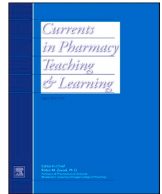
Currents in Pharmacy Teaching and Learning 18 (2026) 102565

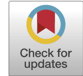
Contents lists available at ScienceDirect

Currents in Pharmacy Teaching and Learning

journal homepage: www.sciencedirect.com/journal/currents-in-pharmacy-teaching-and-learning



Research Paper



An evaluation of cultural safety education in a pharmacy curriculum through constructive alignment mapping

Alexander W. Burke *, Bandana Saini, Megan Anakin, Susan Welch, Rebecca Roubin, Rebekah J. Moles

University of Sydney, Sydney NSW St. Vincent's Hospital, Darlinghurst, Sydney, NSW, Australia

A B S T R A C T

Background/aim: Cultural safety is a vital component of healthcare education, particularly in countries with colonial histories such as Australia. Ensuring that cultural safety is meaningfully embedded and assessed within health professional programs is essential for improving health outcomes for First Nation Australians. Therefore, the aim of this study was to evaluate how cultural safety is represented in a Pharmacy education curriculum.
Methods: A qualitative curriculum mapping approach was used to identify cultural safety elements in curriculum documents. First, the Aboriginal and Torres Strait Islander health curriculum framework was used to determine if unit-level learning outcomes referenced cultural safety. Second, the concept of constructive alignment was used to determine if cultural safety learning outcomes were constructively aligned with learning activities and assessments. Third, verbs similar to Bloom's taxonomy was used to identify the cognitive level of cultural safety elements
Results: Seven units of study were mapped. One unit demonstrated aligned cultural safety elements, however, six did not. Assessments of cultural safety learning outcomes were largely absent with learning activities typically confined to single events at novice level. When assessments did occur, they were predominantly of a lower cognitive order through multiple choice or short answer questions formats
Conclusion: Despite national standards, cultural safety appears to be inconsistently embedded and poorly assessed. Further curriculum development is necessary to achieve constructive alignment and accountability

Introduction

First Nations was the preferred terminology used to represent Aboriginal and/or Torres Strait Islander people throughout the paper, however we note that the word Indigenous and Aboriginal and/or Torres Strait Islander is used in internal and external references and is used when appropriately referring to such texts.

Within professional health education, one area of increasing importance is the integration of cultural safety. Cultural safety is a concept originating in Aotearoa/New Zealand that acknowledges the inherent power imbalances in healthcare relationships between the First Nations people of the land and their counterparts and emphasises the practitioner's responsibility to provide care that is safe, respectful, and responsive to each patient's unique cultural identity.[1] Unlike cultural competence, cultural safety is patient-defined and dynamic, requiring clinicians to continually adapt their approach based on the needs and perspectives of those receiving care,[2] in short the practitioner is not the one who determines if they are acting in a culturally appropriate manner but the individual receiving the care.

To meaningfully embed cultural safety education within health curricula, educational institutions must articulate that cultural safety is not only a learning objective but also an expected learning outcome, one that reflects a learner's ability to provide care

* Corresponding author at: Pharmacy Building A15, Science Road, The University of Sydney, Camperdown, NSW 2006, Australia.
E-mail addresses: alexander.burke@sydney.edu.au (A.W. Burke), bandana.saini@sydney.edu.au (B. Saini), megan.anakin@sydney.edu.au (M. Anakin), susan.welch@sydney.edu.au (S. Welch), rebecca.roubin@sydney.edu.au (R. Roubin), rebekah.moles@sydney.edu.au (R.J. Moles).

https://doi.org/10.1016/j.cptl.2025.102565

Available online 10 February 2026
1877-1297/Crown Copyright © 2026 Published by Elsevier Inc. This is an open access article under the CC BY license (http://creativecommons.org/licenses/by/4.0/).

perceived as safe by First Nations people and other communities. In this sense, cultural safety is an outcome of learning, not only a process of awareness-building; if the outcome is not safe, then the curriculum has failed in its purpose. Without this alignment, the integration of cultural safety risks becoming tokenistic or symbolic rather than substantive and transformative.[3]

First Nation health frameworks are widely used to support the integration of cultural safety content within health curricula, yet their application varies considerably across contexts. National frameworks such as the Treaty of Waitangi in Aotearoa/New Zealand demonstrate how cultural safety can be embedded at a system level, shaping expectations for all health professional programs. Smaller-scale studies, including Min's work developing an elective pharmacy course in Indigenous health in Canada,[4] shows how frameworks can guide the design of individual units of study. However, these examples largely focus on content inclusion rather than evaluating whether entire curricula are coherently aligned with cultural safety principles.

A widely adopted methodology for ensuring consistency among learning outcomes, teaching activities, and assessment is constructive alignment, developed by John Biggs.[5] Constructive alignment is an outcomes-based approach that begins with clearly defined learning outcomes, followed by the design of learning activities and assessment tasks that are directly aligned to these outcomes. In essence, both teaching and assessment should flow from and reinforce the stated outcomes.[6] This principle is grounded in a simple yet powerful logic: if an outcome is deemed important enough to be included in the curriculum, then it should be both taught and assessed. Conversely, content that is neither explicitly tied to an outcome nor appropriately assessed raises questions about its relevance and purpose. This alignment fosters clarity, coherence, and intentionality in the learning experience and has become a foundational principle in contemporary curriculum design across disciplines.

An important dimension of constructive alignment relevant to teaching cultural safety is the view that learners actively construct new knowledge by linking new experiences and concepts into their existing cognitive frameworks. Constructivist learning theory, which underpins Biggs' model of constructive alignment, positions students not as passive recipients but as active meaning-makers who interpret and reorganise knowledge through reflection and experience.[7] This approach is particularly significant when teaching cultural safety, which is itself a social construct that requires learners to interrogate their own assumptions, values, and professional identities rather than memorise static cultural facts.[8] By designing learning activities that connect students' prior understandings to authentic encounters, educators can facilitate the conceptual change necessary for culturally safe practice.[9]

While constructive alignment provides the theoretical scaffolding for embedding cultural safety as a measurable outcome, its practical implementation depends on rigorous curriculum development processes. Curriculum development is an intensive, iterative process requiring careful consideration of content, pedagogy, and assessment.[10] Effective curriculum design ensures that meaningful learning outcomes are articulated and developed, relevant and contemporary content is taught, and assessments are designed not only to measure student achievement but also to identify potential barriers to learning.[11]

Specific emphasis on designing a curriculum starts at the development of learning outcomes as stated by Frank et.al "In an era of greater public accountability, medical curricula must ensure that all graduates are competent in all essential domains"[12] Therefore all essential domains that need to be acquired by graduates should be explicitly defined before content is created. Curriculum design also presents a critical opportunity for institutions to modernise educational practices, implement innovative teaching methods, and remove outdated or redundant material. Informed curriculum development draws on multiple inputs, including expert opinion both from educational specialists, who advise on effective pedagogical strategies and assessment design, and from content experts, who ensure disciplinary relevance and accuracy. Such collaboration ensures that students are equipped with the knowledge and skills necessary for both academic progression and professional success.[13] Other key strategies informing curriculum design include needs-based assessments, the identification of priority content areas, and clearly articulated goals for what the curriculum aims to achieve.[6]

Recognising the centrality of cultural safety to effective and ethical pharmacy practice the aim of this paper is to evaluate how cultural safety is represented in a pharmacy education curriculum.

Table 1
Code, Name, Number of Credit Points, and Description of Units of Study Included in this Study ($N = 7$).

Code	Name	Number of Credit Points*	Description
PHAR1911	Fundamentals of Pharmacy	12	A broad introduction to the discipline of pharmacy that focuses on pharmacy practice and pharmaceutical sciences.
PHAR1921	Pharmaceutics and Pharmacy Practice	12	Builds on PHAR1911 by integrating basic scientific concepts underpinning compounding and pharmaceutical dosage forms with pharmacy practice.
PHAR1922	How Drugs Work	12	Builds on PHAR1911 to provide a more detailed understanding of how molecules interact with their targets to cause a response.
PHAR2911	Pharmaceutics and Professional Practice	12	Builds on pharmaceutics and pharmacy practice teaching commenced in PHAR1911, PHAR1921, and PHAR1922
PHAR2912	Therapeutic Principles	12	Foundational knowledge to support the safe, effective and appropriate use of medicines includes the principles of pharmacodynamics and pharmacokinetics.
PHAR2921	Infectious Diseases	6	The science underpinning the cause and treatment of infectious diseases is integrated with pharmacy practice-related aspects
PHAR2922	Respiratory	6	Pharmaceutical sciences and pharmacy practice content are integrated and relate to the treatment of respiratory conditions.

Note. *A typical pharmacy student has a 24-credit point workload per semester.

Methods

Study context and data source

This study was conducted at the University of Sydney and focused on the new Bachelor of Pharmacy (Honours) and Master of Pharmacy Practice program; a five-year, integrated degree with an approximate 300 students currently enrolled in both the first and second years, where a major curriculum renewal process was undertaken. As the analysis involved review of internal curriculum materials and did not involve human participants or personal data, therefore, institutional ethics approval was not required. However, all data were accessed in accordance with institutional permissions and privacy protocols. The university's learning management systems (Akari and Canvas) were used to access curriculum documents for evaluation. These documents included unit of study outlines and descriptions of curriculum elements: learning outcomes, learning activities, and assessment events. At the time of analysis, only the first two years of the new curriculum had been fully implemented. Accordingly, this study was limited to an evaluation of the seven pharmacy-specific units of study) taught in first two years of the degree. Units within the program vary in expected student workload and comprise either 6 or 12 credit points. A single credit point equates to 1.5–2 h of student effort per week.[14] The code, name, number of credit points, and brief description of each unit examined is presented Table 1.

In Australia, guidance is provided for health disciplines to track and map the inclusion of cultural safety content.[15,16] In this study, the Aboriginal and Torres Strait Islander Health Curriculum Framework (henceforth referred to as the Framework),[17] was used to inform the evaluative document analysis. This Framework was developed and co-designed by the Australian Federal government with Australian First Nations people. The Framework has eight underlying principles that govern how First Nations people should be included in curriculum development shown in Table 2.

Data analysis

Units were evaluated on three criteria: 1. whether cultural safety was mentioned in the Intended Learning Outcomes (ILOs) or the mapped Australian Pharmacy Council (APC) learning outcomes, 2. whether activities related to cultural safety learning was delivered, and 3. whether the outcomes that were taught were assessed. The University of Sydney's internal curriculum management system (Akari) was used to determine if learning outcomes (LO) explicitly mentioned Aboriginal and Torres Strait Islander people, cultural safety or if the outcome was mapped to an APC outcome that mentioned the latter terms in the previously mentioned UOS. The LOs of the UOS are seen in Appendix A. Using the principles of the Framework, all unit-level learning outcomes were scanned for explicit references to First Nation peoples or cultural safety terminology. Outcomes that could reasonably be interpreted as relating to cultural safety were classified as implicit; all others were categorised as having no reference.

Constructive alignment principles were then applied to groups of curriculum elements, learning outcomes, learning activities, and assessments. Each group was categorised as:

Aligned: A cultural safety related learning outcome was present and there was teaching explicitly linked to that outcome and an assessment that evaluated that same outcome.

Misaligned: A cultural safety–related learning outcome and associated teaching were present, but the assessment did not correspond to or did not measure the stated outcome.

Not aligned: One or more stages in the sequence (learning outcome, teaching, assessment) were absent, meaning cultural safety was not represented across the full constructive alignment process.

This stage provided a foundational understanding of whether cultural safety was present, visible, and coherently represented across curriculum components. Alignment results are presented in Table 3.

Determining correspondence of Cultural safety in the Sydney pharmacy school curriculum

For the purpose of this study a more detailed level of mapping was applied to all units at any level that being aligned, misaligned, or not aligned. Moving forward however, it is of the authors belief that if a school starts the review at this deeper level, it may discourage people from taking the time to make change, whilst if they have started the journey with the basic surface level mapping there is more chances for them to continue the decolonising journey. Teaching activities associated with cultural safety were evaluated using the Primary Learning Outcomes table of the Aboriginal and Torres Strait Islander Health Curriculum Framework. This table articulates expected developmental levels for cultural safety learning, which were used to classify teaching activities as: Novice, Intermediate and Entry to Practice.

Teaching was thus assessed not simply for presence, but for its developmental depth and alignment with national expectations for cultural capability progression.

All assessments linked to cultural safety were examined using the Framework's Curriculum Content Learning Outcomes and Assessments table. This table differentiates between:

Lower-order assessments, such as multiple-choice questions (MCQs) and short-answer questions (SAQs).

Higher-order assessments, such as group work, case-based tasks, oral examinations, and critical reflective tasks.

This allowed evaluation of whether students were required to demonstrate surface-level recall or engage in more meaningful, applied demonstrations of cultural safety capability.[17] The determination of the style of assessment using methods of assessment similar to blooms order of hierarchy.[18] The cognitive level (novice–ETP) of teaching activities and the complexity of corresponding assessments (lower–higher order) were combined to evaluate the depth and rigour of cultural safety learning across the curriculum.

Table 2
Description of the Principles of the Framework of this study.

Principle	Description
1	Leadership at all levels is key to supporting effective implementation of Aboriginal and Torres Strait Islander health curricula
2	Respectful partnerships and collaboration with shared responsibility between Aboriginal and Torres Strait Islander and non-Indigenous people are required in curriculum design and implementation
3	The process of learning is equally as important as content
4	Self-reflexivity and humility develop respectful health care practice
5	Holistic health service delivery is essential
6	Local context and diversity must be recognised
7	Development of intercultural capabilities is a lifelong learning journey
8	Ongoing professional development and professional support for Aboriginal and Torres Strait Islander and non-Indigenous educators is essential

These integrated findings were populated into Table 4, which summarises the level of teaching and the nature of assessments similarly to what is demonstrated in the framework itself.

Results

The findings of the basic mapping are summarised below, with a detailed examination presented in Table 3 and an overview of the number of learning outcomes and the number of outcomes that outline cultural safety in Appendix A.

In six of the units of study content was either not aligned or there was significant misalignment where outcomes were clearly stated but not assessed to what the outcome was stating. An example of this was PHAR2922 where the outcome clearly states, "Demonstrate appropriate skills for interacting with Aboriginal and Torres Strait Islander patients, families and carers in a way which fosters cultural awareness and respect." The assessment whilst being an Aboriginal person as demonstrated with the prescription being annotated CTG,[1] had no rubrics relating to interacting with an Aboriginal person.

The initial mapping procedure also identified a limited number of learning outcomes that explicitly referenced Aboriginal and/or Torres Strait Islander peoples. Of the seven units reviewed, only two included an explicit reference (PHAR2911 and PHAR2922), and each contained just one such outcome. This finding is notable given that units averaged 12 learning outcomes overall. The remaining units contained learning outcomes that did not specifically identify First Nations contexts.

Across the curriculum, Framework Principles 5 looking at Holistic health service and 6 looking at local context were most frequently addressed. These principles focus on the influence of broader social and cultural determinants of health and the need for a holistic approach to healthcare. Principle 1, which concerns recruiting and supporting First Nations people, was addressed in a limited capacity, primarily through guest lectures delivered by First Nations educators. Other principles particularly those related to partnerships, advocacy, and cultural capability development (i.e., Principles 2, 3, and 7) were largely absent from the mapped content.

Higher order mapping

Teaching events and at what stage of learning and their corresponding assessment can be seen in Table 4.

The in-depth mapping revealed that most cultural safety-related content was delivered at a novice level. Learning activities predominantly focused on foundational knowledge such as introducing cultural awareness concepts or the historical context of First Nations people's health. Assessment was misaligned and where present in a limited capacity, was typically of the lowest cognitive order in five of the seven units of study, consisting mainly of multiple-choice or short-answer questions. There were also clear cases in three units where culturally relevant content was identified but not formally assessed such as PHAR1911 where there was a lecture introducing First Nations peoples but no corresponding assessment.

Across the units reviewed, First Nations health content was typically confined to a single lecture or learning session within each unit, with only sporadic references in other lectures. For example, PHAR1911 had one lecture introducing First Nations people PHAR1922 having one lecture on Bush Medicine and one on Kangaroo Apple that was more about the pharmaceutical chemistry of the active pharmaceutical ingredients and PHAR2921 having one lecture on antimicrobial use in Aboriginal people. In most cases, these teaching events served as the primary or sole point of exposure to First Nations health perspectives, with limited integration across tutorials, practical classes, or assessment tasks with only PHAR2911 trying to include First Nations perspectives throughout the unit. As a result, cultural safety concepts were often presented as discrete topics rather than embedded threads within the curriculum. The mapping also identified duplication of cultural safety-related content across several first-year and second-year units, with similar introductory material appearing in multiple lectures with PHAR1911 and PHAR1922 being in the same year having introductory lectures on First Nations health.

Overall, the mapping indicates that while cultural safety education is present in parts of the early curriculum, its representation is inconsistent and generally limited in scope. As such cultural safety Education could be seen as tokenistic inclusion into the degree due to the siloed nature of where and how content was taught and the minimal assessing of outcomes, with six out of the seven UOS demonstrating mis or no alignment with one of those units PHAR2912 including no content at all. These findings can provide a baseline

[1] CTG = Closing the Gap

Table 3
Basic alignment table.

Learning outcome	Description	P1	P2	P3	P4	P5	P6	P7	P8	Assessment	Alignment
Phar1911 Fundamentals of Pharmacy: This unit of study provides a broad introduction to the discipline of pharmacy, focusing on two complementary components that are fundamental to the study of pharmacy.											
LO6: Communicate effectively and appropriately, in a culturally capable manner with peers, university staff and health professionals.	Introduction to First Nations Peoples, culture and health worldview	✓	x	x	x	x	✓	x	x	No exam content	No Alignment
LO9: Work effectively and cooperatively as a member of a learning team.	No content mapped	x	x	x	x	x	x	x	x	N/A	
Phar1921 Pharmaceutics and Pharmacy Practice: This unit of study builds on PHAR1911 (Fundamentals of Pharmacy) and integrates basic scientific concepts underpinning compounding and pharmaceutical dosage forms with pharmacy practice											
LO6: Communicate effectively and appropriately in a culturally capable manner with patients, families, carers and other health professionals.	Lectures: First Nations Health lecture, social accountability lecture, ethically and culturally competent communication lecture, parasitic infections lecture	✓	x	x	✓	x	✓	x	x	No exam content Compulsory Racism workshop	Misaligned
LO7: Identify, access and process appropriate sources of evidence-based clinical information and effectively communicate the relevant information.	Lectures: introduction to the pharmaceutical benefit scheme	x	x	x	x	x	✓	x	x		
LO14: Work effectively and cooperatively as a member of a learning team.	No content	x	x	x	x	x	x	x	x	N/A	
Phar1922 How Drugs Work: This unit of study builds on PHAR1911 (Fundamentals of Pharmacy) to give a more detailed understanding of how molecules interact with their targets to cause a response.											
LO10: Work effectively and cooperatively as a member of a learning team.	No content	x	x	x	x	x	x	x	x	N/A	Misaligned
LO4: Identify the sources of drugs, the way they are discovered and designed, purified, characterised and analysed, and their physicochemical properties.	Bush medicines lecture	✓	x	x	x	✓	✓	x	x	MCQ exam content Which of these is the most accurate description of First Nations' Australians view of health?	
LO5: Explain the pharmacological mechanism of action and the interaction of drugs with their targets.	Kangaroo extract lecture	✓	x	x	x	✓	✓	x	x	No assessment content	
Phar2911 Pharmaceutics and Professional Practice: This unit of study builds on pharmaceutics and pharmacy practice teaching commenced in year 1											
LO5 Identify, access and process appropriate sources of evidence-based information and effectively communicate the relevant information	common ear conditions, introduction to depression, introduction to asthma, introduction to cv health, ear & hearing tutorial	x	x	x	x	✓	✓	x	x	Exam SAQ and MCQ Hospitalisation rates for Indigenous Australians with cardiovascular disease are higher and commence at a younger age. Describe THREE factors that contribute to this Which organ is 2.4 times more likely	Alignment and some Misalignment
LO8 Recognise the presence and causes of health inequities and disparities	introduction to mental health, introduction to depression,	x	x	✓	✓	✓	✓	x	x		

(*continued on next page*)

Table 3 (*continued*)

Learning outcome	Description	P1	P2	P3	P4	P5	P6	P7	P8	Assessment	Alignment
and describe their impact on different patient populations including Aboriginal and Torres Strait Islander peoples.	introduction to asthma, introduction to cv health, indigenous health lecture, indigenous health tutorial, ear & hearing tutorial									to have issues causing hospitalisation for Indigenous People	
LO10 Communicate effectively and appropriately in a culturally capable manner with patients, families, carers and other health professionals.	common ear conditions, ear & hearing tutorial	x	x	x	x	✓	x	x	x		
LO13 Work effectively and cooperatively as a member of a learning and/or working team.	ear & hearing tutorial	x	x	x	x	✓	x	x	x		
Phar2912 Therapeutic Principles: This unit of study provides students with foundational knowledge to support the safe, effective and appropriate use of medicines. It includes the principles of pharmacodynamics and pharmacokinetics											
LO7 Apply knowledge of therapeutic principles to communicate and provide appropriate information to patients and other health professionals.	No Content	x	x	x	x	x	x	x	x	N/A	No Alignment
Phar2921 Infectious Diseases: This unit of study focuses on infectious diseases, integrating the science underpinning the cause and treatment of infectious diseases, with pharmacy practice-related aspects											
LO9: Communicate effectively and appropriately, in a culturally capable manner with patients, families, carers and other health professionals.	Antimicrobials in indigenous Australians lecture	x	x	x	x	x	✓	x	x	MCQ exam questions. E.g. How might the pharmacokinetics of antimicrobials differ in Australian Aboriginal populations compared to non-Indigenous Australian populations? Why is the use of antimicrobials higher among rural and remote Australian Aboriginal communities compared to non-Indigenous Australian populations?	Misaligned
Phar2922 Respiratory: This unit of study integrates pharmaceutical sciences and pharmacy practice content relating to the treatment of respiratory conditions											
LO4: Communicate effectively and appropriately in a culturally capable manner with patients, families, carers and other health professionals.	No content	x	x	x	x	x	x	x	x	Oral assessment where the script is annotated CTG	Misaligned
LO6: Demonstrate appropriate skills for interacting with Aboriginal and Torres Strait Islander patients, families and carers in a way which fosters cultural awareness and respect.	No content	x	x	x	x	x	x	x	x		

Table 4
Levels of Learning and corresponding Assessment Events Table.

Capabilities	Key descriptors	Teaching activities							Assessment Events						
		1911	1921	1922	2911	2912	2921	2922	1911	1921	1922	2911	2912	2921	2922
Respect	Historical context	N	N		N			I	X	X		X			OA
	Cultural knowledge	N	N	N	N				X	X	X	X			
	Diversity	N	N	N	N				X	X	MCQ	X			
	Humility and lifelong learning														
Communicate	Culturally safe communication	N	N	N	N				X	X	X	X			
	Partnerships				N							X			
Quality and Safety	Clinical presentation		N		N		N			X		MCQ SAQ		MCQ	
	Population health	N	N		N		N		X	X		MCQ SAQ		MCQ	
Reflect	Cultural self and health care			N							X				
	Racism		N							X					
	White privilege		N							X					
Advocate	Equity and Human rights	N			I				X	X		X			
	Leadership				N							X			

Keys: N=Novice, I=Intermediate, ETP = Entry to Practice, X = No Assessment.
MCQ = Multiple Choice Question, SAQ = Short Answer Question, OA = Oral Assessment.

for evaluating how cultural safety learning is introduced and scaffolded across the program in future years.

Discussion

This evaluation study found that when cultural safety was represented in the first two years of a revised pharmacy education curriculum it was found to be superficial and tokenistic. The mapping revealed that most cultural safety-related teaching was at a novice level of learning, as classified by the Framework. This level is understandable given that the first two years of many pharmacy programs focus on foundational knowledge and identity formation.[19] Nevertheless, this finding raises important questions about when intermediate and advanced levels of cultural safety concepts and practices should be introduced and whether curricula should assume that students enter university with adequate background knowledge of First Nation people's histories and health contexts. Without deliberate scaffolding across later years, students may remain at an introductory level of understanding, unable to translate foundational awareness into culturally safe professional practice.[20,21]

A recurring structural issue identified through the mapping was that First Nations health content was often isolated within individual units, frequently limited to a single lecture or guest presentation. While this allows programs to claim inclusion of First Nations content, it falls short of genuine integration.[22,23] When cultural safety is treated as a discrete topic rather than a recurring theme, students are denied opportunities to engage with it in different professional and clinical contexts.[8,24,25] This pattern reflects a persistent gap between curricular intent and learning experiences meaning what appears well represented on paper, may in fact be isolated in delivery.[26]

The mapping also identified duplication of learning outcomes across multiple units, particularly those referencing culturally appropriate communication or teamwork. While repetition can support spiral curriculum design when scaffolded intentionally,[27] the observed duplication often lacked differentiation in content or assessment. This duplication may represent an attempt to demonstrate compliance with the APC standards regarding cultural safety, but it risks functioning as a superficial or 'tick-box' exercise. Reusing generic learning outcomes without context-specific or progressively complex learning activities diminishes their pedagogical value and can lead to student disengagement.[28]

Another key finding was the disconnect between learning activities and assessment. In three units, cultural safety content was delivered through lectures but not assessed formally. When this finding is considered with the principle of constructive alignment in mind, it represents a breakdown among intended learning outcomes, teaching and learning activities, and measures of achievement. When assessment does not reflect the expected content to be learnt, students may perceive it as optional or peripheral.[29] In this study, the disconnection was compounded by instances where cultural safety learning was assessed only through pass or fail activities, that carried no grade value. For example, the racism workshop in PHAR1922 only had compulsory attendance component and a written reflection. While compulsory tasks can ensure students are exposed to essential competencies, their lack of grade value may signal that the topic is of less importance than the other topics that are assessed formally in the unit of study.[30] From both an educational and ethical standpoint, this disconnection may undermine the stated institutional commitment to cultural safety and risks perpetuating tokenistic engagement.[8]

Similarly to the above point the idea of misalignment while to some may appear to be an early curriculum finding its feet, can be just as damaging and even more so to the idea of creating a curriculum that teaches cultural safety. In practice, the misaligned units functioned no differently from those with no alignment at all.[26,31] However it gives the appearance of a curriculum adding First Nations ideas and teaching them to students. This indicates that misalignment in this curriculum was not evidence of partial progress but a form of non-implementation[32,33]: unless outcomes, activities, and assessments were coherently linked, cultural safety could not be considered embedded in any meaningful way.[34]

Taken together, the findings of this study suggest that despite cultural safety being explicitly mandated in national graduate competency standards and embedded within accreditation guidelines for pharmacy programs, in this study site, these policy commitments are not yet realised. Cultural safety appeared inconsistently in the curriculum and was rarely positioned as a core professional capability to be developed and assessed. For example, cultural safety was not identified in core unit of study (PHAR2912) and only explicitly mentioned as a LO in two units of study (PHAR2911 and PHAR2922). This finding highlights a persistent implementation gap between institutional obligation and curricular enactment. Cultural safety is widely endorsed by institutions, yet it is not prioritised in the curriculum. As a result, students may graduate having met the formal requirements of an accredited program without having meaningfully engaged with the competencies necessary to deliver culturally safe care. Importantly, alignment cannot be achieved where cultural safety is absent from the curriculum.

Strengths, limitations, and future directions

A strength of this study lies in its systematic, theory-informed approach. By applying constructive alignment in conjunction with a national cultural safety framework, the study provides a structured, replicable audit method that captures not only the presence but also the depth, coherence, and assessment of cultural safety within the curriculum. This method can be adapted and applied across disciplines and in other contexts even as national frameworks evolve. Unlike earlier evaluations that relied primarily on document review or faculty perspectives,[35] this study directly interrogates how cultural safety is distributed across learning outcomes, teaching activities, and assessments. This methodology identifies where cultural safety is embedded meaningfully and where it remains superficial or tokenistic. The study focused on the first two years of a newly implemented program, therefore, the findings reflect an early-stage snapshot rather than a mature curriculum. Large-scale curriculum reform is inherently iterative,[27] and the findings identified in this study, particularly involving integration and assessment may already be undergoing revision as teaching teams refine

learning outcomes, redesign learning activities, revise assessments in response to student, staff, and accreditation feedback.

The findings of this study must also be interpreted within a rapidly shifting educational and sociopolitical landscape. National commitments to First Nations health equity, growing momentum toward decolonising health curricula, and strengthened accreditation requirements for cultural safety are placing increasing pressure on programs to move beyond symbolic inclusion toward genuine, longitudinal integration.[36] As such, the findings in this study should be viewed as part of an ongoing quality-improvement process rather than a static critique. They establish a valuable baseline for tracking curricular progress over time while highlighting the need for intentional scaffolding from foundational to advanced levels of cultural safety learning. Future curriculum renewal efforts should therefore prioritise explicit, measurable learning outcomes; coherent teaching design; and meaningful assessment strategies developed in partnership with First Nations educators and communities. Constructive alignment remains a valuable tool in this process, but its ethical and pedagogical effectiveness depends on ensuring that cultural safety is embedded not only in curriculum documents but also in the lived experiences of First Nations people throughout the program.

Future directions for this research area should include regular curriculum reviews that focus on examining longitudinal integration to ensure that cultural safety is progressively developed from foundational to practice-ready levels. Curriculum development must involve collaboration with First Nations educators and communities to ensure authenticity and accountability. Universities should also develop policies and enact strategies to increase numbers of First Nations academics to lead and instruct individuals in schools about the appropriate ways to incorporate and develop culturally safe curricula. Universities should also aim to increase the representation of First Nation students within schools and gather their first-person accounts of their experiences with the First Nations curriculum. Constructive alignment remains a valuable tool, but its success depends on its ethical implementation by embedding cultural safety not only in learning outcomes but also in the lived experience of First Nations people throughout the program.

Conclusion

This study evaluated the representation of cultural safety education within the first two years of a revised pharmacy curriculum. The Aboriginal and Torres Strait Islander Health Curriculum Framework and the principles of constructive alignment were used as the analytical tool. Although relevant learning outcomes were identified across several units of study, their links to corresponding learning activities and assessment tasks were inconsistent, fragmented, and a targeted to novice-level learning. These findings suggests that cultural safety remains a peripheral rather than integral element in the early years of the pharmacy curriculum. Recommendations for improvement include continuous curriculum auditing and incorporating First Nations perspectives into how curriculum should be developed and implemented. Universities should also aim to increase the number of First Nations staff and students and invite them to help judge how the cultural safety curriculum is delivering on its promises.

Declaration of competing interest

Aside from the Authors working at the institution where the study took place, there were no financial or personal conflicts of interest.

Appendix A. Supplementary data

Supplementary data to this article can be found online at https://doi.org/10.1016/j.cptl.2025.102565.

References

1. Papps E, Ramsden I. Cultural safety in nursing: the New Zealand experience. *International J Qual Health Care*. 1996;8:491–497.
2. Curtis E, Jones R, Tipene-Leach D, et al. Why cultural safety rather than cultural competency is required to achieve health equity: a literature review and recommended definition. *Int J Equity Health*. 2019;18:174.
3. Hollinsworth D, Carter J, Gilbey K, Raciti M. Indigenous cultural competence in Australian universities: challenges and barriers. *J Aust Indigenous Issues*. 2017;20: 27–43.
4. Min J, Albon S, Leung L, Clarke A. Creating a pharmacy elective course in indigenous health. *Curr Pharm Teach Learn*. 2020;12:1004–1013.
5. Biggs J. Constructivealignment in university teaching. *HERDSA Rev Higher Educ*. 2014;1:5–22.
6. Schneiderhan J, Guetterman TC, Dobson ML. Curriculum development: a how to primer. *Fam Med Community Health*. 2019;7, e000046.
7. Biggs J. *Aligning Teaching for Constructing Learning*. 2003.
8. Curtis E, Loring B, Jones R, et al. Refining the definitions of cultural safety, cultural competency and indigenous health: lessons from Aotearoa New Zealand. *Int J Equity Health*. 2025;24:130.
9. Anyichie A, Butler D, Perry N, Nashon S. Examining classroom contexts in support of culturally diverse learners' engagement: an integration of self-regulated learning and culturally responsive pedagogical practices. *Frontline Learn Res*. 2023;11:1–39.
10. Tractenberg R, Lindvall J, Attwood T, Via A. *Guidelines for curriculum and course development in higher education and training*. 2020.
11. Ali L. The Design of Curriculum, assessment and evaluation in higher education with constructive alignment. *J Educ e-Learn Res*. 2018;5:72–78.
12. Frank JR, Snell LS, Cate OT, et al. Competency-based medical education: theory to practice. *Med Teach*. 2010;32:638–645.
13. Irfan M, Shabana Nawaz K. Factors affecting Studentsa academic performance. *Glob J Manag Bus Res*. 2012;12:17–22.
14. *Learning and Teaching Policy 2024*. University of Sydney; 2024.
15. Phillips G. *CDAMS Curriculum Framework for Indigenous Health*. 2004.
16. Selkirk B, Joanna A, Chontel G, et al. Yarning sessions to facilitate cultural responsiveness and decolonising the curriculum in a university psychology setting. Aust Psychologist. 1–7.

17. *Aboriginal and Torres Strait Islander Health Curriculum Framework*. Australian Government; 2014.
18. Bloom BS. *Handbook on Formative and Summative Evaluation of Student Learning*. 1971.
19. van Rooij ECM, Jansen EPWA, van de Grift WJCM. First-year university students' academic success: the importance of academic adjustment. *Eur J Psychol Educ*. 2018;33:749–767.
20. Wilson L, Wilkinson A, Tikao K. Health professional perspectives on translation of cultural safety concepts into practice: a scoping study. Front Rehabil Sci 2022; Volume 3–2022.
21. Masava B, Nyoni CN, Botma Y. Scaffolding in health sciences education Programmes: an integrative review. *Med Sci Educ*. 2023;33:255–273.
22. Lowe K, Golledge C, Poulton P, Thompson K. Curriculum as policy deception: a critical analysis of aboriginal and Torres Strait islander knowledge inclusion in the Australian curriculum. *Aust Educ Res*. 2025;52:2561–2582.
23. O'Connor E, McGrath SY, Castillon C, Ralph A, Kennedy E, Kerrigan V. "There is much more to learn still": embedding culturally safe practice education into medical school programs. *J Racial Ethn Health Disparities*. 2025.
24. Tillott V, Barlo S, Donelly M, Staunton BM, Sebastian T. Cultural safety and first nations health content within tertiary education for undergraduate health-care students: a scoping review. *Aust Occup Ther J*. 2025;72, e70011.
25. Wilson C, Crawford K, Adams K. Translation to practice of cultural safety education in nursing and midwifery: a realist review. *Nurse Educ Today*. 2022;110, 105265.
26. Martín-Alonso D, Sierra Nieto J. Relationships and tensions between the curricular program and the lived curriculum. A narrative research. *Teach Teach Educ*. 2021:105.
27. Harden RM. AMEE Guide No. 21: curriculum mapping: a tool for transparent and authentic teaching and learning. *Med Teach*. 2001;23:123–137.
28. Prøitz TS. Consistency in study programme planning and the complexity of curriculum logics. *Teach High Educ*. 2023;28:1815–1830.
29. Pools E, Monseur C. Student test-taking effort in low-stakes assessments: evidence from the English version of the PISA 2015 science test. *Large Scale Assess Educ*. 2021;9:10.
30. Penk C, Richter D. Change in test-taking motivation and its relationship to test performance in low-stakes assessments. *Educ Assess Eval Account*. 2017;29:55–79.
31. Ackrill DFR. The multiple dimensions of curriculum mapping: designing a comprehensive outcomes-based framework. *Lond Rev Educ*. 2025;23:17.
32. Kickert R, Meeuwisse M, Stegers-Jager KM, Prinzie P, Arends LR. Curricular fit perspective on motivation in higher education. *High Educ*. 2022;83:729–745.
33. Khan HF, Qayyum S, Beenish H, Khan RA, Iltaf S, Faysal LR. Determining the alignment of assessment items with curriculum goals through document analysis by addressing identified item flaws. *BMC Med Educ*. 2025;25:200.
34. Napper VS. Alignment of learning, teaching, and assessment. In: Seel NM, ed. *Encyclopedia of the Sciences of Learning*. Boston, MA: Springer US; 2012:200–202.
35. Ewen S, Mazel O, Knoche D. Exposing the hidden curriculum influencing medical education on the health of indigenous people in Australia and New Zealand: the role of the critical reflection tool. *Acad Med*. 2012;87:200–205.
36. Brumpton K, Evans R, Ward R, Sen Gupta T. A consistent definition of cultural safety within Australian health professional education: a scoping review. *AlterNative Int J Indigenous Peoples*. 2022;18:436–444.