

Culturally Responsive Assessment in Higher Education: Bridging Theory-Practice Gaps Through Systematic Bias Management

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This qualitative study examines how academics implement culturally responsive formative assessment in Australian higher education, addressing a critical gap in understanding assessment practices across face-to-face and online learning environments. Through semi-structured interviews with five academics at an Australian university, the study investigates the practical challenges and strategies academics develop when balancing cultural responsiveness with systematic evaluation requirements. Findings reveal that online environments, contrary to theoretical expectations emphasizing face-to-face advantages, often enable more consistent cultural integration through required systematic planning, while spontaneous face-to-face adjustments prove inconsistent. The study demonstrates that cultural bias in assessment cannot be eliminated but requires strategic management. Based on academics' experiences, the study proposes a systematic bias management framework comprising three interconnected strategies: sequential cultural integration (rotating cultural advantages across assessment tasks), transparent bias disclosure (making cultural assumptions explicit to students), and collaborative cultural validation (involving cultural representatives in assessment design). This framework challenges prevailing assumptions that pursue cultural neutrality, instead advocating for transparent acknowledgment and equitable distribution of inevitable cultural bias in assessment practices.

Keywords: Culturally Responsive Pedagogy, Systematic Bias Management, Formative Assessment, Higher Education, Multicultural Learning Environments

1. Introduction

1.1. Background

In higher education, the increasing cultural diversity of student populations presents both opportunities and challenges for academic assessment practices. As universities worldwide experience growing enrolment of students from varied cultural, linguistic, and educational backgrounds, traditional assessment methods often fail to capture the full range of student competencies and learning approaches (Gay, 2018). This challenge has emerged significantly in the post-COVID era, where institutions must navigate assessment practices across both face-to-face and online learning environments while maintaining cultural responsiveness and academic standards.

The importance of culturally responsive assessment extends beyond representing a fundamental shift toward recognizing diverse ways of knowing and expressing knowledge. Research consistently demonstrates that assessment practices can either perpetuate educational inequities or become powerful tools for inclusive learning (Civil, 2018; Solano-Flores & Nelson-Barber, 2001). When assessment methods fail to account for cultural differences in communication patterns, learning preferences, and knowledge demonstration styles, they may disadvantage students from non-dominant cultural backgrounds (Shepard, 2019). In contrast, culturally responsive assessment

approaches have shown potential for enhancing student engagement, academic achievement, and sense of belonging across diverse learning environments (Heritage, 2022).

Formative assessment, with its emphasis on ongoing feedback, flexibility, and student development, offers opportunities for incorporating cultural responsiveness into evaluation practices. Unlike summative assessment, which often relies on standardized approaches that may not accommodate cultural diversity, formative assessment provides opportunities for personalization, multiple modes of expression, and continuous adjustment based on student needs (Brown-Jeffy & Cooper, 2011; Lucas & Villegas, 2013). This study examines academics' implementation experiences to provide insights into both the potential and limitations of culturally responsive assessment approaches in higher education.

1.2. Research Focus and Scope

This study examines culturally responsive formative assessment practices in higher education, focusing on how academics navigate the challenges of cultural integration in assessment design and implementation across face-to-face and online environments. While educators may successfully incorporate cultural awareness into teaching methods, translating this awareness into equitable assessment practices remains challenging and underexplored.

The investigation focuses on three critical dimensions: the ways academics adapt assessment approaches across face-to-face and online environments, the practical strategies they develop for cultural integration, and the challenges they encounter in maintaining both cultural responsiveness and academic standards. This focused approach addresses a significant gap in current literature, which lacks sufficient understanding of how culturally responsive assessment operates across different learning modalities in higher education.

The study addresses three research questions: (1) How do higher education academics implement culturally responsive formative assessment practices, and what challenges do they encounter? (2) How do cultural integration strategies differ between face-to-face and online learning environments? (3) What approaches might enhance cultural responsiveness in assessment while maintaining academic integrity?

2. Literature Review

2.1. Theoretical Foundations of Culturally Responsive Assessment

Cultural responsiveness in assessment refers to educators' ability to recognize, understand, and integrate diverse cultural approaches to learning and knowledge demonstration within evaluation practices. This includes awareness of how cultural backgrounds influence students' communication patterns, preferred modes of expression, and ways of organizing knowledge (Gay, 2018). Cultural responsiveness extends beyond surface-level recognition of cultural differences to encompass a deep understanding of how culture shapes cognitive processes, social interactions, and learning preferences. In assessment contexts, cultural responsiveness requires both theoretical understanding of cultural diversity and practical skills in designing evaluation methods that enable students from varied backgrounds to express their capabilities authentically (Banks, 2006).

Culturally responsive assessment represents a shift from traditional evaluation methods toward approaches that recognize and value diverse ways of understanding and learning. Solano-Flores and Nelson-Barber (2001) demonstrated that standardized assessments often contain embedded cultural assumptions in language, context, and expected response formats that disadvantage students from non-dominant backgrounds. Paris (2021) advocates culturally sustaining pedagogies that move beyond responsiveness to actively sustaining students' cultural practices within academic contexts. The theoretical foundation also draws from funds of knowledge theory (González et al., 2005), which

recognizes that all students bring valuable cultural knowledge and experiences to their learning. This perspective reframes assessment from a deficit model that views cultural differences as barriers to an assets-based model that positions cultural diversity as a resource for learning and evaluation.

Brown-Jeffy and Cooper (2011) identified key components of culturally responsive pedagogy—cultural competence, critical consciousness, and transformative practice—that support multiple modes of competence demonstration in assessment. Johnson-Smith (2020) extends this framework by demonstrating how culturally responsive assessment can address both surface culture (observable practices) and deep culture (implicit values and cognitive patterns). Further work emphasizes asset-based approaches that position cultural practices as sophisticated cognitive tools rather than differences requiring accommodation (De Royston et al., 2017). Such approaches align with Heritage's (2022) formative assessment principles, which emphasize ongoing feedback, flexibility, and responsiveness to individual student needs.

2.2. Formative Assessment and Cultural Integration

Formative assessment theory (Black & Wiliam, 2009) provides a suitable framework for culturally responsive practice due to its emphasis on ongoing feedback rather than high-stakes evaluation. Unlike summative assessment, which often relies on standardized approaches, formative assessment allows for personalization, multiple modes of expression, and continuous adjustment based on student needs (Shepard, 2019). However, this flexibility also presents challenges, as educators must balance cultural responsiveness with assessment consistency and comparability which remains underexplored in the literature (McLaughlin & Cruz, 2025).

Heritage (2022) argues that effective formative assessment requires understanding each student's cultural context to provide meaningful feedback and support learning progression. This aligns with Lucas and Villegas (2013) on linguistically responsive teaching, which showed that assessment approaches respecting diverse communication styles lead to more accurate evaluation of student capabilities. However, the personalisation required in formative assessment may generate unintended inequities when it results in inconsistent expectations, uneven feedback, or differential support for students (Dann, 2023).

The integration of cultural hybridity theory (Casinader & Manathunga, 2020) with formative assessment offers an additional theoretical foundation. Cultural hybridity suggests that learning environments can blend diverse cultural influences to create new forms of understanding, rather than requiring students to abandon their cultural identities. However, critics question whether hybrid approaches adequately address power imbalances, as they may privilege dominant cultural norms while appearing inclusive (Rheem, 2025).

2.3. Higher Education Implementation Challenges and Opportunities

Despite theoretical support for culturally responsive assessment, implementation in higher education faces significant challenges. Boon and Lewthwaite (2015) revealed that many educators lack preparation in cultural responsiveness, often struggling to recognize cultural biases in their assessment practices. Additionally, institutional pressures for standardization and comparability can conflict with the flexibility required for culturally responsive approaches (Adie et al., 2021). Watermeyer et al. (2021) argue that performativity cultures in universities, emphasizing rankings, metrics, and standardization, create structural barriers to culturally responsive practices, even when individual academics are committed to equity.

Professional development emerges as crucial for successful implementation. Moss and Brookhart (2019) emphasized that educators require ongoing support to develop cultural responsiveness and learn practical strategies for inclusive assessment design. This includes understanding how to create

assessment tasks that are culturally relevant and meet the students' individual needs. However, Slade et al. (2019) found that professional development programs often focus on awareness-raising rather than practical implementation skills, leaving academics uncertain about how to translate principles into practice. Furthermore, professional development typically addresses individual capacity while organizational structures and assessment policies remain unchanged, limiting the potential for systemic transformation. This implementation gap between theoretical commitment and practical application represents a critical barrier in contemporary higher education.

2.4. Critical Gaps and Research Imperative

Despite growing recognition of culturally responsive assessment's importance, several critical gaps limit effective implementation in higher education. First, most existing research focuses on K-12 contexts (Gay, 2018; Lucas & Villegas, 2013), raising questions about how cultural responsiveness should be adapted for university students who bring more complex cultural identities and educational experiences. Second, the intersection of formative assessment with cultural responsiveness requires deeper investigation regarding practical implementation strategies. While theoretical frameworks abound, empirical studies examining actual implementation, particularly the challenges academics face and strategies they develop, remain limited (Alt & Raichel, 2021).

Most significantly, the field lacks sufficient empirical evidence of how culturally responsive assessment operates across different learning environments. This study addresses these gaps by examining Australian higher education academics' experiences implementing culturally responsive formative assessment across face-to-face and online contexts. By focusing on practitioners' lived experiences, this research explores the theory-practice gap identified throughout this review, offering insights into how academics navigate the tensions between cultural responsiveness, assessment standardization, and institutional constraints in contemporary higher education.

3. Methodology

3.1. Research Rationale and Distinctive Approach

This exploratory study examines the lived experiences of academics who have worked in both face-to-face and online education settings, focusing specifically on the practical strategies they develop and the challenges they encounter (Creswell, 2018). A qualitative interpretive approach was selected as appropriate for investigating how academics understand and implement culturally responsive assessment across different contexts (Merriam & Tisdell, 2016). Rather than testing existing theories, this study explores how cultural responsiveness in assessment operates in practice, examining the gap between theoretical frameworks and classroom realities (Braun & Clarke, 2022). The research design aligns with experiential qualitative research which prioritizes participants' meaning-making and practical knowledge over researcher-imposed theoretical frameworks.

3.2. Research Focus

Unlike broader studies of multicultural education, this investigation concentrates on three specific dimensions: how academics adapt assessment to integrate different cultural learning styles, the ways they integrate students' cultural knowledge into evaluation processes, and their adaptation of assessment approaches across different technological environments. The study addresses three research questions: (1) How do higher education academics implement culturally responsive formative assessment practices, and what challenges do they encounter? (2) How do cultural integration strategies differ between face-to-face and online learning environments? (3) What

approaches might enhance cultural responsiveness in assessment while maintaining academic integrity?

3.3. Participants

Five academics from an Australian university's teacher education program participated in the study (Table 1). They were purposefully selected because they educate pre-service teachers while also experiencing multicultural assessment challenges in their own practice (Vaccarino, 2009), positioning them as both practitioners implementing culturally responsive assessment and educators preparing pre-service teachers for diverse classrooms.

Table 1. Participant Demographics and Teaching Contexts

Participants	Duration of Teaching Experience		Teaching Contexts
	Face to Face (Years)	Online (Years)	
Academic 1	4	3	Australia, Italy
Academic 2	12	3	Australia
Academic 3	31	3	Australia, South America, Europe
Academic 4	34	3	Australia
Academic 5	32	3	Australia, London

All participants reported teaching students from different countries including China, India, Vietnam, Nepal and various Pacific Island nations. While this small sample size limits generalizability, it enables in-depth exploration of complex implementation experiences (Civil, 2018).

The participants' teaching experience ranged from 4 to 34 years in face-to-face settings and included 3 years of online teaching during COVID-19. This combination of experienced practice and recent adaptation provided insights into how assessment approaches develop and transform as learning environments change. All participants had received some form of professional development in culturally responsive pedagogy, though none reported specific training in culturally responsive assessment design, reflecting the implementation gap identified in the literature review.

3.4. Data Collection

Semi-structured interviews lasting 45 to 60 minutes were conducted via Zoom between September and October 2023. Zoom was selected to accommodate participants' schedules and align with the study's focus on online learning environments. All interviews were video recorded with participants' consent and transcribed.

The interview design examined the practical realities of culturally responsive assessment rather than theoretical knowledge. Questions focused on specific incidents, concrete strategies, and actual challenges rather than general attitudes toward diversity. Key areas explored included: moments when cultural differences affected assessment outcomes, specific modifications made for different student populations, and practical differences between online and face-to-face evaluation approaches. This focus on specifics allowed identification of practical strategies and barriers to implementation.

Prior to data collection, ethical approval was obtained from Victoria University Research Ethics Committee (HRE16-295). All participants provided informed consent and were assured of confidentiality through the use of pseudonyms (Academic 1 – 5). Participants were informed of their right to withdraw at any time and to review their transcripts for accuracy.

3.5. Data Analysis

The analysis used a comparative approach, examining assessment practices across different environments rather than relying only on standard thematic coding (Nasir & Cooks, 2009). Data

analysis followed Braun and Clarke's (2022) reflexive thematic analysis, proceeding through six phases. Transcripts were coded line-by-line, generating 88 codes. These codes were organized into potential themes through iterative sorting and mapping, reviewed against the original transcripts for coherence, and refined into three primary themes with multiple subthemes. To enhance credibility, preliminary findings were shared with five participants for member checking (Lincoln & Guba, 1985). Throughout the analysis, reflexive practice was maintained, including regular analytic memoing and discussion with peer researchers to challenge interpretations.

4. Findings

This analysis examines assessment-specific interview content through a comparative examination of participant experiences across different learning environments. The investigation identified practical implementation patterns and explored how academics navigate cultural responsiveness in evaluation practice. The findings reveal unexpected patterns that suggest complexity in the relationship between theoretical frameworks and the practical implementation of culturally responsive assessment. Three primary themes emerged from the analysis, each challenging established assumptions about culturally responsive assessment in higher education.

4.1. Finding 1: Face-to-Face versus Online—Unexpected Environmental Differences

The first finding reveals unexpected patterns in how cultural responsiveness functions across different learning environments. Contrary to expectations based on existing literature that emphasizes the advantages of face-to-face cultural recognition (Gay, 2018; Heritage, 2022), participants in this study reported some surprising benefits of online assessment approaches.

Academic 4 described how online tools provided unexpected advantages for cultural integration:

I actually really appreciated the tools that I had, especially the breakout rooms...with a click of a button, I could put everyone in a pair. I could make sure that students were working together with different people every time, which was harder to monitor in a face-to-face classroom where students naturally gather toward familiar groups.

Furthermore, Academic 4 elaborated that while face-to-face classes allowed spontaneous adjustments, online environments required advance planning that encouraged more systematic consideration of cultural dynamics.

In face-to-face environments, participants reported making approximately 3 to 4 reactive cultural adjustments per session, but these approaches often proved inconsistent and sometimes missed less obvious cultural needs. Academic 2 noted that while online teaching became more "teacher-centred," this characteristic appeared to improve systematic cultural integration in some cases. The requirement for deliberate planning in online environments encouraged participants to consider diverse needs in advance rather than relying solely on real-time cultural observation.

These findings suggest that face-to-face teaching may feel more culturally responsive through immediate observation and spontaneous adjustment, yet produces less consistent cultural integration than the systemic planning required for online environments.

This finding has implications for professional development and assessment design. If systematic planning outperforms reactive recognition, current training programs emphasizing real-time cultural observation may require reconsideration. The relationship between immediacy and effectiveness in cultural responsiveness appears more complex than current literature suggests, justifying a deeper examination of how different learning modalities can support cultural integration in assessment

practices.

4.2. Finding 2: Cultural Hybridity Implementation—Theory and Practical Gaps

The second finding reveals challenges when participants attempted to implement cultural hybridity approaches in assessment contexts. While cultural hybridity theory promotes the blending of diverse cultural influences to create new forms of understanding (Casinader & Manathunga, 2020), this study found substantial gaps between theoretical expectations and practical implementation realities.

Academic 1 described her attempts to embrace unlimited cultural integration as creating a classroom culture that “includes whatever students bring,” honouring their cultural backgrounds and authentic expression. However, this idealistic approach created assessment challenges. Academic 1 noted that it became problematic when systematic cultural integration was required rather than spontaneous cultural mixing. This dilemma between respecting cultural authenticity and maintaining assessment standards emerged as a central tension across participants’ experiences. Students from different cultural backgrounds approached identical assignments using completely different cultural frameworks, making consistent evaluation criteria difficult to maintain.

The implementation breakdown occurred most clearly in online environments that demanded planned cultural integration. Academic 3 reflected on how unlimited student choice became problematic online: “In face-to-face classes, I could let students choose any aspects like gender or ability to focus on, and I’d adjust my expectations based on what they presented.” This illustrates how spontaneous cultural accommodation that works in simultaneous face-to-face contexts may not transfer effectively to structured online environments. When theoretical approaches proved insufficient for systematic implementation, participants developed practical adaptations. Three strategies emerged: structured limitation (providing cultural options within defined frameworks), sequential integration (building cultural elements progressively), and peer validation (using student groups to verify assessment fairness).

Academic 5 described shifting from open-ended “express yourself however you want” instructions to offering specific format options (essay, video, or infographic) with explicit evaluation criteria, maintaining cultural flexibility within evaluative boundaries. These findings suggest a fundamental incompatibility between unlimited cultural integration and systematic assessment that current theory may not fully address. Cultural hybridity theory, while valuable, requires adaptation for systematic assessment implementation. The evidence challenges theoretical frameworks that assume consistent cultural integration, demonstrating instead that cultural responsiveness in assessment requires careful boundary setting and explicit criteria, a reality that contradicts the open-ended flexibility promoted in multicultural education literature.

This finding has implications for both theory and practice. Rather than viewing structured limitation as a compromise or failure of cultural responsiveness, participants’ strategies suggest that boundaries may enable more equitable assessment than unlimited flexibility. When every student can approach an assignment differently, the resulting variation makes fair evaluation difficult, potentially disadvantaging students whose cultural approaches are less familiar to educators. Providing structured options with explicit criteria may support cultural equity.

4.3. Finding 3: Technology Integration—Development Rather Than Solution

The third finding suggests that technology integration amplifies existing cultural patterns rather than creating neutral evaluation spaces. Academic 4’s video assessment application revealed performance variations:

I introduced a video assessment which they can construct a video...I thought I was being culturally responsive by offering options. But what I saw shocked me. Students from Pacific Island backgrounds...were highly engaged. Meanwhile, students from East Asian backgrounds really struggled with individual video presentations...it felt uncomfortable to present themselves individually on camera which wasn't their cultural norm.

This discovery connects to the systematic versus spontaneous cultural approaches identified in previous findings. While technology required planned cultural integration, it generated unpredictable cultural advantages that systematic planning could not fully anticipate. Students from oral tradition backgrounds performed exceptionally well in video assessments, while those from collective knowledge cultures struggled with individual digital requirements despite strong performance in collaborative written work.

These performance differences varied across different technological applications and were not easily predicted through existing cultural responsiveness frameworks (Lucas & Villegas, 2013). Students from hierarchical knowledge traditions performed strongly in structured video formats but found open-ended multimedia tasks challenging. Those from narrative knowledge cultures excelled in storytelling videos yet struggled with analytical presentations, while students from visual knowledge traditions thrived in infographic assignments but had difficulty with text-based video descriptions.

The implications extend beyond simple technology selection. Each technological choice created specific cultural advantages and disadvantages that varied across different cultural knowledge systems. Providing multiple format options, rather than reducing cultural bias, may increase it by creating systematic advantages for cultures whose knowledge systems align with particular technological approaches.

The technology findings indicate that planned cultural integration generates predictable bias patterns that current theory may not fully address. Even well-intentioned multiple format options produced cultural advantages and disadvantages that participants could not fully predict, suggesting that technological solutions to cultural equity in assessment may be more complex than commonly assumed.

4.4. Connected Analysis: Systematic Problems in Cultural Assessment Theory

These three findings reveal interconnected patterns that highlight the complexity of implementing culturally responsive assessment across different learning environments. The environmental analysis indicated that systematic planning often outperformed reactive cultural adjustment. The cultural hybridity analysis showed that theoretical frameworks assuming seamless cultural integration encountered practical implementation barriers. The technology investigation revealed that planned integration generated unpredictable bias patterns across different technological applications. Together, these findings challenge the assumption that cultural bias in assessment can be eliminated through awareness and flexibility.

Academic 2's observation that exemplifies this complexity rather than representing a straightforward opportunity for cultural inclusion:

Different cultures have different ways of collaborating. I had Chinese students who wanted to work individually first, then come together. Pacific Island students who wanted to start together and stay together throughout. How do I design group assessments that respect all these approaches while still evaluating individual contributions fairly?

This observation illustrates that culturally responsive assessment involves navigating competing

demands between cultural integration and evaluation consistency, requiring academics to make strategic choices about how to balance these priorities. The connected analysis indicates that current theoretical frameworks may not fully account for the practical tensions that emerge when systematic cultural responsiveness meets structured assessment requirements.

4.5. Implications for Assessment Practice

This investigation indicates that effective culturally responsive assessment may require acknowledging inherent tensions rather than seeking to eliminate them entirely. The findings suggest three practical directions for assessment design in multicultural contexts. First, assessment sequences might consider rotating cultural advantages across different tasks rather than attempting to make each individual assessment culturally neutral. This approach recognizes that different assessment formats will privilege certain cultural approaches while challenging others. Second, transparent communication about cultural assumptions embedded in assessment tasks may help students prepare more effectively than maintaining assumptions of cultural neutrality. Students may benefit from understanding which cultural approaches particular assignments favour or require. Third, involving cultural representatives in assessment design and evaluation processes can provide insights that individual academics cannot anticipate alone. This collaborative approach addresses the limitations of relying solely on instructor judgment about cultural appropriateness. Taken together, these three strategies form what this study terms systematic bias management: an approach that acknowledges cultural bias as inherent while developing methods to distribute advantage equitably, make assumptions explicit, and incorporate diverse perspectives.

5. Discussion

5.1. Theory-Practice Gaps in Cultural Assessment Implementation

This investigation identifies gaps between culturally responsive assessment theory and implementation practice. Participants' experiences suggest that implementation difficulties stem from inherent tensions between theoretical ideals and practical constraints.

All five participants had completed professional development in culturally responsive pedagogy, yet reported insufficient preparation for assessment-specific challenges, indicating that existing theoretical frameworks may require adaptation to address the practical tensions between cultural integration and evaluation consistency.

5.2. Systematic Planning Versus Spontaneous Responsiveness

The finding that online environments enabled more consistent cultural integration than face-to-face settings challenges prevailing assumptions. Current literature emphasizes face-to-face environments for cultural responsiveness. Banks (2006), Gay (2018), González et al. (2005) and Heritage (2022) all emphasize immediate cultural recognition and direct interaction as essential for effective cultural integration.

However, participants reported reactive cultural adjustments, averaging three to four per session. These adjustments often addressed obvious cultural differences while missing understated ones. They overreacted to visible cultural markers while ignoring less apparent cultural needs. This reactive approach produced inconsistent patterns that may have disadvantaged students whose cultural needs were not immediately visible.

In contrast, online environments required advanced planning that encouraged systematic consideration of cultural diversity, potentially producing more consistent cultural integration. If

systematic planning outperforms reactive recognition, then current professional development programs may need to be reoriented (Abacioglu et al., 2022; Brown-Jeffy & Cooper, 2011). The evidence suggests that an emphasis on real-time cultural recognition may inadvertently reproduce the very cultural biases that culturally responsive assessment aims to address. The practical implications are substantial. Instead of training academics to identify cultural elements during instruction, institutions should focus on systematic cultural analysis capabilities that enable comprehensive advance planning (Boon & Lewthwaite, 2015). This represents a complete reversal of current priorities, but the evidence suggests that such a shift is necessary if cultural competence is to be translated into effective assessment practice.

5.3. Cultural Hybridity Theory and Assessment Contexts

While cultural hybridity theory (Casinader & Manathunga, 2020) promotes blending diverse cultural influences, participants found that unlimited cultural integration challenged assessment consistency. Students from different cultural backgrounds approached identical assignments using different cultural frameworks. Students from collective knowledge cultures produced collaborative responses to individual assignments. Students from oral tradition backgrounds provided narrative responses to analytical prompts. Students from hierarchical knowledge traditions waited for explicit instruction rather than demonstrating independent analysis. Each approach was culturally valid and educationally sound, but they could not be evaluated using consistent criteria.

The academics developed practical solutions when theoretical approaches proved insufficient for systematic implementation. Structured limitation emerged from recognizing that cultural space must operate within defined boundaries to maintain comparative evaluation. Sequential integration developed from the understanding that cultural elements must be introduced gradually to preserve assessment consistency. Collaborative validation emerged from the acknowledgment that academics cannot fairly evaluate culturally unfamiliar approaches without help from cultural insiders.

This finding suggests that cultural hybridity theory requires refinement for assessment contexts and indicates that multicultural education frameworks may benefit from reconsidering assumptions about unlimited cultural integration in structured evaluation contexts. Instead, the evidence suggests that effective cultural responsiveness requires strategic limitation, defining clear boundaries within which cultural flexibility can operate without compromising assessment integrity. This represents a significant departure from current theoretical frameworks that promote maximalist approaches to cultural inclusion.

5.4. Technology and Cultural Bias Patterns

Digital tools are often assumed to create more equitable evaluation opportunities through multiple format options (Black & Wiliam, 2009; Moss & Brookhart, 2019; Wilton & Methot, 2020). This assumption underlies most current approaches to technology integration in culturally diverse settings.

However, participants found that the video assessment option produced performance variations. Students from oral tradition backgrounds excelled, while students from collective knowledge cultures struggled with individual video requirements. These patterns were not random or easily predicted through existing cultural competence frameworks (Boon & Lewthwaite, 2015; Lucas & Villegas, 2013). Students from hierarchical knowledge traditions performed strongly in structured video formats but found open-ended multimedia tasks challenging. Those from narrative knowledge cultures excelled in storytelling videos yet struggled with analytical presentations. Meanwhile, students from visual knowledge traditions thrived in infographic assignments but had difficulty with text-based video descriptions.

Each technological choice created specific cultural advantages and disadvantages that vary across

different cultural knowledge systems. This makes it impossible to achieve truly equitable technological integration within current approaches. Providing multiple format options may increase rather than decrease cultural bias by creating systematic advantages for cultures whose knowledge systems align with particular technological approaches, challenging basic assumptions in current assessment theory (Adie et al., 2021; Shepard, 2019).

This disrupts the technology-as-solution narrative that dominates contemporary assessment reform. Rather than seeking technological solutions to eliminate bias, educators must acknowledge that every assessment format digital or traditional embeds cultural assumptions. The goal shifts from finding neutral tools to explicitly managing the biases inherent in any technological choice. This represents a paradigm shift from technology-enabled equity to technology-mediated bias management.

5.5. Toward Systematic Bias Management

These three findings connect to reveal a dilemma that current culturally responsive assessment theory cannot address. Each finding suggests that while systematic approaches ensure more consistent cultural integration, they also produce predictable patterns of bias that spontaneous approaches are better able to avoid. This creates an unavoidable choice between different types of cultural bias rather than a choice between bias and equity. Systematic cultural planning tends to prioritize cultures whose needs academics can anticipate, whereas responsive cultural competence allows for more individualized adaptation but often results in inconsistent and insufficient inclusion.

In culturally diverse assessment contexts, a systematic approach may align better with some cultures than others, while reactive approaches may respond better to some cultural needs than others. Current literature does not acknowledge this dilemma because it assumes compatibility between comprehensive cultural integration and consistent evaluation that the evidence challenges (Brown-Jeffy & Cooper, 2011; Heritage, 2022). The tension is not between bias and neutrality but between different types of bias and ways of managing them.

This connected pattern reveals the central insight of this study: cultural bias in assessment is not a problem to be solved but a reality to be managed. The three findings demonstrate different manifestations of the same fundamental tension between cultural competence and assessment systematization, between unlimited integration and evaluation consistency, and between technological flexibility and equitable implementation. Recognizing this tension as inherent rather than resolvable represents a fundamental shift from current theoretical frameworks that pursue bias elimination toward the systematic bias management approach this study proposes.

The practical implications are intense. Rather than continuing to pursue the unrealistic goal of eliminating cultural bias entirely, the field should focus on developing transparent and equitable systems to acknowledge, manage, and distribute inevitable biases. This shift requires reconceptualizing culturally responsive assessment not as achieving cultural neutrality but as strategically managing cultural positioning through sequential integration, transparent disclosure, and collaborative validation.

6. Toward Systematic Bias Management in Cultural Assessment

Drawing from participants' experiences, this study proposes a framework for managing cultural bias transparently. This represents a paradigm shift from pursuing cultural objectivity to implementing cultural equity.

6.1. Theoretical Rationale

This framework assumes that all assessment methods contain cultural assumptions that may advantage some groups while disadvantaging others (Shepard, 2019). Traditional approaches assume that sufficient cultural competence training and careful design can produce culturally unbiased assessments (Brown-Jeffy & Cooper, 2011). The evidence from this study demonstrates that this assumption is unfounded. When Academic 4 offered video options with the intention of creating more equitable choices, the result was systematic advantages for oral tradition cultures and systematic disadvantages for collective knowledge cultures. When Academic 3 allowed unlimited cultural choice in assignment focus, the result was assessment inconsistency rather than cultural inclusion.

This managed approach operates on three principles: (1) bias may be inevitable in cultural contexts, (2) it can be distributed equitably, and (3) it can be made transparent to students. This foundation challenges central assumptions in current culturally responsive assessment literature (Solano-Flores & Nelson-Barber, 2001) but aligns with implementation realities that academics encounter in practice. However, this framework requires empirical validation through intervention studies examining student outcomes, comparing implementation approaches, and testing transferability across contexts.

6.2. Sequential Cultural Integration

Sequential cultural integration involves distributing cultural advantages across assessments. Instead of attempting to make each individual assessment culturally neutral, this approach aims to ensure that different cultural groups receive advantages at different points in the assessment sequence.

The implementation begins with cultural bias mapping for each assessment task. Academics would collaborate with cultural representatives to identify which cultural approaches each assessment method may privilege and disadvantage. For example, individual written analytical essays may advantage cultures that emphasize independent critical thinking while disadvantaging cultures that prioritize collective knowledge construction. A rotation system would then aim to ensure that subsequent assessments privilege different cultural approaches. If the first assessment advantages independent analytical cultures, the second might privilege collective knowledge cultures through collaborative projects, while the third might advantage narrative cultures through storytelling formats. This sequence continues until all major cultural approaches represented in the class have received systematic advantages. This differs from current approaches that attempt to accommodate all cultures simultaneously within each assessment. Sequential cultural integration would maintain assessment consistency within individual tasks while distributing cultural advantages across the complete sequence.

This strategy would provide clear criteria for each assessment, enabling consistent evaluation, while ensuring equity through temporal distribution rather than task-level accommodation. It allows students to demonstrate competence through familiar cultural approaches while also developing capacity in less familiar ones. Most importantly, it acknowledges that fairness does not require treating all students identically within each assessment but ensures that all students receive equitable opportunities across the assessment system as a whole.

6.3. Transparent Bias Disclosure

This component involves making cultural assumptions explicit. For example, academics would identify which cultural approaches each assessment task may privilege and disadvantage. For Academic 4's video assessment, transparent disclosure would inform students that this format may advantage cultures with strong oral traditions while disadvantaging cultures that emphasize collective knowledge construction and written analytical expression. Students would receive this information

in advance, along with guidance about how to prepare for assessments that may not align with their cultural strengths. Students from collective knowledge cultures taking individual video assessments might receive preparation focusing on individual presentation skills, while students from written analytical cultures might receive support for oral expression techniques.

The communication also includes an explanation of how cultural advantages will be assigned across the complete assessment sequence. Students learn that while they may be disadvantaged in some assessments, they will receive systematic advantages in others. This transparency replaces the false objectivity assumptions that current approaches promote (Black & Wiliam, 2009; Moss & Brookhart, 2019) which the evidence shows mislead students about actual assessment requirements. Implementation requires developing standardized cultural bias statements for different assessment methods and training academics to communicate these clearly to students. The objective is not to discourage students from taking assessments that may disadvantage them, but to provide accurate information about cultural assumptions so students can prepare effectively and understand their results in cultural contexts.

This transparency strategy challenges the common practice of presenting assessment as culturally neutral. By explicitly positioning culture, it enables students to recognize when they are being asked to perform in culturally unfamiliar ways, transforming what was previously experienced as personal failure into recognized cultural learning.

6.4. Collaborative Cultural Validation

This component involves representatives from different cultural groups in assessment design and evaluation processes. For example, academics would establish cultural advising groups including representatives from major cultural backgrounds. These groups would participate in assessment design, reviewing proposed assessment methods for cultural bias patterns and suggesting modifications. They would also participate in evaluation, particularly for responses that employ culturally unfamiliar approaches.

The collaboration groups also participate in developing the cultural bias mappings required for sequential integration and the disclosure statements required for transparent communication. Their involvement ensures that cultural assumptions are identified by cultural insiders rather than cultural outsiders, improving accuracy and reducing the risk of cultural stereotyping (Civil, 2018). Implementation requires establishing formal cultural structures and training both academics and cultural representatives in collaborative evaluation processes. The objective is not to create separate evaluation standards for different cultural groups, but to ensure that evaluation processes can recognize and appropriately assess culturally diverse approaches to demonstrating knowledge and skills.

The collaborative approach indicates purposes beyond improving assessment design. It centers diverse voices in assessment, challenging traditional power dynamics where academics from dominant backgrounds unilaterally determine evaluation standards. It builds institutional capacity for cultural competence by creating ongoing dialogue rather than one-time consultations. However, this approach would require careful implementation to avoid placing an unfair burden on them. Compensation, clear role definitions, and rotation of cultural representatives can help ensure that collaborative validation remains ethical and sustainable.

6.5. Application Across Learning Environments

This framework would function across face-to-face and online learning environments, drawing on the systematic planning identified in online settings while addressing the contextual bias problems identified in face-to-face contexts.

In online learning environments, the structured planning required for digital delivery aligns with the cultural bias management principles. Sequential integration could be embedded into course design, with assessment sequences strategically organized to distribute cultural advantages across tasks rather than concentrating them within individual assignments. Explicit communication can be incorporated into course management systems by providing cultural bias statements alongside assessment guidelines, thereby making cultural assumptions transparent to students. Furthermore, inclusive co-design can be supported through digital discussion processes, enabling representatives from diverse cultural groups to participate in assessment development and evaluation. Collectively, these strategies demonstrate how the intrinsic demands of online modalities can be leveraged to implement systematic approaches to cultural equity in assessment.

In face-to-face environments, the framework would require advanced cultural planning rather than relying on spontaneous cultural recognition. Academics must identify cultural assumptions and plan culturally integrated strategies before class sessions rather than attempting to notice and respond to cultural needs as they emerge. This systematic approach replaces the inconsistent contextual adjustments that evidence shows reinforce systemic inequities.

The key insight is that effective cultural bias management requires systematic planning regardless of modality. Online environments naturally encourage such planning through their structural requirements, while face-to-face environments require effort to resist reactive patterns. Both modalities can implement the systematic bias management framework, but online environments may offer structural advantages for consistency and documentation that face-to-face settings must consciously build in.

6.6. Implementation Considerations

Implementing this proposed approach would require changes in how institutions prepare academics for culturally diverse classrooms. The evidence shows that current training programs focus on achieving cultural objectivity through sensitivity and immediate competence (Buzzai et al., 2023). However, this study demonstrates that these goals are unachievable and potentially inefficient.

Professional development must shift toward systematic cultural analysis and bias management capabilities (Abacioglu et al., 2022). Instead of training academics to recognize cultural elements in real-time, programs should teach cultural bias mapping, assessment sequencing, and advanced planning strategies. This directly supports the sequential integration and explicit communication components of the managed bias framework.

Assessment design processes must also change fundamentally. Rather than attempting cultural impartiality in individual assessments, design processes must incorporate bias mapping and sequential planning from the beginning (Moss & Brookhart, 2019). This requires new tools and frameworks that help academics identify cultural assumptions and sequence assessments to distribute advantages equitably. Current systems evaluate academics based on their ability to achieve impartiality and demonstrate sensitivity (Lucas & Villegas, 2013). Instead, evaluation should focus on academics' ability to identify, manage, and distribute biases equitably across assessment practices (Civil, 2018).

Beyond individual professional development, this framework requires institutional policy changes. Universities committed to cultural equity must move beyond workshops and awareness training toward systemic changes in assessment. These changes may include requirements for assessment sequence planning that document how cultural advantages are distributed, explicit statements of cultural bias in course outlines and assessment rubrics, and formal mechanisms for involving diverse stakeholders in assessment design and review. Without institutional support, individual academics attempting systematic bias management face significant barriers, as current quality assurance processes often reward standardization and comparability over cultural responsiveness. This

represents a shift from treating cultural competence as individual pedagogical skills to recognizing it as an institutional responsibility requiring systematic support, resources, and accountability.

7. Conclusion

7.1. Study Limitations

This exploratory investigation acknowledges important limitations. The small sample size (five participants) and single institutional context limit generalizability to other educational settings or cultural populations (Abacioglu et al., 2022). All participants came from one Australian university within teacher education, which may have distinct characteristics compared to other disciplines. As a theory-building study, this research provides preliminary insights into implementation complexities rather than generalizable conclusions. The findings require validation through larger-scale empirical research across diverse institutional and disciplinary contexts.

Additionally, this study captures only academics' perspectives, excluding student voices, a significant limitation. Without student outcome data, future research cannot assess whether the strategies academics describe actually improve student learning or experience. This absence is particularly critical given our focus on culturally responsive practice, where student perspectives are essential for evaluating cultural appropriateness and effectiveness. Future research should incorporate student perspectives to understand how assessment strategies are experienced by diverse learners, including comparative studies examining student outcomes under different assessment approaches.

The three-year timeframe of online teaching (limited to COVID-19) may also affect findings, as emergency remote teaching differs from purposefully designed online education (Hodges et al., 2024). Participants' online experiences occurred during a crisis period, which may have influenced their perceptions and strategies in ways that differ from planned online pedagogy. Additionally, the focus on formative assessment, while appropriate for exploring cultural responsiveness, means findings may not transfer to summative assessment contexts where different constraints apply.

Furthermore, this study's positioning as exploratory, theory-building research means the study proposes rather than validates the systematic bias management framework. While grounded in practitioner experiences, the framework's effectiveness requires empirical testing through intervention studies that measure student outcomes, compare different implementation approaches, and examine transferability across cultural and institutional contexts. The study intentionally prioritizes depth of understanding over generalization, accepting reduced external validity in exchange for rich, contextual insights into implementation challenges. However, the detailed examination of implementation realities provides valuable groundwork for advancing both theoretical understanding and practical application of culturally responsive assessment in higher education contexts.

7.2. Conclusion

This study examines tensions between culturally responsive assessment theory and implementation practice in higher education. Through examination of five academics' experiences with cultural diversity in assessment across face-to-face and online environments, this investigation challenges fundamental assumptions that have guided assessment practice throughout the years.

The analysis proposes a framework based on systematic cultural bias management. This approach operates through sequential cultural integration that aims to distribute advantages across assessment sequences, transparent cultural bias disclosure that makes assumptions explicit, and collaborative cultural validation that involves cultural representatives in assessment design and evaluation.

Although the data for this study were drawn from the Australian higher education context, the findings offer broader insights that can inform global discussions on culturally responsive assessment. Korean universities are also experiencing increasing cultural and linguistic diversity, alongside the expansion of online and hybrid learning environments. The strategies and challenges identified by Australian academics in this study may provide useful comparative perspectives for Korean higher education. In particular, the emphasis on integrating cultural competence into formative assessment design can serve as a valuable reference for Korean universities seeking to enhance inclusiveness and equity in assessment practices. The managed bias framework is not culturally specific to Australia but addresses fundamental tensions that emerge wherever diverse student populations encounter standardized assessment systems.

The study acknowledges several limitations. The investigation examined five academics within one institutional context, limiting generalizability across different educational environments, cultural populations, and disciplinary contexts. Additionally, the study captures only academics' perspectives and excludes student voices, a significant limitation that future research should address. Future research should examine whether systematic bias management improves student outcomes compared to current methods, and whether students prefer transparent bias management over equity assumptions. Longitudinal studies tracking the implementation across multiple institutions and diverse cultural contexts would strengthen the understanding of transferability and effectiveness.

This investigation contributes to the culturally responsive assessment literature by providing evidence-based challenges to established theoretical frameworks and offering practical alternatives grounded in experience and reality. The managed bias approach represents a paradigm shift from pursuing the unrealistic goal of cultural neutrality to implementing achievable cultural fairness through systematic bias management. As higher education institutions worldwide experience increased cultural diversity and navigate hybrid learning environments, these findings provide a foundation for developing more effective and honest approaches to culturally responsive assessment practice.

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