. (2020). Digital technologies integration in teacher education: the active teacher training model. *Journal of E-Learning and Knowledge Society*, 16(3), 24–33.
- Romijn, B. R., Slot, P. L., & Leseman, P. P. M. (2021). Increasing teachers' intercultural competences in teacher preparation programs and through professional development: A review. *Teaching and Teacher Education*, 98, 103236.
- Rowan, L., Bourke, T., L'Estrange, L., Lunn Brownlee, J., Ryan, M., Walker, S., & Churchward, P. (2021). How does initial teacher education research frame the challenge of preparing future teachers for student diversity in schools? A systematic review of literature. *Review of Educational Research*, 91(1), 112–158.
- Salma, I. M., & Yuli, R. R. (2023). Membangun paradigma tentang makna guru pada pembelajaran culturally responsive teaching dalam implementasi kurikulum merdeka di era abad 21. *Jurnal Teknologi Pendidikan*, 1(1), 11.
- Schmid, R., Pauli, C., Stebler, R., Reusser, K., & Petko, D. (2022). Implementation of technology-supported personalized learning—its impact on instructional quality. *The Journal of Educational Research*, 115(3), 187–198.
- Surayya, S., & Patonah, S. (2024). Pengaruh pendekatan culturally responsive teaching (CRT) untuk meningkatkan berpikir kritis peserta didik kelas IV SDN Peterongan Semarang. *COLLASE (Creative of Learning Students Elementary Education)*, 7(2), 214–222.
- Taherdoost, H. (2022). What are different research approaches? Comprehensive Review of Qualitative, quantitative, and mixed method research, their applications, types, and limitations. *Journal of Management Science & Engineering Research*, 5(1), 53–63.
- Tan, D. N. L., & Mante-Estacio, M. J. (2021). Reader-text connection: reporting the engagement of high school students with culturally relevant texts. *TEFLIN Journal: A Publication on the Teaching & Learning of English*, 32(2).
- Wati, S., Kurnisar, K., & Mutiara, T. M. (2023). Peningkatan minat belajar peserta didik melalui metode pendekatan culturally responsive teaching (CRT). *Pendas: Jurnal Ilmiah Pendidikan Dasar*, 8(2), 6260–6268.
- Wojuade, J. I. (2025). Culturally responsive teaching(CRT) in the united states of america as a pathway to a new order in teaching social Studies in Diverse Society: a literature review. *Gen-Multidisciplinary Journal of Sustainable Development*, 3(1), 1–14.