

Profile of Prospective Elementary School Teachers' Ability in Developing Learning Materials Based on the Culturally Responsive Teaching Approach

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Abstract

This study investigates how elementary teacher education (PPG PGSD) students develop instructional materials grounded in the Culturally Responsive Teaching (CRT) framework and analyzes how the five core CRT dimensions are operationalized in their instructional designs. Responding to the limited empirical evidence on the practical enactment of CRT within teacher preparation programs, this study contributes by offering an analytical examination of pre-service teachers' design competence rather than merely their conceptual understanding. A qualitative descriptive approach was employed involving ten PPG PGSD students. Data were collected through CRT-based instructional material assignments, semi-structured interviews, and rubric-guided assessments. The five CRT dimensions, cultural awareness, culturally relevant curriculum integration, inclusive learning environment, critical consciousness development, and culturally responsive assessment, were translated into explicit analytical indicators to ensure systematic evaluation. Although qualitative in design, percentage scores (average mastery of 89.23%) were incorporated as descriptive support to enhance analytic clarity rather than statistical generalization. The findings indicate that participants demonstrated strong conceptual mastery and were able to integrate several CRT dimensions into their instructional materials. However, limitations were identified in designing culturally responsive assessments, promoting higher-order critical thinking, and facilitating students' active knowledge construction. Participants also experienced challenges in deeply incorporating students' cultural backgrounds and sustaining inclusive classroom representations. These results extend CRT scholarship by highlighting gaps between theoretical understanding and instructional implementation. The study provides implications for strengthening CRT-oriented in teacher education programs and for improving the development of culturally responsive instructional materials in culturally diverse educational contexts.

Keywords: Culturally Responsive Teaching, Instructional Materials, Pre-Service Teachers, Elementary Teacher Education Program (PPG PGSD)

INTRODUCTION

The importance of lesson planning has been emphasized in various formal regulations in Indonesia. Law Number 14 of 2005 concerning Teachers and Lecturers, as well as Regulation of the Minister of Education, Culture, Research, and Technology ([Permendikbudristek](#)) Number 16 of 2022 Article 2, asserts that the standard educational process includes planning, implementation, and assessment of learning. Within these documents, lesson planning is positioned as the primary foundation that determines the direction, process, and learning outcomes of students.

This issue is not limited to Indonesia. Globally, lesson planning is widely recognized as a fundamental component of effective teaching, ensuring alignment between curriculum objectives, instructional strategies, and assessment practices (Darling-Hammond, 2021; Jensen, 2010). International frameworks on teaching quality emphasize that systematic lesson planning enhances instructional coherence, supports differentiated learning, and improves student achievement. Therefore, understanding lesson planning within the Indonesian regulatory framework contributes to broader discussions on educational quality and teacher professionalism worldwide.

From a theoretical perspective, this regulatory emphasis is also strongly supported by educational research. Lesson planning is a crucial aspect of the learning process because it determines the achievement of learning objectives (Darling-hammond et al., 2020; Dolong, 2016; John, 2006). It involves formulating learning outcomes, selecting appropriate instructional strategies, and designing assessment methods to ensure alignment within the instructional process. Although learning implementation and evaluation are integral components of teaching (Black & Wiliam, 1998; Nana Sudjana, 2010, in Rizki & Yuwono, 2021), lesson planning serves as the primary foundation that guides both processes. A concrete manifestation of this planning is the development of teaching devices, which structure and organize classroom instruction systematically.

Teaching devices are among the main factors educators must prepare, as the success of a learning process depends on the planning carried out and affects student learning outcomes (Angraini et al., 2021; Rahayu, 2023). Teaching devices function as supplementary tools that enhance the learning process (Hudaidah et al., 2021) and should align with students' standards and needs (Siregar, 2019; Tambunan & Tambunan, 2023). Along with curriculum changes, the form and terminology of teaching devices have been adjusted due to developments in knowledge, technology, and social demands (Firmansyah et al., 2023). However, the principles and provisions regarding teaching devices remain foundational in the educational process, including in the implementation of Indonesia's Merdeka Curriculum, a competency-based and flexible curriculum reform that emphasizes student-centered learning, differentiation, and contextual teaching practices. Within this framework, teaching devices, such as instructional materials, teaching modules, and assessment instruments, serve as essential instructional tools that support teachers in designing and implementing meaningful learning experiences.

According to Article 4 of Permendikbudristek Number 16 of 2022, lesson planning documents must contain at least three main components: learning objectives, learning steps/activities, and assessment. Salsabilla et al. (2023) Also emphasize that the teaching module in the Merdeka Curriculum consists of general information components, core components, and attachments. To ensure that the teaching devices produced are truly contextual and applicable, their preparation must begin with an analysis of student needs, teacher conditions, and the availability of school resources.

These components are consistent with internationally recognized principles of effective lesson planning, which emphasize constructive alignment between learning objectives, instructional strategies, and assessment practices (Biggs, 1996; Darling-hammond et al., 2020). Furthermore, the integration of the Culturally Responsive Teaching (CRT) approach strengthens contextual relevance by aligning instruction with students' cultural backgrounds and learning contexts. The CRT approach aims to help students accept, appreciate, and strengthen their cultural identity (Fitriani et al., 2024), provide opportunities to acquire relevant new knowledge through their environment and cultural backgrounds (Febriana et al., 2025), and enrich the learning process and understanding of diversity (Fitriah et al., 2024). CRT has also been proven to improve learning outcomes (Khasanah et al., 2023; Rahma et al., 2024; Sari et al., 2024; Wardani et al., 2025) and students' collaboration skills (Azizia et al., 2024; Kurniawati & Mawardi, 2024).

Although the need for integrating CRT into teaching devices is widely acknowledged, the capacity of pre-service teachers, especially PPG (Teacher Professional Education) students, to create CRT-based teaching devices has not been extensively investigated in research. In fact, integrating CRT into teaching devices is crucial so that pre-service teachers not only understand the concept theoretically but can also apply it in practice when designing teaching devices in the field. This gap is important to address, considering that the PPG program is indeed designed to equip pre-service teachers with professional skills and readiness to face diverse classroom realities (Maulana et al., 2025). This study is significant because it analyzes students' ability to develop CRT-based teaching devices using five main aspects according to Hernandez et al. (2013) (Diana et al., 2024), namely: (a) Content Integration, (b) Knowledge Construction Facilitation, (c) Prejudice Reduction, (d) Social Justice, and (e) Academic Development.

This study seeks to characterize the abilities of PPG PGSD students in developing teaching devices aligned with the Culturally Responsive Teaching approach, as measured by the five specified aspects.

METHODS

This study employed a qualitative descriptive methodology to examine the ability of PPG PGSD students at Universitas Pasundan to develop CRT-based teaching tools (Rusandi & Rusli, 2021). Percentage-based scoring and categorization levels were utilized to define achievement levels; however, these were intended solely as descriptive analytical tools to aid qualitative interpretation rather than to produce statistical generalizations. The primary objective of the analysis remained to examine the content and characteristics of the instructional materials created by the participants. The study's participants comprised 10 second-semester PPG Prajabatan PGSD students from the 2024/2025 academic year, chosen by purposive sampling. The tiny sample size is consistent with qualitative research, which emphasizes an in-depth understanding of a situation rather than broad generalizations. We obtained the data by examining the teaching device assignments in the Assessment and Learning course and conducting semi-structured interviews to enhance participants' comprehension and application of CRT ideas.

Before it was put into use, two experts in elementary education and language reviewed the rubric to ensure it was valid and aligned with CRT principles. We made small changes based on what they said. To make the results more credible, two raters independently reviewed the teaching tools, and inter-rater agreement was calculated to ensure consistency in the scores. We talked about any differences until we all agreed on what to do.

The evaluation of teaching devices was conducted using a rubric based on the five CRT aspects according to Hernandez et al. (2013) (in Diana et al., 2024), namely: (a) Content Integration, which assesses the extent to which the teaching device integrates students' cultures, local values, or backgrounds; (b) Facilitating Knowledge Construction, which evaluates the teaching device's ability to help students build new knowledge relevant to their experiences and cultures; (c) Prejudice Reduction, which reflects the efforts within the teaching device to reduce prejudice, stereotypes, or discrimination in the learning process; (d) Social Justice, which examines whether the teaching device encourages students' awareness of the importance of social justice values in daily life; and (e) Academic Development, which assesses the teaching device's focus on improving student learning outcomes and academic achievement.

The assessment instrument used was a percentage-based rubric to evaluate the CRT aspects in the teaching devices developed by PPG PGSD students, analyzed using the percentage formula (Sriyono et al., 2021):

$$NPP = \frac{\text{Score Obtained}}{\text{Maximum Score}} \times 100\%$$

Explanation:

NPP = Teaching Device Percentage Score

The percentage thresholds were adopted from [Sriyono et al. \(2021\)](#) and are commonly used in educational performance assessments in Indonesia to classify competency levels. These categories serve descriptive purposes and are not intended for statistical generalization but to provide a clearer interpretation of students' performance levels. The ability categories of PPG PGSD students based on the percentage score are as follows ([Sriyono et al., 2021](#)):

Table 1. Criteria for the Ability of PPG PGSD Students in Developing Teaching Devices

| Percentage (%) | Category |
|--------------------|------------|
| $NPP \geq 86$ | Very Good |
| $81 \leq NPP < 86$ | Good |
| $76 \leq NPP < 81$ | Fair |
| $70 \leq NPP < 76$ | Sufficient |
| $NPP < 70$ | Poor |

The data analysis techniques used in this study are as follows: (1) Data reduction, which is the process of grouping and then analyzing data, concepts, categories, and specific themes ([Rijali, 2018](#)); (2) Data presentation, which is one of the most important functions of data analysis, to ensure that the information presented can be clearly understood and supports the objectives of the analysis. The data must be accurate, relevant, and organized in such a way that it is easily understood by readers ([Nurhaswinda et al., 2025](#)); and (3) Drawing conclusions, which refers to the final step of the data analysis process, based on the data that has been analyzed according to the information obtained during the research ([Zulfirman, 2022](#)).

Interview data were transcribed verbatim and analysed using thematic analysis. The initial coding process identified statements relevant to the five aspects of culturally responsive teaching (CRT) and the challenges students faced in developing CRT-based teaching devices. Codes were organised into categories corresponding to these aspects and then developed into broader themes that reflected recurring patterns in the data. To strengthen the study's credibility, the research team systematically reviewed the coding process and resolved discrepancies through discussion until consensus was reached. Participants were identified by their initials (RA, AD, CI, FA, AR, DN, EP, DH, SA, and RI) to ensure confidentiality. This analytical approach provides a comprehensive framework for integrating CRT principles into instructional tools and delineates the specific challenges students encounter when implementing culturally responsive practices.

RESULTS AND DISCUSSION

Result

PPG PGSD students demonstrated mastery of the concept of teaching devices based on Culturally Responsive Teaching, with distribution in the "very good" category. The average mastery of the concept of teaching devices reached 89.23%. This average is further detailed by the distribution among students: out of 10 students, four achieved a score of 92.5% (very good category), two students scored 89.7% (very good category), one student scored 87.0% (very good category), and two students were categorized as "good" with scores of 85.7% and 84.5%, respectively. Thus, the average ability of pre-service teacher students in mastering the concept of teaching devices is classified as very good in applying aspects of Culturally Responsive Teaching using innovative learning models and media.

The following is an analysis of the Culturally Responsive Teaching indicators in the preparation of teaching devices developed by the students:

Content Integration

The assessment of the content integration aspect aims to measure the extent to which the teaching devices developed by pre-service teacher students incorporate elements of culture, local values, and students' backgrounds. This aspect is evaluated through three indicators: (1) integration of content and students' cultures, (2) building positive relationships between educators and students, and (3) motivating students. The description of students' abilities in this aspect is presented in Table 2.

Table 2. Description of Content Integration Capabilities

| No. | Subject | Description of Competencies | | |
|-----|---------|--|---|---|
| | | Integration of Content and Student Culture Building | Positive Relationships Between Educators and Students | Motivating Students |
| 1 | RA | Able to present mathematical material in accordance with the experiences, knowledge, and culture of the students' environment. However, the adopted culture is too forced to adapt to the learning material. | Educators have not created a safe and inclusive classroom atmosphere, have not shown empathy and concern, have not provided constructive feedback, and have not involved students in the learning process. | Educators motivate students and give rewards to those who excel, and provide reinforcement. |
| 2 | AD | Sufficiently able to present Indonesian language material with experience, knowledge, and culture that exists in the environment, but not yet able to emphasize essential concepts in learning objectives. | Presenting positive teacher relationship activities by creating a safe and inclusive classroom atmosphere, showing empathy and caring, providing constructive feedback, and involving students in the learning process. | Educators motivate students by creating a pleasant atmosphere, doing icebreakers, and giving rewards. |
| 3 | CI | Able to present IPAS concept material in accordance with experience, knowledge, and environmental culture, and is already visible in the CRT learning syntax. | Educators create a safe and inclusive classroom atmosphere, show empathy and caring, provide constructive feedback, and engage students in the learning process. | Educators motivate students through icebreakers and rewards. |
| 4 | FA | Sufficiently capable of presenting mathematical concept material according to experience, knowledge, and culture, and this is not visible in the syntax for the CRT. | Sufficiently capable of presenting positive relationship activities between educators and students by creating a safe and inclusive classroom | Educators motivate students in the learning process by using learning models and media. |

| Description of Competencies | | | | |
|-----------------------------|---------|---|---|---|
| No. | Subject | Integration of Content and Student Culture Building | Positive Relationships Between Educators and Students | Motivating Students |
| | | | atmosphere, showing less empathy and attention, providing constructive feedback, and involving students in the learning process. | |
| 5 | AR | Able to present mathematical concept material according to experience, knowledge, and culture, and able to emphasize essential concepts in learning objectives and syntax. | Presenting educator activities in creating a safe and inclusive classroom atmosphere, showing empathy and attention, providing constructive feedback, and involving students in the learning process. | Educators create a pleasant, meaningful atmosphere, carry out ice breaking, give rewards, use innovative learning, and motivate students. |
| 6 | DN | Able to present science concept material in accordance with experience, knowledge, and culture in the environment, emphasizing essential concepts and already visible in the learning syntax for CRT. | There are educator activities to create a safe and inclusive classroom atmosphere, show empathy and attention, provide constructive feedback, and involve students in the learning process. | Educators carry out well-being learning, provide rewards, appreciation, and interactive learning, and motivate students. |
| 7 | EP | Sufficiently capable of presenting mathematical material in accordance with experience, knowledge, and culture in the environment, along with its essential concepts. | Educators present positive relationship activities by creating a safe and inclusive classroom atmosphere, showing empathy and concern, providing constructive feedback, and involving students in the learning process. | Educators motivate students by involving students in learning, creating a safe and comfortable atmosphere, and providing rewards. |
| 8 | DH | Able to present mathematical material according to experience, knowledge, and culture, along with its essential concepts, and CRT is in accordance with the learning syntax. | Presenting educator activities in creating a safe and inclusive classroom atmosphere, showing empathy and attention, providing constructive feedback, and involving | Educators motivate students with a pleasant atmosphere, carry out icebreakers, and give rewards. |

| No. | Subject | Description of Competencies | | |
|-----|---------|---|--|---|
| | | Integration of Content and Student Culture Building | Positive Relationships Between Educators and Students | Motivating Students |
| 9 | SA | Able to present mathematical concept material according to experience, knowledge, and culture, and is visible in the learning syntax for the CRT. | students in the learning process. Educators demonstrate activities to create a safe and inclusive classroom atmosphere, show empathy and attention, provide constructive feedback, and involve students in the learning process. | Educators motivate students by conducting well-being learning, providing meaningful appreciation, and interactive learning. |
| 10 | RI | Able to present Indonesian language material in accordance with the experiences, knowledge, and culture of the students' environment. However, the culture adopted is too forced to adapt to the learning material. | Lack of presentation of educator activities in creating a safe and inclusive classroom atmosphere, showing empathy and attention, providing constructive feedback, and involving students in the learning process. | Educators motivate students by conducting interactive learning, using media, and promoting well-being. |

Based on Table 2, as many as 70% of students were able to integrate content and culture in the teaching tools they created, while the other 30% showed sufficient ability. In terms of the indicator of building positive relationships, 70% of students meet this criterion, while 30% still lack empathy. All students (100%) have included efforts to motivate students in their teaching modules. On average, students' abilities in the content integration aspect are in the medium category (80%).

Facilitating Knowledge Construction

The knowledge construction aspect measures the ability of PPG PGSD students to develop teaching materials that help them build new knowledge relevant to their experiences and culture. Assessment is based on three indicators: (1) the ability to construct students' knowledge, (2) the use of examples relevant to everyday life, and (3) efforts to improve students' critical thinking skills. Details of students' abilities in this aspect are presented in Table 3.

Table 3. Description of Knowledge Construction Capabilities (Facilitating Knowledge Construction)

| No. | Subject | Description of Competencies | | |
|-----|---------|----------------------------------|---------------------------------|--|
| | | Constructing students' knowledge | Using examples in everyday life | Improving students' critical thinking skills |
| 1 | RA | Capable | Capable | Capable |
| 2 | AD | Less Capable | Capable | Capable |
| 3 | CI | Capable | Capable | Capable |
| 4 | FA | Less Capable | Capable | Quite Capable |
| 5 | AR | Capable | Capable | Capable |

| No. | Subject | Description of Competencies | | |
|-----|---------|----------------------------------|---------------------------------|--|
| | | Constructing students' knowledge | Using examples in everyday life | Improving students' critical thinking skills |
| 6 | DN | Capable | Capable | Capable |
| 7 | EP | Quite Capable | Capable | Quite Capable |
| 8 | DH | Capable | Capable | Capable |
| 9 | SA | Capable | Capable | Capable |
| 10 | RI | Capable | Capable | Capable |

Based on Table 3, 70% of students were assessed as having adequate knowledge construction skills, while 30% demonstrated adequate skills. All students (100%) were able to implement the use of examples from everyday life in the developed teaching materials. Regarding the critical thinking indicator, 70% of students were able to facilitate the development of students' critical thinking skills, while the remaining 30% were still in the adequate category. On average, student achievement in the knowledge construction aspect was 80%, which is in the moderate category.

Overall, these results indicate that students have adequate skills in facilitating knowledge construction through the developed teaching materials, making learning more meaningful and contextual for students.

Prejudice Reduction

The prejudice reduction aspect aims to measure the ability of PPG PGSD students in developing teaching devices, based on indicators such as the use of local languages, student interactions, and the creation of a comfortable learning environment, as presented in Table 4.

Table 4. Description of Prejudice Reduction Ability

| No. | Subject | Description of Competencies | | |
|-----|---------|-----------------------------|---------------------|----------------------------------|
| | | Use of Local Language | Student Interaction | Comfortable Learning Environment |
| 1 | RA | Able | Able | Able |
| 2 | AD | Able | Able | Able |
| 3 | CI | Able | Able | Able |
| 4 | FA | Able | Able | Able |
| 5 | AR | Able | Able | Able |
| 6 | DN | Able | Able | Able |
| 7 | EP | Able | Able | Able |
| 8 | DH | Able | Able | Able |
| 9 | SA | Able | Able | Able |
| 10 | RI | Able | Able | Able |

Based on Table 4, all students (100%) have demonstrated ability in all three indicators. The use of local languages is well integrated into the teaching devices, in alignment with the fact that most students come from the West Java region. Additionally, activities promoting student interaction and the creation of a comfortable learning environment are reflected in all the teaching devices developed. These results indicate that the students have strong awareness and skills in designing lessons that support prejudice reduction and in creating an inclusive and comfortable classroom atmosphere for all students.

Social Justice

The social justice aspect is used to measure the ability of PPG PGSD students in developing teaching devices that foster student awareness of the importance of social justice values, as presented in Table 5.

Table 5. Description of Social Justice Ability

| No. | Subject | Description of Competencies | |
|-----|---------|---|---|
| | | Teacher Participation in Creating Positive Change through Innovative Learning | Teacher Questions and Responses to Student Activities |
| 1 | RA | Able | Able |
| 2 | AD | Able | Able |
| 3 | CI | Able | Able |
| 4 | FA | Able | Able |
| 5 | AR | Able | Able |
| 6 | DN | Able | Able |
| 7 | EP | Able | Able |
| 8 | DH | Able | Able |
| 9 | SA | Able | Able |
| 10 | RI | Able | Able |

Based on Table 5, all students (100%) have demonstrated active roles in creating positive change through innovative learning. This is reflected in the use of both concrete and digital learning models and media, which are integrated with students' cultures, experiences, and prior knowledge. In addition, all students engaged in learning activities that encouraged active participation, such as providing stimulus questions, conducting discussions, facilitating icebreakers, and offering feedback during the learning process. These results indicate that students are able to design teaching devices that are not only innovative but also oriented toward building social justice awareness among students.

Academic Development

The academic development aspect is used to measure the ability of PPG PGSD students in developing teaching devices aimed at improving student learning outcomes and academic achievement. Assessment is based on four indicators: (1) creating interactive and meaningful learning, (2) using learning models, (3) using learning media, and (4) designing assessments aligned with learning objectives. The details of student achievement in this aspect are presented in Table 6.

Table 6. Description of Academic Development Ability

| No. | Subject | Description of Competencies | | | |
|-----|---------|--|-----------------------|----------------------|---|
| | | Creating Interactive and Meaningful Learning | Using Learning Models | Using Learning Media | Designing Assessment according to Learning Objectives |
| 1 | RA | Able | Able | Able | Able |
| 2 | AD | Quite Capable | Able | Able | Quite Capable |
| 3 | CI | Able | Able | Able | Able |

| No. | Subject | Description of Competencies | | | |
|-----|---------|--|-----------------------|----------------------|---|
| | | Creating Interactive and Meaningful Learning | Using Learning Models | Using Learning Media | Designing Assessment according to Learning Objectives |
| 4 | FA | Quite Capable | Able | Able | Quite Capable |
| 5 | AR | Able | Able | Able | Able |
| 6 | DN | Able | Able | Able | Able |
| 7 | EP | Quite Capable | Able | Able | Quite Capable |
| 8 | DH | Able | Able | Able | Able |
| 9 | SA | Able | Able | Able | Able |
| 10 | RI | Able | Able | Able | Able |

Based on Table 6, 70% of students can design interactive and meaningful learning, while the remaining 30% are considered fairly able. All students (100%) have demonstrated the ability to use learning models and media in their teaching devices. However, regarding assessment, 70% of students have been able to design assessments that align with the learning objectives, while 30% still encounter difficulties in accurately linking assessments to learning objectives. On average, student achievement in the academic development aspect is 85%, which falls into the “good” category.

Discussions

In general, students were found to excel in integrating culture with learning innovations. However, they still need reinforcement in aspects of assessment, critical thinking development, and student knowledge construction. Interview findings support this finding, where students admitted to still having difficulty linking assessments to learning objectives, constructing student knowledge using the CRT approach, and adapting teaching materials to these principles. This condition aligns with research by [Siswaningsih et al. \(2023\)](#) and [\(Yolanda et al., 2024\)](#), which found that teachers also experience similar challenges, particularly in integrating local culture and CRT-based assessment.

Individual student analysis revealed varying achievement across each aspect of CRT. For example, RA students demonstrated weaknesses in establishing a safe and inclusive classroom environment, but maintained their abilities in other aspects such as knowledge construction, prejudice reduction, social justice, and academic development. Similar findings were also observed for RI and EP students, where achievement in certain aspects was still considered adequate. AD and FA students, on the other hand, were less proficient in the indicator of constructing student knowledge, but quite good in other aspects.

Another interesting finding emerged for AD and FA students, both of whom were less proficient in the indicator of constructing student knowledge in the knowledge construction aspect. However, both were quite proficient in the aspect of academic development, as well as the aspect of integrating content and student culture. AD and FA students' weaknesses primarily lie in the indicator of building positive relationships between educators and students. It should be noted that while both share similarities in some aspects, there are differences in the indicator of improving students' critical thinking skills, with FA students only being moderately proficient, while AD students were deemed proficient.

Another finding was that EP students were quite proficient in the indicators of constructing student knowledge and improving critical thinking skills. In terms of academic development, EPs were also only moderately capable of creating interactive and meaningful learning and developing assessments aligned with

learning objectives. Furthermore, in terms of Content Integration, EP students were considered moderately capable of presenting material appropriate to the culture, experiences, and prior knowledge of students. In other indicators within the same aspect, EPs also created learning activities aimed at building positive relationships between educators and students, but were still moderately capable of demonstrating empathy, caring, and providing constructive feedback. Overall, EPs' achievements across all aspects and indicators of CRT can be categorized as moderately capable, but other aspects also indicate EPs' ability to integrate CRT.

Common issues that emerged with CRT-based teaching tools included difficulties in integrating the CRT approach, limited knowledge of students' cultures, challenges in creating a safe and inclusive learning environment, and the complexity of designing learning experiences responsive to cultural diversity. These findings align with research by [Safitri \(2025\)](#) and [\(Christiananda et al., 2024\)](#), which stated that teachers were not fully prepared to implement CRT teaching tools due to a lack of in-depth understanding of this approach.

Based on these findings, effective solutions are needed to improve students' abilities, particularly prospective teachers' abilities, in integrating CRT into teaching tools and materials. In addition to taking the PPG PGSD course, training programs that focus on an in-depth understanding of teaching modules and their tools are an important alternative, so that the implementation of the CRT method can run more optimally [\(Anjaswuri et al., 2025; Widayanti et al., 2024\)](#). This is supported by research by [Alfiandra et al. \(2025\)](#), which showed that CRT training is effective in improving teachers' understanding while supporting the integration of CRT into teaching modules. Thus, CRT functions not only as a pedagogical strategy but also as a relevant approach in strengthening the identities of both teachers and students.

CONCLUSION

Based on the research results, PPG PGSD students demonstrated varying levels of achievement in each aspect of Culturally Responsive Teaching (CRT). Overall, their average mastery of teaching materials reached 89.23%, which falls into the Very Good category. However, improvements were still found in assessment, critical thinking development, and student knowledge construction to optimize the quality of the resulting teaching materials and align with the CRT approach.

Individual findings also revealed common challenges, including difficulties integrating the CRT approach into teaching materials, prospective teachers' limited knowledge of student culture, challenges in creating a safe and inclusive learning environment, and the complexity of designing learning responsive to cultural diversity. Therefore, intensive training is needed to improve students' understanding of the teaching modules and CRT implementation. Furthermore, support from both the government and schools is crucial to foster teachers' awareness of students' cultures, their own cultural identities, and the cultures of their surrounding communities. These efforts are expected to strengthen prospective teachers' competencies in realizing inclusive, contextual, and culturally equitable learning. Thus, strengthening the implementation of Culturally Responsive Teaching in the PPG PGSD environment is a strategic step to provide basic education that is relevant to Indonesia's cultural diversity.

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AUTHOR CONTRIBUTIONS STATEMENT

FI, SSN, DFF was responsible for conceptualization, research design, methodology development, data collection, data analysis, and interpretation of results. The author also prepared the original manuscript draft, conducted critical revisions, and approved the final version for publication.

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