

Competency-Based Education in Multicultural Classrooms: Designing Culturally Responsive Teaching Strategies

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ABSTRACT

Culturally diverse classrooms are increasingly the norm in many education systems worldwide, presenting both opportunities and challenges for equitable teaching and learning. Competency-Based Education (CBE), which emphasizes mastery of skills over time spent in instruction, holds significant promise in addressing student diversity. However, without culturally responsive strategies, CBE may fall short in meeting the learning needs of students from varied cultural and linguistic backgrounds. This study explores how culturally responsive pedagogy can be integrated into CBE frameworks to enhance equity and engagement in multicultural secondary school settings. Using a qualitative multiple case study design, data were collected from nine teachers across three urban schools through interviews, classroom observations, and instructional material analysis. Thematic analysis revealed that effective strategies included differentiated assessments, cultural content integration, student voice mechanisms, and flexible evaluations. These practices increased learner motivation, inclusivity, and performance. The findings highlight that aligning CBE with culturally responsive teaching enhances its applicability and equity in diverse classrooms. The study contributes a framework for culturally inclusive CBE and offers guidance for curriculum design, teacher training, and education policy. The study concludes that aligning CBE with culturally responsive teaching enhances its effectiveness in multicultural settings. It recommends embedding cultural relevance as a core component in CBE-based teacher training and curriculum development.

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INTRODUCTION

Globalization and increased mobility have transformed classrooms into multicultural spaces where students bring a wide range of cultural, linguistic, and social backgrounds. This growing diversity enriches learning environments but also presents significant challenges for educators in delivering equitable and inclusive instruction. In response, educational systems are adopting frameworks that promote personalized learning, with Competency-Based Education (CBE) emerging as a leading model for fostering mastery and learner autonomy across diverse student populations.

Adrianus Prihartanto, Shirley A Padua, Alvin S Sicat, Rosmerry Simanjuntak, Henny Sutrisman

CBE emphasizes the acquisition of clearly defined skills and knowledge, allowing students to progress at their own pace once mastery is demonstrated. The model shifts the focus from time-based learning to performance-based outcomes, thereby promising greater flexibility and responsiveness to individual learning needs. In theory, CBE holds great potential for diverse classrooms because of its personalized and goal-oriented structure. However, its implementation in multicultural contexts remains complex and under-theorized, especially when it comes to integrating cultural differences into competency development pathways.

Educators are often left to reconcile standardized competency frameworks with the heterogeneous realities of their student populations. In practice, students from culturally and linguistically diverse backgrounds may struggle with CBE models that lack contextual relevance or cultural sensitivity (Allaert et al., 2025; Balarezo et al., 2025; Carstensen et al., 2025; Maroufi et al., 2025; Zhou et al., 2025). Without deliberate attention to cultural responsiveness, CBE risks reinforcing inequities by privileging dominant norms in curricular content, assessment practices, and pedagogical interaction. These challenges raise important questions about how to design culturally inclusive competency-based approaches that support all learners.

Despite widespread recognition of the importance of culturally responsive teaching (CRT), its integration into competency-based educational models remains inconsistent (Brocke et al., 2025; Debels et al., 2025; Odewole, 2025). Teachers working in multicultural classrooms frequently lack adequate guidance, training, and tools to adapt competencies to reflect students' cultural contexts and lived experiences. As a result, competency-based instruction can become disconnected from learners' identities, leading to disengagement and uneven achievement across demographic lines.

Instructional materials often fail to address the cultural backgrounds of students, resulting in a curriculum that does not reflect the diversity of the classroom. Competencies are sometimes framed in ways that reflect dominant cultural perspectives, making it difficult for students from minoritized groups to see themselves in the learning process (Aabdi et al., 2025; Alvarez & Guinat, 2025; Barbina et al., 2025; Hays et al., 2025; Seritan, 2025). This lack of representation contributes to cultural discontinuity between home and school, which has been linked to decreased academic motivation and participation.

In practice, teachers express a desire to make their classrooms more inclusive but often lack practical models or examples of how to do so within a CBE framework. While CBE encourages individualized learning, it does not inherently account for the sociocultural factors that shape students' learning trajectories (Glover et al., 2025; Nurani et al., 2025; Veena et al., 2025). The challenge lies in designing teaching strategies that uphold the rigor and accountability of CBE while ensuring that the curriculum is culturally affirming and equitable for all students.

The primary objective of this study is to explore how culturally responsive teaching strategies can be intentionally embedded within competency-based education models in multicultural classroom settings (Biloshchytskyi et al., 2025; Casler & Masciola, 2025; Jennings, 2025; Mukurunge et al., 2025). This research seeks to understand the ways in which educators interpret and implement culturally responsive pedagogy while designing and delivering competency-based instruction. The study aims to identify specific strategies that effectively bridge the gap between standardized competencies and culturally diverse learner needs.

This study aims to examine how culturally responsive strategies can be purposefully embedded within CBE frameworks in multicultural secondary school classrooms. It seeks to identify specific pedagogical practices that bridge standardized competencies with learners' cultural contexts. The research also documents teachers' experiences, challenges, and instructional decisions when aligning cultural relevance with competency mastery (Ashokkumar et al., 2025; Braun & Houck, 2025; Constable et al., 2025). The study is particularly focused on classrooms that serve linguistically and ethnically diverse student populations, where cultural responsiveness is critical to learning success.

The ultimate goal is to develop a conceptual and practical framework for designing culturally responsive CBE strategies. This framework is intended to inform curriculum development, teacher professional learning, and educational policy aimed at supporting equity in competency-based

learning environments. The research aspires to contribute actionable knowledge that supports practitioners in building inclusive, culturally sustaining classrooms without compromising academic rigor.

Although CBE and culturally responsive pedagogy have each been the subject of substantial academic inquiry, their intersection remains underexplored in empirical research. Existing studies on CBE predominantly focus on learning outcomes, assessment mechanisms, and mastery tracking, often neglecting cultural and contextual variables. Literature on CRT, while rich in pedagogical theory and classroom application, rarely addresses how cultural responsiveness can be operationalized within structured, standards-based competency systems.

The limited scholarship that does examine the intersection of CRT and CBE tends to be conceptual or anecdotal, lacking empirical validation or classroom-based analysis (Illahibaccus-Sona & Abdullah, 2025; Manning et al., 2025). There is a notable absence of case studies, especially in multilingual and multiethnic school settings, that document how teachers integrate cultural responsiveness into the design and implementation of competencies. This absence leaves educators and policymakers without evidence-based guidance for aligning inclusive teaching practices with outcome-driven educational models.

This research seeks to fill that gap by providing empirical data from multicultural classrooms where CBE is being implemented. It aims to identify real-world strategies, constraints, and opportunities for aligning culturally responsive pedagogy with competency-based instruction. By doing so, it offers a critical contribution to the discourse on equitable learning, particularly in global and pluralistic educational contexts where one-size-fits-all models fail to serve diverse learner communities.

This study introduces a novel focus on the intersection between two important but often siloed domains of educational research: CBE and culturally responsive pedagogy. Its originality lies in examining not only how these frameworks can coexist but how they can be mutually reinforcing when thoughtfully integrated. While previous studies have explored each construct independently, this research investigates the synergies that emerge when both are intentionally combined to enhance learning equity.

The study offers practical and theoretical contributions to the field. Practically, it yields a set of culturally responsive teaching strategies that are grounded in real classroom practice and tailored for competency-based contexts. Theoretically, it advances a model for culturally inclusive CBE design that extends current understanding of how culture, identity, and learning outcomes interact in diverse educational environments. This model challenges assumptions about standardization and encourages educators to view diversity not as a barrier but as a resource for enriched learning.

The importance of this research is underscored by current global trends toward educational personalization, inclusion, and accountability. As schools strive to meet diverse learner needs within competency-driven systems, there is a growing demand for guidance on how to do so in culturally sustaining ways. This study responds to that demand by offering context-sensitive, empirically grounded insights that empower educators to foster equity, excellence, and belonging in today's multicultural classrooms.

RESEARCH METHODOLOGY

A qualitative multiple case study design was employed to gain in-depth insights into how teachers implement culturally responsive strategies within CBE environments. Data were collected from nine teachers across three urban multicultural secondary schools, selected purposively based on their CBE engagement and classroom diversity. Data sources included semi-structured interviews, classroom observations, and document analysis. Thematic coding followed Braun & Clarke's six-step framework, supported by NVivo software. Trustworthiness was established through triangulation, member checking, and reflexive journaling throughout the research process. (Durga Devi et al., 2025; Martinez et al., 2025; Wynn, 2025). The case study approach was selected to allow for in-depth examination of real teaching contexts, enabling researchers to capture the complexities of instructional practice, teacher decision-making, and student interaction within

diverse learning environments. This design was appropriate for the exploratory nature of the research, which sought to understand processes rather than measure outcomes.

The population of the study included secondary school teachers working in urban public schools with high levels of cultural and linguistic diversity. Three schools located in different multicultural regions were purposively selected based on their official implementation of CBE frameworks and their demographic composition, which included students from various ethnic, religious, and language backgrounds. Within these schools, a sample of nine teachers—three from each site—was selected for participation based on their active engagement with competency-based instructional planning and their experience working in diverse classrooms.

Data collection instruments included semi-structured interviews, classroom observations, and instructional document analysis. Interviews were conducted with teachers to gather insights on their perceptions, strategies, and challenges related to culturally responsive teaching in a competency-based context. Classroom observations were conducted using an observation protocol designed to capture culturally responsive pedagogical practices, including student-teacher interaction, instructional differentiation, and the integration of cultural content. Teaching artifacts such as lesson plans, assessment rubrics, and project-based learning guides were collected and analyzed to understand how competencies were designed and contextualized for diverse learners.

The procedures began with obtaining institutional consent and ethical approval from each participating school and education authority. Preliminary visits were conducted to build rapport with school staff and to refine observation schedules. Data collection was carried out over a period of twelve weeks, with researchers spending an average of three days per week at each site. Interviews were audio-recorded and transcribed verbatim, while observation notes were expanded into detailed field memos after each session. All qualitative data were coded thematically using NVivo software, following an inductive-deductive coding process. Codes were derived both from the literature on culturally responsive pedagogy and emergent themes arising from the data. Triangulation across data sources ensured credibility, and member-checking procedures were employed to validate key interpretations with participating teachers.

RESULT AND DISCUSSION

The study involved qualitative and descriptive quantitative analyses of nine secondary school teachers implementing culturally responsive strategies within competency-based education (CBE) frameworks. Classroom observations were conducted using a rubric with four key indicators: differentiation, integration of cultural content, student voice, and assessment flexibility. Each indicator was scored on a 1–5 scale based on frequency and depth of use.

Table 1.

Average Scores of Culturally Responsive Strategies within CBE Implementation

Strategy Category	Mean Score
Differentiation	4.22
Cultural Content	4.22
Student Voice	3.67
Assessment Flexibility	3.22

The table shows that teachers most consistently implemented differentiation and integrated cultural content with high frequency. While student voice and flexible assessment were observed at lower frequencies, they still appeared regularly, suggesting a growing but uneven commitment to learner agency and assessment equity within the observed CBE environments.

Teachers employed a range of culturally responsive practices to personalize instruction and make competencies more meaningful for students from diverse backgrounds. Differentiation strategies included flexible grouping, choice-based assignments, and varied instructional scaffolds. Cultural content integration was achieved by aligning lesson themes with students' heritage, languages, and community values.

Student voice was supported through reflective journals, group decision-making in project tasks, and learner-led feedback sessions. However, fewer instances of fully flexible assessment formats were observed, indicating that while teachers were open to cultural variation in learning paths, they often adhered to uniform assessment criteria for grading and reporting. This discrepancy may stem from institutional requirements or a lack of training in designing diverse assessment models.

A review of lesson plans and instructional materials revealed that teachers consciously embedded multicultural themes within their CBE designs. Examples included units on environmental sustainability using local case studies, historical inquiry projects focused on underrepresented community narratives, and science tasks contextualized to everyday cultural practices. These designs reflected both cultural relevance and alignment with national competency standards.

The frequency and depth of culturally embedded content varied depending on teacher background, training, and school leadership support. Teachers with prior exposure to culturally responsive pedagogy or mentorship demonstrated more robust integration across the instructional cycle. In contrast, some relied on surface-level cultural references without connecting them to critical thinking or skill development, limiting their pedagogical impact.

Although the study is primarily qualitative, inferential interpretation was applied to examine trends and relationships in the observed practices. The two strategies with the highest scores—differentiation and cultural content—show a strong alignment with teachers' expressed beliefs during interviews, suggesting a consistency between intention and classroom behavior. This alignment was further supported by reflective journal entries that revealed teachers' rationale for modifying content to reflect students' cultural assets.

An indirect relationship was observed between assessment flexibility and student voice, suggesting that when students were given more say in their learning process, they were also more likely to advocate for alternative ways of demonstrating their learning. However, teachers noted systemic barriers to diversifying assessment, including fixed rubrics and reporting systems mandated by school authorities.

Cross-case analysis indicated a positive correlation between the degree of cultural content integration and observed student engagement. Teachers who designed tasks that reflected students' linguistic or cultural identities reported higher levels of participation, especially among students from minoritized backgrounds. Engagement was demonstrated through extended discussion, peer explanation, and initiative-taking in project planning.

Differentiation was most effective when paired with active recognition of students' cultural norms related to communication, collaboration, and authority. In cases where teachers overlooked these cultural dynamics, differentiation strategies appeared superficial or misaligned with students' preferences, occasionally leading to confusion or disengagement. This finding suggests that cultural competence enhances the impact of differentiation practices in CBE environments.

One illustrative case involved a language arts teacher who structured a competency-based unit on narrative writing around traditional storytelling genres from students' home cultures. Students were encouraged to select oral traditions from their families, analyze narrative structures, and translate them into written formats using multilingual scaffolds. The project culminated in a public storytelling exhibition, reinforcing both literacy competencies and cultural pride.

In another case, a science teacher facilitated a project on water purification using indigenous knowledge systems and local ecological conditions. Students interviewed community elders and integrated traditional filtration methods with modern scientific inquiry. The teacher used flexible assessment tools—including oral presentations and visual models—based on students' linguistic strengths and preferred modes of expression. These examples highlight how culturally responsive design in CBE can foster both academic mastery and community-connected learning.

Teachers reported that culturally relevant strategies helped students see the value of their cultural backgrounds within the academic space. Students responded positively to lessons that connected competencies to their lived experiences, leading to increased motivation and deeper

inquiry. Teachers also noted reduced behavioral disruptions and improved collaboration among students from different cultural groups when inclusive materials and practices were consistently used.

Interview data revealed that teachers viewed culturally responsive CBE as a continuous learning process rather than a fixed methodology. Most acknowledged initial uncertainty about how to align standard competencies with local knowledge, but they gained confidence through experimentation and feedback. Professional learning communities, when available, played a crucial role in encouraging innovation and reflection.

Findings from this study suggest that culturally responsive strategies can be meaningfully integrated into competency-based education to improve learner engagement and instructional equity. While differentiation and cultural content integration were commonly and effectively applied, student voice and assessment flexibility require further support through institutional policy, professional development, and collaborative planning.

The overall pattern points to the transformative potential of aligning CBE frameworks with the cultural realities of diverse classrooms. Rather than compromising academic standards, culturally responsive CBE strengthens learning by affirming student identity, enhancing relevance, and promoting agency. These results underscore the need to center culture in competency design as a core component of inclusive and effective education.

The study revealed that secondary school teachers implementing competency-based education (CBE) in multicultural classrooms employed a variety of culturally responsive strategies. Differentiation and integration of cultural content emerged as the most consistently observed practices, with high average scores indicating regular and meaningful application. Teachers adapted content to align with students' cultural backgrounds and modified instruction to address diverse learning needs.

Student voice and assessment flexibility were present to a lesser extent, though still evident in classroom practices. These strategies appeared to be emerging rather than fully institutionalized, often depending on teacher initiative rather than systemic support. The disparity in implementation levels suggests that while teachers recognize the value of culturally responsive practices, structural limitations may hinder their full integration.

Qualitative data from interviews and classroom observations supported these quantitative patterns. Teachers reported increased student engagement and collaboration when cultural identity was reflected in learning activities. They also noted higher participation among students from traditionally marginalized groups, who felt more empowered when their cultural knowledge was validated in the classroom.

Case studies demonstrated how culturally grounded project-based learning tasks enhanced both competency mastery and cultural relevance. These narratives illustrated the effectiveness of integrating heritage knowledge, linguistic scaffolding, and localized content within CBE frameworks. They underscored the potential of culturally responsive teaching to promote deeper learning across diverse student populations.

The findings of this study align with existing research on culturally responsive pedagogy, which emphasizes the importance of contextualizing learning to improve student engagement and equity. Previous studies by Gay (2010) and Ladson-Billings (1995) have demonstrated that culturally relevant teaching fosters academic success, cultural competence, and critical consciousness. The present study reinforces these conclusions within the specific context of competency-based education.

Unlike much of the literature on CBE, which often assumes a culturally neutral application, this study foregrounds culture as a dynamic and essential component of effective instruction. While traditional models of CBE focus on standardization and outcome-driven learning, this research highlights the need for flexibility and contextualization to accommodate diverse learners. The study contributes to a growing body of work that challenges the assumption of universality in educational models.

Differences also emerged in the extent to which cultural responsiveness has been operationalized in previous CBE frameworks. While studies from North America and Europe have explored personalized learning paths, few have examined how these can be tailored through culturally responsive practices. This research adds to the discourse by demonstrating practical strategies for embedding cultural relevance into competency design, especially in multilingual and multiethnic classrooms.

Another point of contrast lies in the teacher agency observed. While prior studies have reported institutional resistance or lack of autonomy in adopting responsive pedagogy, the teachers in this study demonstrated considerable initiative in adapting CBE to their students' cultural realities. This agency suggests that bottom-up innovation plays a crucial role in transforming competency frameworks into inclusive and culturally affirming models of education.

The findings indicate that culturally responsive practices are not merely add-ons to CBE but are essential to its success in diverse educational contexts. The consistent use of differentiation and cultural content integration reflects teachers' recognition that competencies must be taught in ways that are meaningful and relevant to learners' lived experiences. This reinforces the idea that equity and personalization are inseparable in effective education.

Teachers' efforts to incorporate cultural knowledge, student voice, and flexible assessments demonstrate a shift from deficit-based views of diversity to asset-based pedagogies. Students were not seen as lacking certain competencies but as bringing unique strengths that could be leveraged within CBE frameworks. This shift marks a move toward a more inclusive interpretation of what it means to be competent.

The varied levels of strategy implementation also serve as a barometer of systemic support. Where teachers received professional development or institutional encouragement, practices were more comprehensive and sustained. In contrast, where support was lacking, efforts were often isolated or unsystematic. This suggests that culturally responsive CBE cannot rely solely on individual teacher initiative but must be institutionalized through policy and training.

These results signal a deeper understanding of the cultural dimensions of learning. They suggest that culturally responsive teaching is not just a pedagogical choice but a necessary condition for equitable and meaningful competency development. In multicultural classrooms, culturally affirming strategies act as both catalysts for engagement and foundations for mastery.

The study carries important implications for curriculum developers, teacher educators, and policymakers. Curriculum designers should consider embedding cultural content and flexibility into core competency documents to ensure relevance for diverse learners. This approach not only affirms student identity but also enriches learning by connecting academic skills to real-world cultural contexts.

Teacher education programs must incorporate culturally responsive pedagogy into their training frameworks. Future educators need explicit instruction on how to adapt CBE to multicultural classrooms, including how to design assessments that recognize multiple ways of demonstrating knowledge. Without such preparation, teachers may struggle to align instructional strategies with learners' cultural realities.

Policymakers should support the institutionalization of culturally responsive practices within CBE models. This could include providing time and resources for collaborative curriculum development, revising assessment policies to allow for flexibility, and recognizing teacher innovation in evaluation systems. A system-wide commitment is essential for scaling up inclusive practices.

School leaders should foster professional learning communities where teachers can share, reflect, and develop culturally responsive strategies together. Administrative support can make the difference between isolated efforts and school-wide transformation. These communities can serve as incubators for innovation, ensuring that culturally responsive CBE is not only implemented but continuously refined.

The successful implementation of differentiation and cultural content integration can be explained by their alignment with teacher values and student needs. Teachers observed that when

learning reflected students' cultural experiences, students were more motivated and better able to grasp abstract competencies. This relevance fostered deeper learning and stronger classroom relationships.

Culturally responsive strategies also enabled more meaningful assessment practices. Teachers who knew their students' cultural and linguistic backgrounds were better positioned to design tasks that aligned with how students best expressed understanding (Cretu & Grosseck, 2025; Furey et al., 2025; Kinnear et al., 2025). This connection made assessment more accurate and empowering rather than punitive or exclusionary.

The lower scores for assessment flexibility and student voice suggest institutional constraints. Many teachers cited standardized testing requirements and fixed rubrics as barriers to full implementation. These systemic factors limited the extent to which teachers could adapt assessments or co-construct learning experiences with students.

Despite these barriers, the willingness of teachers to experiment with responsive strategies highlights the potential of grassroots educational change (Ehrlich et al., 2025; Houtrow & Hurwitz, 2025; Porta-Miller & Brueckner-Collins, 2025). When educators are trusted to act as professionals and innovators, they can find ways to adapt rigid systems to better serve all learners. This adaptability is a key factor in the development of inclusive competency-based education.

Future research should explore the long-term effects of culturally responsive CBE on student achievement, identity development, and educational equity. Longitudinal studies could reveal whether these strategies lead to sustained improvement in critical thinking, collaboration, and self-directed learning. Such findings would strengthen the case for embedding responsiveness in competency design.

Comparative studies across different cultural, linguistic, and socio-economic contexts would help identify universal principles and local adaptations of responsive CBE. Research in rural, indigenous, and migrant communities could uncover new insights about how competencies are shaped by culture and context. This knowledge would support more tailored and inclusive educational frameworks.

There is also a need for research on systemic implementation. Studies should investigate how schools and districts can institutionalize culturally responsive practices through leadership, policy, and professional development. Understanding how to move from teacher-level innovation to system-wide transformation is essential for scaling impact.

Educators and scholars should now collaborate to co-create models, toolkits, and assessment frameworks that integrate cultural responsiveness into the core of CBE. These resources can guide practice, inform policy, and elevate the voices of diverse learners in shaping their own educational journeys. This work is not only timely but essential in building education systems that are both competent and just.

CONCLUSION

The most salient finding of this study is the consistent and intentional integration of culturally responsive teaching strategies—particularly differentiation and contextualized content—within competency-based education (CBE) frameworks by teachers in multicultural classrooms. This contrasts with prevailing assumptions that CBE operates in culturally neutral or standardized ways. Teachers in the study demonstrated that meaningful engagement and mastery of competencies are significantly enhanced when instructional design reflects the cultural identities, lived experiences, and learning preferences of diverse students.

This research offers a dual contribution to the field by advancing both conceptual understanding and methodological practice. Conceptually, it reframes CBE as an adaptable and culturally anchored model, challenging the conventional dichotomy between standardization and personalization. Methodologically, it employs a multiple-case, mixed-methods approach that combines observation, teacher interviews, and artifact analysis to capture classroom realities with analytical depth. The resulting framework and practical examples can inform teacher education, curriculum planning, and policy formulation aimed at equity-oriented instructional transformation.

The study is limited by its scale and focus, involving a small sample of teachers within three urban school contexts and emphasizing short-term instructional practices. Broader generalizations should be made cautiously, as the dynamics of rural, indigenous, or differently resourced schools may yield distinct patterns. Future research should explore longitudinal impacts of culturally responsive CBE on student learning outcomes, examine its application across subject areas and grade levels, and assess how systemic support structures—such as policy, leadership, and professional development—can sustain and scale inclusive practices in competency-based systems.

AUTHORS' CONTRIBUTION

Adrianus Prihartanto: Conceptualization; Project administration; Validation; Writing - review and editing.

Shirley A Padua: Conceptualization; Data curation; Investigation.

Alvin S Sicat: Data curation; Investigation.

Rosmerry Simanjuntak: Formal analysis; Methodology; Writing - original draft.

Henny Sutrisman: Supervision; Validation; Other contribution; Resources; Visualization; Writing - original draft.

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