



DIGITAL ASSESSMENT INFUSED WITH CULTURALLY RESPONSIVE TEACHING: EFL LEARNER PERCEPTIONS ON TECHNOLOGICAL INCLUSIVENESS

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Abstract: Culturally Responsive Teaching (CRT) is a learning approach that emphasizes the value of respecting and incorporating students' cultures into the learning process. Along with this approach, there is a desire for more culturally sensitive assessments that take into account the students' background characteristics or cultures. The purpose of this study is to acquire an overview of EFL learners' impressions of the CRT approach, which incorporates digital assessment into learning. This study used an explanatory sequential mixed-methods design to gather and process data from 124 secondary-level students, employing questionnaires and observations for the instruments. It was then analyzed using descriptive statistics and qualitative analysis. It was discovered that EFL learners had positive attitudes toward the use of CRT-based digital assessments, notably in terms of comfort, convenience, and relevance to their culture they have experienced. Their motivation and involvement in learning supported this finding, leading to higher significant and beneficial outcomes. They felt more respected, intrigued, and connected to ordinary situations, and boosted their confidence. However, the challenges and obstacles encountered necessitate careful consideration, in particular the time provided for completing the assessment and the inadequacy of some test elements to accommodate a small group of students.

Keywords: *digital assessment; CRT; inclusiveness; EFL learners; technology.*

INTRODUCTION

Language is not just a literal manifestation of culture; culture may also be conveyed through language, and the two are intimately linked, emphasizing an unbreakable relationship between culture and language (Dong, 2024). As a result, inclusive learning techniques, such as culturally responsive teaching (CRT), are becoming increasingly important because both aspects play a key role. Bagea (2023) discovers that language cannot be separated from the civilization that shapes it, and studying a language is frequently a path toward a better understanding of that culture. According to Hossain (2024), cultural variety, technology, and learners' individual origins all have an impact on language instruction in the current world. To build effective and inclusive language learning environments, teachers must acknowledge and embrace these aspects. Teachers may enable students to become confident and

competent language users in a globalized world by incorporating culture, technology, and varied learner backgrounds into language instruction.

Despite increasing attention to technology in language teaching, empirical studies indicate persistent limitations. For example, Gonzalez-Vidal (2024) reports that web-based technology in Chilean EFL classrooms was used in superficial ways, lacking critical intercultural engagement, and Çakır & Kurnaz (2022) discovered that Turkish EFL teachers expressed low techno-cultural competence, despite positive attitudes toward technology. Similarly, Ravindran & Amini (2023) highlight that although bidirectional approaches hold promise for enhancing cultural and pragmatic competencies, their integration remains rare in practice. These studies of exploring on the use of technology for cultural awareness are still explorable and frequently descriptive, and the presence of

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technology does not imply inclusive cultural involvement. Furthermore, there is a scarcity of empirical information on the use of culture-based learning approaches in English language acquisition, particularly digital-based assessments aimed at the recipients of these services. These studies continue to focus on EFL teachers' opinions and behaviors, rather than the users of these learning services, specifically the extent to which students embrace the integration of digital assessment methods with cultural involvement in English language learning.

In fact, there has been little research into the development of CRT-based digital assessment tools for EFL learning, particularly in local contexts. According to Hossain (2024), language teaching in today's globalized and technologically evolved world requires a comprehensive approach that incorporates culture, technology, and a varied range of student backgrounds. The incorporation of technology into language instruction creates numerous options for improving English language teaching and learning experiences. Digital language learning platforms, mobile apps, virtual reality, and social media tools give students fun, personalized, and immersive ways to learn a language (Yaseen et al., 2025; Urbaite, G, 2024; Reinders, 2012). These advancement tools not only improve learners' language skills but also increase their autonomy and self-confidence (Levy & Stockwell, 2013; Negoescu & Mitulescu, 2023; Tran & Ma, 2025). The concepts imply that teachers must integrate technologically based assessment methods with CRT in order to improve more inclusive EFL instruction and more intense learning experiences for students. This current study attempts to involve technological advancement in assessing students' English performance by incorporating the CRT approach in teaching practices. The practices then require students' perception as the receivers of the method and approach to assure the acceptance, adequacy, efficacy, and practicality of them.

CRT is a learning method that ensures relevance by incorporating source examples from the learner's culture (Abdalla & Moussa, 2024). CRT in EFL learning can help students feel more connected to the topic and boost motivation and engagement. Teachers who implement the CRT approach embrace students' cultural and linguistic resources and see this information as capital to build upon rather than as a barrier to learning (Aceves & Orosco, 2014). However, CRT implementation is frequently hampered by issues such as a lack of teacher understanding, a scarcity

of resources, and a lack of research integrating CRT with technology. Kong et al. (2022) propose that language teacher participation with CRT, as well as research in oriental educational environments, has not received sufficient attention. On the other hand, the availability of a curriculum that incorporates CRT-based learning is a breakthrough that must be adopted, particularly in English learning for EFL in Indonesia, given what Ladson-Billings has conveyed. According to Ladson-Billings (2011), most teacher education programs include a "multicultural" or "diversity" course as an "add-on" rather than integrated into the curriculum. This may be an issue since "the very coursework that comprises teacher education fails to take up notions of culture and learning in robust and substantive ways." Kong et al. (2022) claimed that research on CRT in L2 schooling is limited, and existing studies involving immigrants are mostly undertaken in the United States (Siwatu et al., 2016).

In the context of EFL learning, CRT can help students understand English in a way that is relevant to their life experiences, enhancing motivation and learning results. Student motivation and involvement are critical to successful EFL learning. According to Self-Determination Theory (Deci, 2020), students' intrinsic motivation can improve when they feel independent, competent, and linked to their learning. CRT, with its emphasis on cultural relevance, addresses these demands by providing meaningful learning situations for pupils. Dong (2024) indicated that culture plays an essential role in language skills, changing attitudes toward native cultures, and cultural awareness, and that adding culture into the classroom of language education is beneficial and adaptive. As a result, teachers must use specific language instruction method including the way how to teach and assess infusing cultural content into classroom practices. This culturally responsive assessment practices require teachers to choose measures and procedures that have been validated for the population being evaluated, capitalize on students' strengths, include qualified and trained representatives from students' cultural groups and communities in assessment procedures and recommendations, and acknowledge that learning is demonstrated by a continuum of performance rather than by discrete skills displayed at specific points in time (Gay, 2013; Klingner et al., 2005).

Conversely, advancements in information technology (IT) have had a huge impact on education. Compared to old techniques, digital

learning and evaluation systems are more efficient, adaptable, and accommodating to today's generations. Technology allows for more individualized and adaptive tests, as well as quick feedback, which can boost student enthusiasm. According to Reinders (2012), digital tools and applications promote independent language learning by allowing students to personalize their experiences to their specific requirements and interests. Further, Black & Wiliam (2010) emphasize that effective use of technology in education necessitates a strong focus on student-centered evaluation procedures. They propose that assessments should be adaptable, formative, and responsive to students' requirements, allowing technology to facilitate deeper learning and meaningful feedback. Furthermore, Barua & Lockee (2025) exposed that assessment procedures should be adaptable to various contexts, candidate needs, and personal situations. It frequently includes choice, encourages engagement and motivation, and promotes student ownership of learning and students' needs and interest which may be presented to students' experiences and cultures.

Recent critics of large-scale summative assessments allege that the tests are biased against historically marginalized groups due to a lack of cultural representation. Along with these complaints, there is a desire for more culturally sensitive assessments—assessments that take into account the students' background characteristics (Walker et al., 2023). In order to ensure that the evaluation is accurate and meaningful for the individuals and groups being assessed, the CRT assessment method recognizes, addresses, and respects their cultural settings (Wholey, Joseph S., Hatry, Harry P., & Newcomer, 2021). A culturally responsive assessment is one that assesses students' knowledge, skills, and understandings while taking into account their distinct cultural identities, allowing students to use their own cultural viewpoints to demonstrate knowledge of a certain subject area.

Digital assessment is a technology-based evaluation tool that measures student learning achievement. According to Redecker & Johannessen (2013), digital assessment has various benefits, including the capacity to provide real-time feedback, flexibility in assessment design and implementation, and accessibility for students with special needs. In EFL learning, digital assessment enables teachers to use a variety of evaluation methods, including interactive quizzes, digital platform-based essays, and simulations. These

digital solutions not only improve evaluation efficiency but also allow for customization based on student needs. The combination of CRT with digital assessment allows for more inclusive evaluation systems that are sensitive to students' cultural demands.

CRT-based assessment can be structured to account for cultural differences in assessment materials, employ digital resources to encourage student involvement through visual and interactive approaches, and provide culturally relevant feedback. Smith & Ayers (2006) found that CRT-based digital evaluations can improve students' sense of belonging in the classroom, particularly for those from minority cultural groups. Previous research has looked at the use of CRT in EFL learning and digital evaluations independently. However, research combining these two methodologies remains restricted, particularly in the context of English language learning in Indonesia. Siregar et al. (2023) created a culturally responsive English language teaching methodology for elementary school teachers in Indonesia; however, they did not expressly address integration with digital assessments. Ariza & Afifah (2024) explored the use of technology in constructing learning evaluations but did not address the issue of cultural responsiveness. As a result, the purpose of this research is to close this gap by investigating the use of CRT-based digital assessment in English learning for EFL students, as well as its impact on student motivation and engagement.

Nonetheless, the cultural backgrounds of students are frequently overlooked when using technology for assessment, which has a smaller effect on student motivation and engagement. Digital assessment not only makes evaluation more efficient, but it also makes it possible to customize assessment techniques to the needs and traits of individual students. It is consistent with Aceves & Orosco (2014), who stated that several recommendations related to culturally responsive assessment practices call for teachers to implement two of them: integrate multiple ongoing performance assessments and capitalize on students' strengths. These two ideas address the demands and characteristics of students in the digital era, where they prefer activities that require digital literacy. It is an excellent opportunity to implement CRT assessments digitally. However, the implementation of this technology frequently misses the issue of cultural diversity among pupils. As a result, the full value of IT integration has not been achieved.

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When paired with digital assessment technologies, the CRT-based teaching approach has the potential to significantly address this issue. This technique can help teachers gain a more thorough understanding of their students' achievements by altering their everyday context and offering more relevant and informative explanations. Inserting subject material based on students' cultural backgrounds may encourage students' interests and curiosities to blend into the teaching and learning process, even for evaluation purposes. Kozleski (2012) states that CRT can help students learn by scaffolding their learning from what they already know through a series of increasingly complex experiences that shift the locus of control from the teacher to the learner, increasing students' ability to manage new material, solve difficult problems, and acquire new skills.

This study aims to provide answers to the following research questions: (1) How are CRT-based digital assessment methods perceived by students? (2) How much do digital assessment methods based on CRTs boost students' interest and enthusiasm for learning? (3) What difficulties and barriers arise when using digital assessment methods based on CRT? Therefore, the primary novelty of this study is to present a fresh viewpoint on the use of CRT-based digital assessments in EFL classrooms, emphasizing the opinions of students within the local Indonesian context while offering theoretical and practical guidance for the creation of more technologically advanced, inclusive, and culturally relevant assessments.

The findings presumably contribute to the body of knowledge regarding the use of CRT and technology in EFL instruction and a new perspective on how technology might be combined with the CRT approach to increase the efficiency and inclusivity of EFL learning. In practice, the findings of this study can help teachers build more inclusive evaluation procedures that are tailored to students' needs. As a result, this study encourages EFL education while simultaneously addressing concerns about EFL learning.

METHOD

This study employed a mixed-methods design with a sequential explanatory strategy, which presents a comprehensive picture by incorporating numerical data (perception, motivation) and in-depth exploration (challenges and barriers). The instrument used was a questionnaire with a Likert scale of 1-5 to measure student perception, motivation, and engagement, and challenges and

barriers. Each dimension consists of 8 items to get a comprehensive perception on it. Student perception, for instance, confirmed about '*how students' feel about taking a CRT/culturally responsive digital assessment*'. Meanwhile, regarding another dimension such as motivation and students' involvement it provided one of the following items '*CRT-based digital assessments encouraged me to discuss with my friends*'. Dimension 3 which deals with challenges also stated 8 items where one of them present about '*Students experiencing on technical difficulties while accessing the digital assessment platform*'.

Participatory observation was supplemented, in which researchers directly observed the implementation of the assessment in the classroom to record the dynamics of students and teachers, as well as the level of student participation during the assessment and student reactions to materials that are appropriate or not appropriate for their culture. The observation sheet was composed encompassing the three dimensions mentioned earlier with 15 items totally. After undergoing a validity and reliability process that involved two validators (Inter-Rater) and the use of the Cronbach Alpha formula, the questionnaire's reliability score was 0.771. The study included 124 students from five junior high schools employing purposive sampling. The demographic and cultural characteristics of these students vary since they come from different socioeconomic, traditions and norms, and geographic location. To delve deeper into the issues and obstacles encountered during the implementation of the CRT-based digital assessment method, 5 students participated in semi-structured interviews utilizing the snowball technique.

The CRT-digital based assessment was implemented by designing material relevant to students' daily life or culture. This material presentation was also brought into the assessment using platforms such as Kahoot, Mentimeter, Quizizz, and Word wall. The test item required students to respond a procedure text of local culture culinary topic or local object as one of examples of the assessment via Kahoot or to respond their understanding of for example 'Narrative text' with topic from local legend via Quizizz Apps with multiple choice test format. The data analysis procedure included simple statistical analysis of survey responses as well as observations of learning undertaken by the teacher. Descriptive qualitative methods were also employed to analyze the data. Miles et al. (2018) used three processes in the data analysis process: compiling the data,

presenting the data, and drawing conclusions or verifying the results emphasizing on thematic analysis to discover consistent data.

RESULTS AND DISCUSSION

Students' perceptions of CRT-based digital assessment

The data analysis results demonstrate that students' impressions of digital technology engagement in assessments that use the CRT approach are very favorable and substantial. This finding was based on the results of a three-dimensional survey that was distributed: perception, motivation and involvement, and problems and impediments to

CRT-based digital assessment. The use of diverse platforms for digital assessment improves learning outcomes. This research demonstrates that students have inventive perspectives in responding to the presence of technology and a contextual learning method through cultural exploration in their surroundings. The CRT approach, which includes digital-based assessment, gives students real-life examples of how learning should be meaningful, as well as opportunities to investigate and become an important part of the subject matter. A detailed questionnaire poll revealed that students largely supported the implementation of CRT-based digital assessments.

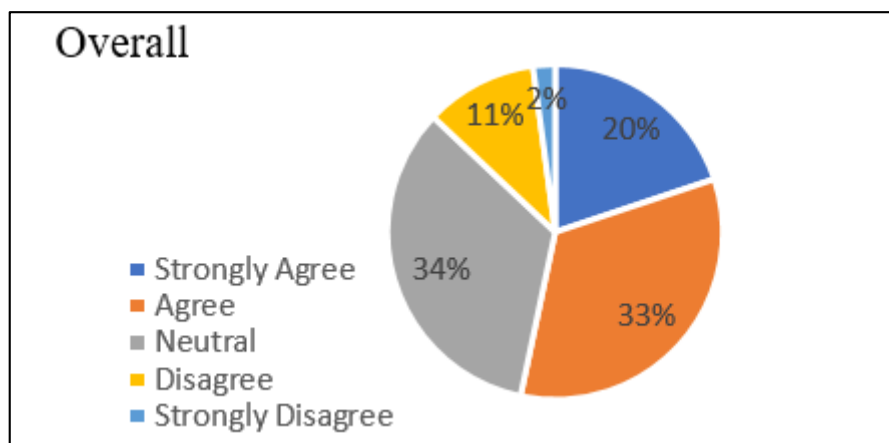


Figure 1. Overall perception of digital assessment integration into CRT

Figure 1 demonstrates that 53% of respondents had a positive perception, where 33% of respondents committed to 'Strongly Agree' and another 20% "Agree" with the presence of CRT-based digital assessments. This data is supported by the fact that 13% of respondents had a negative perception of this combination of approach and method. This suggests that the use of digital assessment based on CRT learning can convey the perceptions that respondents need, want, and require. These perceptions include the degree of comfort and involvement of students in facing the assessment as well as the cultural relevance of the assessment material through the use of digital platforms. These results are consistent with classroom observations during the learning process, where students appeared active and focused during the assessment, showed interest in the assessment material provided, and demonstrated recognition or emotional connection to the assessment content relevant to their culture. Bahrani (2011) discovered that the unique methodologies and procedures utilized in technology-based evaluation accurately measure language proficiency progress. This assertion is confirmed by Hossain (2024), who states that

teachers can design relevant and fulfilling language learning experiences by integrating culture, technology, and diverse student backgrounds into language instruction. Students can become effective communicators in a globalized environment by utilizing digital tools, leveraging on their diverse experiences, and diversifying course content to represent cultural ideas. This comprehensive strategy ensures that language education is still relevant and effective in the face of changing global dynamics. The results or findings from the interviews show a consistent correlation with the findings from the questionnaire and observations. The transcribed interview excerpts are as follows:

'The test items are like those encountered every day...so it's quite interesting'

'I like the test questions... they match what I usually do.'

'I'm interested and curious about the test questions...unlike usual...'

Advocates of CRT have therefore argued that academic knowledge and skills should be

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connected to students' personal experiences and frames of reference within a supportive and cooperative environment (Abacioglu et al., 2020). However, the fact that 34% of respondents chose "neutral" shows that, in order to provide a more positive contribution overall, the combination of these methods and approaches needs to be further improved in terms of accessibility, connectivity, cultural diversity, and readiness as a form of challenge or obstacle that needs to be faced. This

finding is consistent with a research review published by Abdalla & Moussa (2024) who revealed that students' preparation for digital learning is modest. The precise conclusions of this circumstance are presented employing sufficient analysis of statistics descriptive of the questionnaire results that have been collected and processed. The findings from classroom observations and interviews are also given as follows:

Table 1. *Student perceptions of CRT-based digital assessment methods*

Descriptive Statistics									
Item of Dimension	N	Range	Minimum	Maximum	Sum	Mean	Std. Deviation	Variance	
	Statistic	Statistic	Statistic	Statistic	Statistic	Statistic	Std. Error	Statistic	Statistic
P1	123	2	3	5	498	4.05	0.064	0.711	0.506
P2	124	3	2	5	491	3.96	0.071	0.79	0.624
P3	124	4	1	5	510	4.11	0.071	0.788	0.621
P4	124	2	3	5	525	4.23	0.062	0.688	0.473
P5	124	3	2	5	491	3.96	0.075	0.83	0.689
P6	124	3	2	5	495	3.99	0.066	0.738	0.545
P7	124	3	2	5	500	4.03	0.067	0.743	0.552
P8	124	4	1	5	481	3.88	0.077	0.861	0.741
Valid N (listwise)	123								

Note: P= Statement (Item)

According to Table 1, the use of CRT-based digital assessments can assist students in completing their assignments (P1/Statement 1), reaching 84% (\bar{x} 4.0) of the total respondents. This finding is supported by the statement that digital assessments help students comprehend the subject matter properly (P3), where 79% (\bar{x} 4.1) of all respondents responded positively to this matter. This finding correlates with Chuang et al. (2020), who explore that due to the significant variances in ethnically diverse student groups, infusing digital tools with a variety of activities have been shown to be among the best strategies for teaching different classrooms background. The results of this study are further confirmed by similar findings from another study in which the CRT-based digital assessment approach was able to help 75% of students, or 3.9 of total respondents, learn better (P6). This is inextricably linked to the fact that 68% or 3.9 of students felt at ease participating in CRT-based learning with the available digital assessment technique (P2). One of the reasons they feel at ease is the availability of digital assessment materials appropriate to their culture and experiences (P1). A respectably high response rate of 76%, or \bar{x} 4.0, of all respondents, suggests this. Additionally, the graphic style and substance of the digital assessment take into account the cultural variety of the students (P8). With a percentage

achievement of 68%, or \bar{x} 3.8, this design and diversity also drew in students.

These findings are consistent with the research conducted by Garza (2009), reported that culturally responsive research confirms the usefulness of this method in promoting students' success and self-esteem during instructional episodes. Students have remarked that teachers that provide this level of specialist support welcome a diversity of student discourse and are genuinely interested in their students' success (McIntyre & Hulan, 2013). In addition, several previous research findings also suggest that this is inextricably linked to the digital platform aspect present in CRT-based assessment and learning. The ease of access to digital platforms influences students' perceptions of CRT assessment methods and approaches (P7). Seventy-five percent (\bar{x} 4.0) of respondents agreed with this assertion. This sentence reinforces the argument that virtual reality, social media, smartphone applications, and digital language learning platforms provide learners immersive, personalized, and interactive language learning experiences (Reinders, 2012). These technological tools promote learner autonomy and motivation in addition to improving language proficiency (Levy & Stockwell, 2013).

Motivation and student engagement in learning using the CRT-based digital assessment method

The results of the data analysis show that learning involving digital assessment based on CRT yields positive outcomes in terms of student motivation and engagement. The motivation indicators presented in the questionnaire statements received

positive responses and were perceived as contributory to the implementation of the assessment method and the CRT learning approach applied, as outlined in Table 2. This data is also supported by interview and observation results that occurred during the learning process.

Table 2. Student motivation and engagement in CRT-based digital assessment

Item of Dimension	N	Range	Minimum	Maximum	Sum	Mean		Std. Deviation	Variance
						Statistic	Std. Error		
P1	123	3	2	5	468	3.8	0.071	0.786	0.617
P2	124	4	1	5	481	3.88	0.078	0.87	0.758
P3	124	3	2	5	471	3.8	0.07	0.775	0.601
P4	124	3	2	5	485	3.91	0.066	0.733	0.537
P5	124	3	2	5	487	3.93	0.073	0.818	0.669
P6	124	3	2	5	476	3.84	0.08	0.887	0.787
P7	122	3	2	5	456	3.74	0.073	0.811	0.658
P8	123	3	2	5	487	3.96	0.07	0.772	0.597
Valid N (listwise)	121								

Referring to table 2, students feel more motivated to participate in learning after the implementation of the CRT-based digital assessment method (P1). 60%, with an average score of 3.8, of the respondents agree with this. This condition is supported by other aspects that reinforce it, namely the presence of assessments and the approach, where students feel more involved (P3) with an achievement of 61% or an average score of 3.8 and encourage them to discuss with their friends (P8) with an achievement of 73% or an average score of 3.9. Woodley et al.(2017) found that integration of technology into a culturally responsive environment has the capability to create interdependence, social skills, and collaboration among diverse students. This result is in line with Byrd's (2016) research, which supported the efficacy of culturally relevant instruction in regular classroom settings. Further, Guillet (2024) adds to this by confirming that CRT methods are connected with improved academic performance, student involvement, and social and emotional development. Furthermore, Hoytt, K., Hunt, S., & Lovett (2022) say that failure to appreciate and acknowledge cultural variations in the learning environment leads to lower student engagement and motivation. This claim is also in line with Liu et al. (2025), who discovered that CRT dramatically improves student engagement and educational outcomes.

These findings are consistent with direct observational evidence in the classroom regarding the implementation of assessment methods and the CRT approach. Observations show that students exhibit enthusiasm, confidence, or a sense of being valued during the assessment. These three conditions prove that their motivation and engagement during and after learning with the CRT-based digital assessment method were built quite strongly. This finding proves the research conducted by Anyichie & Butler (2023), who evaluated culturally diverse learners' engagement and motivation and discovered that students' level of engagement and motivation is above the medium level. Also, research findings on motivation in language learning involving culture indicate that culture has a substantial impact on learners' motivation and perception of English language learning, in addition to linguistic proficiency (Byram et al., 2002; Yuliantari & Huda, 2023). By seamlessly incorporating cultural factors into language instruction, educators provide important opportunities for students to build intercultural competence, a skill thought critical for navigating global environments and cultivating open-mindedness and empathy (Byram et al., 2002; Singh, 2015).

The findings from this research and previous studies are very aligned and consistent. Student motivation and engagement are also fostered by the presence of digital assessment materials linked to

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their daily experiences and habits (P7), which reached 58% of all respondents or an average achievement of \bar{x} 3.7. This is supported by classroom observations where students consistently took the initiative to complete tasks without additional encouragement from the teacher. It is in line with Negoescu & Mitrulescu (2023), who discovered that the presence of digital assessment promotes student-centered learning by giving students a strong sense of control, which increases their motivation to complete activities and become lifelong language learners. This statement provides strong justification that involving experiences or culture in learning, especially in the provision of assessment materials, fosters a sense of pride because they feel appreciated by it. This is evident in statement P5, where 64%, or an average achievement of 3.9, of students feel valued by the inclusion of materials that touch on their experiences and culture. As Liu et al. (2025) asserted, CRT promotes increased engagement and equity in the educational process. As a result of this inclusive approach, a learning atmosphere emerges in which all students feel valued and encouraged.

Another finding reported that students showed more interest in the subject matter when learning was conducted by integrating CRT-based digital assessments (P2). As many as 64%, or an average of 3.8 students, reported that they were enthusiastic and interested in the material being taught. According to them (53% or \bar{x} 3.91), assessment using that method provides challenges relevant to their abilities (P4). In the end, their confidence grew in using English, both spoken and written (P6). This is evidenced by 59%, or an average of 3.8, stating that the assessment method and approach were able to build their confidence. According to Garza (2009), research that is culturally sensitive shows how well this approach works to support students' achievement and self-worth during instructional sessions.

The results of the observation show consistency with the responses given by the students. The students took the initiative to solve the problems without additional encouragement from the teacher, the students discussed the assessment questions with their peers, and the student showed enthusiasm, confidence, or a sense of being valued during the assessment. The interview results are presented as follows:

‘Yes...we can do a discussion talk to our mates about the English item exercises’

‘I love it...doing English exercises using gadget...we also can collaborate with friends’

‘The test items are relevant to things I used to do and find daily’

Challenges and obstacles in the implementation of CRT-based digital assessment methods.

Based on the analysis results, it was found that overall, the challenges and obstacles in the implementation of digital assessments based on the CRT approach tend to be 'ambiguous,' meaning that the challenges and obstacles that arise do not fully require much attention and consideration. As many as 46% of respondents expressed a 'neutral' stance, indicating that the assessment methods and approaches applied have not yet been fully contributory or detrimental, which could either hinder or facilitate the learning they experience. However, 31% of respondents believe that the challenges and obstacles faced do not hinder but rather facilitate and smoothen the learning process. Meanwhile, 15% of respondents indicated that challenges and obstacles truly arise during the implementation of the digital assessment method by combining this CRT approach. The remaining 10% did not respond to certain items in this dimension of challenges and obstacles. In more detail, Table 3 presents the following.

Table 3. Challenges and obstacles

Descriptive Statistics									
Item of Dimension	N	Range	Minimum	Maximum	Sum	Mean	Std. Deviation	Variance	
	Statistic	Statistic	Statistic	Statistic	Statistic	Statistic	Std. Error	Statistic	Statistic
P1	123	4	1	5	380	3.09	0.086	0.958	0.918
P2	123	4	1	5	356	2.89	0.082	0.913	0.833
P3	122	4	1	5	356	2.92	0.086	0.95	0.902
P4	124	4	1	5	406	3.27	0.081	0.905	0.819
P5	124	4	1	5	367	2.96	0.087	0.966	0.933
P6	124	4	1	5	440	3.55	0.084	0.931	0.868
P7	124	4	1	5	394	3.18	0.074	0.827	0.684
P8	124	4	1	5	406	3.27	0.089	0.991	0.981

Table 3 illustrates that 41%, or \bar{x} 3.2 respondents stated that they are already accustomed to the implementation of digital assessment methods (P4), and 13.7% of respondents feel less accustomed. This is very relevant to the respondents' statements indicating that 31% (\bar{x} 3.09) of them do not experience difficulties in accessing the implemented digital assessment platform (P1), so the stressfulness related to adapting to the assessment and their need for the materials embedded in the assessment does not have much influence (P8). This context is also supported by positive statements from respondents that they (35% or 3.18 on average) feel that the cultural aspects involved in the learning process help them find ease and integrate into learning as a basis for their needs, interests, and preferences toward the necessary learning activities (P7). According to Abdulaziz Aldawood & Almeshari (2019), learning a foreign language should include cultural factors in addition to mastering grammatical structures and new vocabulary. Meanwhile, 17% of respondents feel that the material does not fully accommodate their culture. However, referring to items P1, P2, and P8, it is explicitly seen that 44% (\bar{x} 3.27) of respondents expressed satisfaction and comfort in the implementation of that learning. This condition can occur because the role of the teacher as a facilitator has provided clear guidance on the use of digital platforms employed in learning or assessment (P6). There are 54%, or an average of 3.5 respondents, who responded positively regarding this situation. Meanwhile, the remaining 9% do not feel that the teacher has provided guidance on the use of the platform.

The findings above indicate a positive and contributory perception of the implementation of the assessment method with a CRT-based approach. Challenges and obstacles do not seem to be significant barriers to the implementation of this method and approach. However, careful attention and consideration are needed, especially regarding the other three findings, such as the availability of time for students to complete the assessment questions, which is considered insufficient (P2). As many as 28% (\bar{x} 2.9) of respondents stated that the availability of time was insufficient in completing the digital and CRT-based assessments. Meanwhile, 23% stated that there was no problem with the time provided for answering the assessment questions. Another finding related

to obstacles and challenges is that the assessment questions felt inconsistent with their experiences, making them somewhat difficult to understand (P3). A total of 26% (\bar{x} 2.9) of respondents expressed that the main topics in the assessment partially aligned with their experience dimensions. Meanwhile, 29% expressed their disagreement regarding the relevance of the said assessment items. According to a study conducted by Ali (2021), selecting tasks for pupils to engage in is a key difficulty when employing CRT. If the texts are not carefully chosen and are focused solely on the projection of one culture, they fail to provide the rigorous exposure that students require to appreciate cultural variety.

Besides this finding, it also proves that teacher-made tests must also consider the elements of difficulty level and significant relevance concerning the aspects of validity and reliability of test items. Although the assessment questions are conducted in the context of classroom learning (assessment for learning), the test instrument should meet criteria of validity and reliability. According to a study conducted by Majeed & Jasim (2022), teacher-created assessments should be designed using the criteria of validity, reliability, scorable, and accuracy. Another finding related to the dimension of challenges and obstacles is the low internet connection, which poses a significant hindrance to the assessment process using this digital and CRT method. Only 24%, or \bar{x} 2.9 statistically of the respondents stated that there were no issues at all with the internet connection (P5). However, 25% of the respondents had a different opinion. They claim that the internet connection while completing assessments or engaging in digital and CRT-based learning significantly hinders them.

Observation results indicate that the three components that pose challenges and obstacles frequently appear and occur in different classes. Consistently, these three issues do occur, namely the time given is insufficient for students to complete the assessment questions, technical difficulties such as internet access disruptions or errors on the digital platform, and some of them feel that the assessment content is not relevant to their backgrounds. These three components are consistently found during the learning process, although not frequently, but they require attention. The situation is consistent with the results of interviews conducted with 5 respondents, where

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they stated that they experienced technical difficulties, such as internet access disruptions or errors on the digital platform. It is consistent with Jackson et al. (2021), who noted that some teachers reported not employing technology owing to a lack of access to technology devices or an issue with the gadgets used by their students. Other technical difficulties were insufficient time for students to complete the assessment questions, and some students felt that the assessment content was not relevant to their backgrounds. The background refers to students' daily life and their commonalities and experiences, including cultures or indigenous knowledge. When these components can be fulfilled, it consequently enhances their learning outcomes. In order to improve their learning outcomes, Suarta et al. (2022) demonstrated the important mediating function that students' engagement plays between their perceptions of teachers' indigenous knowledge and cultural competence. Consequently, the instructor is expected to integrate indigenous knowledge into the curriculum. Because she believes that school is a miniature of society, instructors must be able to examine many cultural viewpoints while connecting the curriculum to their daily lives. Here are quotes from the respondents:

'I need more time, I use handphone and need to read the stem carefully...then to answer'

'The internet connection often disconnects...very interrupting when doing the exercises'

'Some of the material I'm not so familiar with'

CONCLUSION

Deriving from the finding of this current study, it can be inferred that integrating the CRT approach with technological tools for improved English teaching and learning outcomes has become significantly needed. Hossain (2024) suggests that classroom teaching through accommodating variety of students' unique backgrounds, culture integration, and technological infuse will build teaching and learning more meaningful. Thus, learners can become successful communicators by using digital resources, incorporating different cultural points of view into course materials, and building on the different backgrounds of their students. This integration contributes significantly to students' English learning in many aspects of the learning dimensions exposed in this study, such as students' motivation and engagement, challenges,

and perception toward the use of this mixed approach and method in the teaching of English to EFL learners. As technology becomes a more important instrument in education, its ability to scaffold cultural relevance and responsiveness becomes increasingly evident. Shifting to student-centered, CRT digital spaces necessitate rethinking how digital technologies are used, not just for material delivery, but also for students' active involvement, critical thinking, and cultural expression.

Teachers should design digital assessment employing various platforms such as Quizizz, Kahoot, Word Wall, incorporating local cultural references. The incoming study can be focused on Teacher Assessment Literacy (TAL) and Students Assessment Literacy (SAL) in particular shaping these two how they contribute one to another in learning. This study is very limited in terms of time it is suggested that the next study can also provide longer term with an intervention.

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