




Cultural immersion in dietetics curricula: A method for ensuring Aboriginal pedagogies are used for Aboriginal educational content

Alyse Davies PhD, APD^{1,2}  | Juliana Chen PhD, APD^{1,2} |
Margaret Allman-Farinelli PhD, FDA^{1,2}  | Anna Rangan PhD, AdvAPD^{1,2}  |
Latoya Brown³ | Jacquelin Vidor MND, APD^{1,2} |
Margaret Nicholson Med, AdvAPD^{1,2} | Merryl Ireland Dip Nutr & Diet, APD^{1,2} |
Jacqueline W. S. Chan MND, APD^{1,2} | Bobby Porykali PhD^{4,5}

¹Discipline of Nutrition and Dietetics, School of Nursing and Midwifery, Faculty of Medicine and Health, The University of Sydney, Camperdown, New South Wales, Australia

²Charles Perkins Centre, The University of Sydney, Camperdown, New South Wales, Australia

³Kadoo Indigenous Experiences, Matraville, New South Wales, Australia

⁴Guunu-maana (Heal) Aboriginal & Torres Strait Islander Health Program, George Institute for Global Health, Newtown, New South Wales, Australia

⁵Faculty of Medicine and Health, University of New South Wales, Sydney, New South Wales, Australia

Correspondence

Alyse Davies, Charles Perkins Centre, The University of Sydney, Level 4 East Building D17, Camperdown, NSW 2006, Australia.

Email: alyse.davies@sydney.edu.au

Funding information

The University of Sydney

Open access publishing facilitated by The University of Sydney, as part of the Wiley - The University of Sydney agreement via the Council of Australian University Librarians.

Abstract

Aims: To describe an Aboriginal cultural immersion delivered to dietetics students at a large university in Australia and assess its effectiveness as a method to teach Aboriginal history, culture, diet, and health in dietetics.

Methods: Taking a strength-based approach, Aboriginal processes of learning were privileged, with the cultural immersion being co-designed with immersion educators, a First Nations researcher, and dietetics academic. The cultural immersion consisted of an opening ceremony and four stations of yarning, weaving, bush tucker, and artefacts/medicines. A mixed-methods approach was used, with triangulation of data from pre- and postsurveys, station mapping, and focus group interviews. Quantitative and qualitative data were simultaneously analysed from participating first-year Master of Nutrition and Dietetics students and then drawn together for an integrated understanding of the impact of the cultural immersion on student learnings.

Results: Fifty-three students completed pre- and postsurveys and 36 participated in focus groups. Through sharing lived experiences, learning through culture, and keeping sessions practical and Aboriginal leadership, each cultural immersion station utilised Aboriginal processes of learning that meaningfully engaged students with Aboriginal education content, appreciate holistic health and increased their general knowledge on Aboriginal history, culture, diet, and health (all $p < 0.001$).

Conclusion: Cultural immersion is one teaching method to enhance student knowledges and can be a part of a programmatic and integrated approach that embeds Aboriginal content throughout the whole curriculum. It is necessary

This is an open access article under the terms of the [Creative Commons Attribution](https://creativecommons.org/licenses/by/4.0/) License, which permits use, distribution and reproduction in any medium, provided the original work is properly cited.

© 2024 The Author(s). *Nutrition & Dietetics* published by John Wiley & Sons Australia, Ltd on behalf of Dietitians Australia.

that institutions recognise the value of cultural immersions to student learnings and commit to providing ongoing support.

KEYWORDS

Aboriginal, Australia, cultural immersion, dietetics, pedagogies, Torres Strait islander

1 | INTRODUCTION

The First Peoples of Australia are proudly represented by two distinct and culturally rich groups, Aboriginal and Torres Strait Islander peoples. Aboriginal peoples refer to the rightful custodians of mainland Australia and the Torres Strait Islander peoples are those traditionally owning the Islands in the Torres Straits, between Queensland's Cape York Peninsula and Papua New Guinea.¹ Aboriginal cultures, lore, customs, and traditions have established a 65 000-year-old knowledge system that is holistic and deeply relational to the physical and metaphysical environments, of which is reflected in their ways of knowing, being and doing.² Ensuring that all health professionals including dietitians appreciate the complexity of this knowledge system and understand the detrimental impacts on health and wellbeing that colonisation continues to have is critical for the provision of culturally safe healthcare.

As future health professionals who will engage in front-line person-centred care, the importance of enhancing dietetics students' knowledge of Aboriginal and Torres Strait Islander history, culture, diet, and health cannot be understated. Though nuances may exist in the content being delivered across universities, of equal importance is the pedagogies or processes being used, that is, ensuring Aboriginal processes of learning are utilised to engage students with Aboriginal educational content. This is explained through the 8-Ways Aboriginal Pedagogy Framework, which promotes educators to include Aboriginal perspectives by using Aboriginal learning processes.³ Aboriginal perspectives are derived not only from Aboriginal content but also from Aboriginal processes of learning. The 8-Ways Aboriginal Pedagogy Framework (referred to as processes of learning here after) has been used by primary and secondary educators,⁴ as well as in tertiary educational^{5–7} and healthcare settings.⁸ These processes of learning are interrelated and have been described in literature to include story sharing, learning maps, non-verbal, symbols and images, land links, nonlinear, deconstruct/reconstruct, and community links. It is recognised that these processes are innate cultural approaches in which Aboriginal learnings are transmitted.

In a proactive measure to address the health inequities experienced by Aboriginal and Torres Strait Islander peoples,⁹ universities across Australia are increasingly required to embed Aboriginal and Torres

Strait Islander health and wellbeing content in health curricula.^{10,11} Dietitians Australia, the peak governing body of dietetic and nutrition professions in Australia, have Accreditation Standards for Dietetics Education Programs that involve embedding Aboriginal and Torres Strait Islander peoples' history, health, wellbeing, and culture as an integrated process across the curriculum.¹² In addition, the National Competency Standards for Dietitians were updated in 2021 with four explicit competencies relating to Aboriginal and Torres Strait Islander peoples and valuing Aboriginal and Torres Strait Islander ways of knowing, being and doing, where previously, they were not distinguished from other cultural groups.¹³

Community engagement and partnering with Aboriginal and Torres Strait Islander peoples and communities in the development of the curriculum content is fundamental for dietetics education programs.¹² One educational method that universities can utilise to foster community engagement and, in return, value and empower communities are cultural immersion.^{14,15} Cultural immersion experiences allow students the opportunity for direct interactions with culturally diverse populations in supervised settings.¹⁴ A systematic review that included nine international studies in healthcare degrees reported cultural immersion as an effective educational method for increasing cultural knowledge and sensitivity, particularly for counselling-based health fields.¹⁶ In Australia and New Zealand, cultural immersion experiences have also been implemented across curriculum with positive outcomes for medical,^{15,17} nursing,¹⁴ and other interprofessional health students.¹⁸

Students studying dietetics, a strong counselling-based profession, could also benefit from interactive, intercultural learning experiences, although there has been no evidence to date regarding the implementation of cultural immersion within dietetics. The aim of this study was to describe an Aboriginal cultural immersion delivered to dietetics students at a large university in Australia and to assess its effectiveness as a method to teach Aboriginal history, culture, diet, and health in dietetics.

2 | METHODS

The Aboriginal cultural immersion content was tailored for nutrition and dietetics students. Taking a strength-

based approach, processes of learning were privileged, with the cultural immersion being co-designed with immersion educators, a First Nations researcher, and dietetics academic.

This approach empowered the immersion educators of the Dhawarral, Walbunja, Djiringanj, and Gunai/Kurnai peoples to deliver personalised educational content through their innate cultural processes of learning (Table 1).

The Aboriginal cultural immersion was held on the university campus in October 2022, over 5 h for first-year Master of Nutrition and Dietetics students. The day commenced with an opening ceremony (Welcome to Country, Smoking Ceremony, and cultural dances) before dividing into smaller groups for four station rotations of yarning, weaving, bush tucker, and artefacts/medicines (Figure 1).

A mixed-methods approach was used, with triangulation of data from pre- and postsurveys, station mapping, and focus group interviews.

Seventy first-year Master of Nutrition and Dietetics students were invited to participate in pre- and postsurveys and focus groups via convenience sampling. Recruitment was facilitated by professional university staff not known to students and took the form of advertisements

posted between August and October 2022 on Canvas, an interactive learning management system.

Quantitative process measures were derived from pre- and postsurvey data collected and managed via RED-Cap.¹⁹ A set of nine pre- and postquestions were developed to assess the impact of the cultural immersion on student knowledge of predetermined categories of Aboriginal and Torres Strait Islander history, culture, diet, and health; interest and perceived confidence in working with Aboriginal and Torres Strait Islander peoples in a health setting; and interest in placement opportunities in a Community Controlled Health Service. To inform the delivery of future cultural immersions, additional postsurvey questions were asked about the organisation, facilitation, overall satisfaction, and if they would recommend the experience to another dietetics student. A question was also included on students' identifying as being of Aboriginal and/or Torres Strait Islander descent. There was no pilot testing of the survey beyond the research group. The presurvey was completed 1–10 weeks prior to the students attending the cultural immersion (File S1) and postsurvey within 1 week of the cultural immersion (File S2).

Qualitative process measures were derived during co-design and from focus group interview data. To understand what processes of learning were utilised innately by Aboriginal immersion educators, meetings were held over 6 months in preparation for and lead up to the cultural immersion during the co-design process. The First Nations researcher and dietetics academic yarned with the immersion educators about the student learning outcomes and topics areas of Aboriginal history, culture, diet, and health; immersion educators yarned with the First Nations researcher and dietetics academic about their desired content, approach, and format of delivery of topic areas at each station, with a final meeting to yarn on logistics.

A focus group interview guide was developed with five questions to provide unique insight into the impact on knowledge in predetermined categories of history, culture, diet, and health; experiences and perspectives on engagement with each station; and impact on journey as a dietitian (File S3). Four focus groups with eight to nine students in each group were conducted face-to-face on campus for 30 min, 1 week after the cultural immersion. Focus groups were structured in accordance with the methodology suggested by Krueger and Casey,²⁰ to ensure good discussion and exploration of themes. The focus groups were jointly facilitated and moderated by experienced dietetics academics and dietetics research students (PhD and second-year Master's) and followed a semi-structured format to maintain consistency in the information provided to all groups while also allowing for some level of flexibility in participant contributions.²¹

TABLE 1 Processes of learning with description.

Process	Description
Story sharing	Teaching and learning through narrative
Learning maps	Explicitly mapping/visualising processes
Non-verbal	Hands-on learning, critical reflection, and least-intrusive management strategies. Ancestral/spiritual knowledge also comes through this way of learning
Symbols and images	Exploring content through imagery and using visual cues and signals
Land links	Place-based pedagogy, linking content to local land and environment
Non-linear	Indirect management strategies, lateral thinking, comparing and synthesising diverse cultural viewpoints, innovating, adapting, working with cycles and working with holistic knowledge
Deconstruct/Reconstruct	Modelling and scaffolding, balancing teacher instruction with independent learning, and working from wholes to parts
Community links	Grounding learning content and values in community knowledge, working on community projects, and using or displaying knowledge products publicly for local benefit



FIGURE 1 Images from the Aboriginal cultural immersion. Row (a) opening ceremony; (b) artefacts/medicines and yarning stations; (c) weaving and bush tucker stations.

Determination of the sample size was guided by the principle of information power²² and suggested sample recommendations.²⁰

Quantitative and qualitative data were simultaneously analysed and then drawn together to achieve an integrated understanding of the impact of the cultural immersion on student learnings. A Likert-scale scoring system was applied (one scale with three points and one with five points) for the pre- and postsurvey questions. The median (IQR) and mean Likert score change (SD) was reported. The Wilcoxon signed rank test and paired samples test (two sided) were used to compare scaled pre- and postresponses. SPSS version 28 was utilised for statistical analyses. Significance was set at $p < 0.05$. Descriptive analyses were used for additional postsurvey questions.

As described during co-design, the processes of learning used innately by the immersion educators as described during co-design were mapped to each applicable station as station processes (Table 2). Focus groups were audio-recorded and transcribed via Otter.ai application. Transcripts were edited by the second-year Master's research student dietitian and checked by a dietetic academic. Transcripts were de-identified but not returned to participants for any further checking. Audio data files

and transcripts were stored on the universities secure Research Data Store. De-identified transcripts were imported into NVivo (release 1.7.1). A framework method of analysis generated categories and codes and incorporated both deductive and inductive thematic analysis. This approach allowed for the exploration of specific themes (e.g. knowledge and understanding of history, culture, diet, and health), while not restricting the emergence of unanticipated themes (e.g. impact on journey as a dietitian) and was flexible enough that non-interview data (such as notes taken or reflexive considerations) could also be included.²³

This research was reported according to the Good Reporting of a Mixed Methods Study guidelines.^{24,25} Participation was voluntary, and written, informed consent was obtained prior to the commencement. The study was approved by The University of Sydney Human Research Ethics Committee (project 2022/365).

3 | RESULTS

There were 70 entries submitted for the presurvey. Seventeen were excluded due to multiple entries of individuals

TABLE 2 Cultural immersion stations with description mapped to the processes of learning during the co-design process.

Station	Description	Processes of learning
Yarning	In this station, the cultural immersion educator yarned about significant historical events and celebrations, kinships, intergenerational trauma and dietitian/patient interactions. Learning maps were used to map clans based on geographical features. An interactive dialogue was encouraged.	<ul style="list-style-type: none"> • Story sharing • Learning maps • Land links • Non-linear • Deconstruct/Reconstruct • Community links
Weaving	In this station, the cultural immersion educator yarned about the cultural significance of weaving including men's and women's business, while weaving. The students were encouraged to participate (watch then do) while yarning with the facilitator.	<ul style="list-style-type: none"> • Story sharing • Non-verbal • Deconstruct/Reconstruct • Community links
Bush Tucker	In this station, the cultural immersion educator displayed local native foods and plants and yarned about their traditional and contemporary uses and nutritional value. Select foods and beverages were pre-prepared for tastings. An interactive dialogue was encouraged.	<ul style="list-style-type: none"> • Story sharing • Non-verbal • Land links • Community links
Artefacts/Medicines	In this station, the cultural immersion educator displayed an array of cultural artefacts, tools, and medicinal plants and yarned about traditional practices and ancestral/spiritual connections and knowledges. An interactive dialogue was encouraged.	<ul style="list-style-type: none"> • Story sharing • Learning maps • Non-verbal • Symbols and images • Community links

($n = 9$), no postsurvey ($n = 7$), and completing the pre-survey after attending the cultural immersion experience ($n = 1$). The final sample included $n = 53$ students (76% response rate). Student duplicates were due to reposting of the presurvey when a change of date for the cultural immersion occurred due to the immersion educators attending to Sorry Business (period of mourning or ceremony following the death of an Aboriginal and/or Torres Strait Islander person). First responses were used for consistency. Most participants were female ($n = 48$) and aged 20–25 years ($n = 46$), with no students identifying as being of Aboriginal and/or Torres Strait Islander descent.

All processes of learning were utilised innately by the immersion educators, and Table 2 provides a description of each station mapped to relevant processes of learning utilised.

Of the 53 students who completed the pre- and post-surveys, 36 participated in the focus groups. Using the framework approach, the data were initially categorised deductively into knowledge gained (history, culture, diet, and health). These were then explored inductively and within this framework six themes emerged (Figure 2).

The cultural immersion improved students' general knowledge on Aboriginal history, culture, diet, and health (Table 3 and File S4, Figure 1).

The sharing lived experiences from the immersion educators were a commonly expressed theme that impacted knowledge of Aboriginal history from 'a little' to 'working' knowledge (mean change (SD): 0.89 (0.95);

Category	Themes
History	Sharing lived experience
Culture	Learning through culture
Diet and health	Keeping sessions practical
Impact journey as a dietitian	Self-efficacy
Emerging themes	Breaking barriers through Aboriginal leadership Holistic health

FIGURE 2 Categories and themes developed during analysis.

$p < 0.001$). An example is illustrated through the yarning station where immersion educators used story sharing to develop deeper insights on Aboriginal history.

...I agree, because I didn't get much [...] knowledge or education around the topics of Aboriginal and Torres Strait Islander. [...] Yeah, history and all I could do before this immersion day was go to museums, [...] local councils [...]. So that's how I learned but then to hear it from a first-person firsthand experience with her like history and how much how much emotion she had, I was like, Oh,

TABLE 3 A comparison of first-year Master of Nutrition and Dietetics students' ($n = 53$) knowledge of Aboriginal and Torres Strait Islander history, culture, diet, and health; interest and confidence in Aboriginal and Torres Strait Islander health; and interest in placement opportunities in an Aboriginal Community Controlled Health Service pre- and postcultural immersion.

	Precultural immersion (median \pm IQR)	Postcultural immersion (median \pm IQR)	p-value^d	Mean Likert score change (SD)	p-value^e
Rate general knowledge^a					
Aboriginal history (past and present)	2.00 (1.00)	3.00 (1.00)	<0.001	0.89 (0.95)	<0.001
Aboriginal culture (beliefs, customs, and values)	2.00 (1.00)	3.00 (1.00)	<0.001	1.11 (0.87)	<0.001
Aboriginal diet and health (traditional foods, medicines)	2.00 (1.00)	3.00 (1.00)	<0.001	1.17 (0.87)	<0.001
Torres Strait Islander history (past and present)	2.00 (1.00)	3.00 (1.00)	<0.001	1.04 (1.02)	<0.001
Torres Strait Islander culture (beliefs, customs, and values)	2.00 (1.00)	3.00 (1.00)	<0.001	1.02 (1.03)	<0.001
Torres Strait Islander diet and health (traditional foods, medicines)	1.00 (1.00)	3.00 (1.00)	<0.001	1.08 (0.94)	<0.001
Questions					
Interest in Aboriginal and Torres Strait Islander health ^b	3.00 (2.00)	3.00 (1.00)	0.085	0.25 (0.98)	0.074
Confidence working in Aboriginal and Torres Strait Islander populations in a health setting ^b	2.00 (2.00)	3.00 (1.00)	<0.001	0.81 (1.13)	<0.001
Interest in an Aboriginal Community Controlled Health Service for Placement ^c	3.00 (1.00)	2.00 (1.00)	0.059	-0.15 (0.57)	0.059

^aKey: 1 = No knowledge; 2 = A little knowledge; 3 = Working knowledge; 4 = Sound knowledge; 5 = A lot of knowledge.

^bKey: 1 = Not very; 2 = Somewhat; 3 = Fairly; 4 = Very; 5 = Extremely.

^cKey: 1 = No; 2 = Maybe; 3 = Yes.

^dWilcoxon signed rank test.

^ePaired samples test, two-sided.

my God, stop, my, my heart [...]. I could feel a lot more rather than [...] museum and just stand there and look through a glass window. Whereas this was more like she's telling her story. She's [...] being so open and vulnerable. It's just a whole new level of understanding, and understanding [...] the Koori mob, and how it is located and [...] it really integrated my knowledge from theory to a more personable way

(Participant 37)

Learning through culture was identified as occurring at all stations. This improved student knowledge in Aboriginal culture from 'a little' to 'working' knowledge (mean change (SD): 1.11 (0.87); $p < 0.001$). The opportunity to hear about culture whilst being able to interactively immerse themselves enabled students to begin to grasp cultural concepts such as relationality. An example was illustrated

through non-verbal in the station of artefacts/medicines.

...I really loved it [furs, bark and other artefacts] because the presenter, she had a really like spiritual side to it, which was kind of unexplored. I've never really heard much about that before in Aboriginal culture, so and she was still so connected with it as well, which was really fascinating to me. And she spoke from such a place of passion, which just like really interests me as well [...]

(Participant 36)

Keeping sessions practical was effective in promoting student knowledge on Aboriginal diet and health from 'a little' to 'working' knowledge (mean change (SD): 1.17 (0.87); $p < 0.001$). An example was illustrated using land links in the bush tucker station, which enabled students to link foods to the local place and contextualise diet.

When they talk about the bush food, and one of them is the pig face. Yeah. And I searched on Google, oh, it looks like this. And when we go to our (University Building), to eat lunch and then wow, there's lots of pig face outside of the building! And then mm, okay, that could be food, and they eat like this as salad. I would never try that

(Participant 50)

The cultural immersion improved students' general knowledge on Torres Strait Islander history (mean change (SD): 1.04 (1.02); $p < 0.001$); and culture (mean change (SD): 1.02 (1.03); $p < 0.001$) from 'a little' to 'working' knowledge; and diet and health from 'no' knowledge to 'working' knowledge (mean change (SD): 1.08 (0.94); $p < 0.001$) (Table 3). Conversely, students expressed in the focus groups a desire to specifically learn more about Torres Strait Islander peoples.

.... [...] I don't feel like we were told about Torres Strait Islander peoples and so lots of the questions I find really hard to answer on the survey because pre survey I didn't know much about Torres Strait Islands, post the day I still don't know much about Torres Strait Islands, so it would have been nice to have some part of the day that kind of acknowledged the Torres Strait Islander people and how their culture is similar or different I still don't really know how that fits in

(Participant 6)

The cultural immersion improved students perceived confidence working in Aboriginal and Torres Strait Islander populations in a health setting (mean change (SD): 0.81 (1.13); $p < 0.001$). No change was reported in students' interest in Aboriginal and Torres Strait Islander health (mean change (SD): 0.25 (0.98); $p = 0.074$), and interest in a Community Controlled Health Service for placement decreased, although not significant (mean change (SD): -0.15 (0.57); $p = 0.059$) (Table 3 and File S4: Supplementary Figure 2 and Supplementary Figure 3).

The impact the cultural immersion had on a student's journey as a dietitian was one of increased self-efficacy and the students' perceived confidence working in Aboriginal and Torres Strait Islander populations significantly improved from 'somewhat' to 'fairly' (mean change (SD): 0.81 (1.13); $p < 0.001$).

[...] you were always told that, you know, there's a certain way to interact with

Aboriginal or Torres Strait Islander people and this and that and it builds kind of this, it's almost scary when it comes to that. And I feel like that workshop really broke down those barriers and showed us, [...] here are the practical things to know when you want to, you know, have a respectful and normal interaction. So, I thought that's how it contributed my knowledge it was really practical and broke down barriers

(Participant 1)

A theme that emerged was breaking down barriers through Aboriginal leadership. The opportunity for learning to be led by local Aboriginal community members provided a unique learning opportunity that may not have otherwise be experienced.

[...] I really appreciated the fact that we did this in person with actual people from those cultures because, yes, it could have easily been delivered by a Professor that we know and like done like a lecture PowerPoint, but I think it's not as powerful and effective than someone coming in and telling us about their own experience because I think there are ways of interaction especially like, how you would write down the medical problems and give it to the patient as a list so they can tell it to their family, things like this, I think could only come from the people themselves and their own experiences. So, I think that's much more powerful and something we will actually remember and utilise more than someone telling us to do this in a lecture

(Participant 24)

As well as developing an appreciation of holistic health.

Overall, just a greater appreciation for the holistic nature and that people look at health so differently, and that's something you need to prioritise, always. You just have to get out of your own head a bit. And when you meet culturally diverse people assessing what are your values around health and making that a priority of the assessment. Just understanding that

(Participant 66)

Students were 'very' or 'extremely' satisfied with the cultural immersion (85%) and would recommend the day

to other dietetics students (96%). The cultural immersion was 'very' or 'extremely' well organised (81%), and the immersion educators contributed 'very' or 'extremely' positively to their experience (91%).

4 | DISCUSSION

This novel paper for the discipline of dietetics describes cultural immersion as an effective method for teaching dietetics students about Aboriginal history, culture, diet, and health. Through sharing lived experiences, learning through culture, and keeping sessions practical and with Aboriginal leadership, each cultural immersion station was able to utilise processes of learning that meaningfully engaged students with Aboriginal education content, appreciate holistic health, and increase student confidence with working with Aboriginal and Torres Strait Islander populations in a health setting.

A programmatic and integrated approach needs to be adopted when embedding Aboriginal and Torres Strait Islander educational content across the whole curriculum, including mapping student learning to the Aboriginal and Torres Strait Islander Health Curriculum Framework.^{26,27} Recognising that student prior learnings relating to Aboriginal peoples, history and culture may differ at the commencement of their degree,²⁶ this cultural immersion was positioned early as a first progressive stage in the dietetics curriculum²⁷ and therefore did not form part of an assessment. Rather, it was a compulsory activity, purposed as an interactive cultural learning experience to develop students' foundational knowledges and understanding of Aboriginal peoples by learning their beliefs, values, practices, and experiences (cultural awareness).²⁷ This experiential learning is to be built upon and assessed through an integrated curriculum that moves students across a continuum of learning towards becoming culturally capable dietitians.²⁷ The provision of ongoing education and interactive learning experiences may further develop students' interest in Aboriginal and Torres Strait Islander health and placement in an Aboriginal Community-Controlled Health Services.¹⁸

The benefits of delivering cultural immersions are recognised and increasingly being utilised within health disciplines to provide unique learning experiences for students.^{14–18,28} One such program run over 3 days provided additional content on health conditions through an inter-professional learning experience.¹⁸ Dietetics students may also benefit from such an interdisciplinary learning experience in the final progressive stage in the dietetics curriculum. This may help to consolidate knowledge, understanding of, and sensitivity towards, Aboriginal cultural beliefs and practices, and the ability to interact in ways that are considered appropriate (cultural capability).²⁷ This emphasises the

importance of a programmatic and integrated approach that embeds such tailored learning experiences appropriately within respective curriculums.

Accreditation and National Competency Standards prioritise the promotion of Aboriginal and Torres Strait Islander health in meaningful ways,^{12,13} and however, difficulties arise when Aboriginal and Torres Strait Islander allied health professionals are underrepresented.⁶ For example, in dietetics there are only 40 Accredited Practising Dietitians including student members who self-identify as Aboriginal and/or Torres Strait Islander peoples.¹⁰ There are also challenges in recruiting and retaining Aboriginal and Torres Strait Islander staff in allied health tertiary education settings when institutions fail to align with their needs, cultures, and aspirations.⁶ The incorporation of cultural immersion can help to overcome these challenges. Aboriginal communities are well positioned to support academic staff with content delivery through cultural knowledge and lived experiences; however, it is key that institutions recognise the value this brings to student learnings and commit to providing ongoing support.¹⁸

Today, in academic institutions across Australia, Aboriginal and Torres Strait Islander university staff may be constrained to teach their educational content within a colonised educational framework, westernised setting, and processes.²⁹ Whilst this provides a platform for appropriate content and lived experiences to be delivered to students, it is incumbent upon academic institutions to also support Aboriginal content being delivered through Aboriginal pedagogical processes, such as experiential learnings³⁰ or learning through country.³¹ The benefits of Aboriginal processes have been highlighted within our cultural immersion. An underlying sentiment expressed by students was one of timidity when contemplating future interaction with Aboriginal peoples, but through learnings being led by local Aboriginal community members this fear was overcome. It is suggested that every student should meet Aboriginal and Torres Strait Islander peoples during placement. Given Aboriginal and Torres Strait Islander peoples only represent 3.8% of the total Australian population,³² it cannot be assumed that clinical interactions will occur in mainstream healthcare services. Furthermore, allocating students to Aboriginal Medical Services or an Aboriginal Community Controlled Health Service may not always be feasible given the limited number of services available; limited capacity for student supervision within each service; and competing universities' interests for student placements. Therefore, not every student will have the opportunity and many new graduates may complete their degree with little or no experience working interactively with Aboriginal and Torres Strait Islander community members.³³ Cultural immersion provides a safe platform for authentic interactions for all students.

This cultural immersion was delivered through an Aboriginal cultural group, with no Torres Strait Islander content delivered, yet there was a reported increase in students' knowledge of Torres Strait Islander peoples' history, culture, diet, and health. These findings should be interpreted with some caution as focus group data revealed students not knowing about, and a desire to specifically learn more about Torres Strait Islander peoples, and how the culture is 'similar or different'. It is important to recognise Torres Strait Islander peoples' culture, linguistics, customs and belief systems,¹ to further enrich students understanding of both of Australia's First Nation cultural groups. Therefore, universities and other health disciplines wishing to conduct a tailored cultural immersion need to include Torres Strait Islander content when co-designing, or to deliver in conjunction a standalone Torres Strait Islander culture immersion.

Cultural immersion is one teaching method that interactively exposes students to Aboriginal ways of knowing and ways of doing, which then appears to promote students' appreciation of Aboriginal ways of being. Strengths of this study were that it was co-designed with Aboriginal immersion educators and a First Nation researcher and that it utilised processes of learning to engage students with Aboriginal knowledges. Although participation in the surveys and focus groups was voluntary, most of the first-year dietetics cohort was represented in this study, but the sample may not be generalisable to other universities. This study is not without limitations. Due to unforeseen circumstances, the cultural immersion was delivered later in the academic year than planned. This affected the timetabling for focus groups such that the time available for each focus group was limited and may have impacted on the opportunity for focus group participants to interact and provide deeper insights on their experiences. This cultural immersion was delivered by an external provider engaged by the dietetics staff and others should be aware this incurs a need for funding. There is potential for future qualitative studies to explore students' interest in Aboriginal health and placements to extend the evidence base presented. Considerations for delivering future cultural immersion programs would be to have smaller groups for station rotations and including a closing process to recap and consolidate knowledge learnt.

In conclusion, cultural immersion is an effective teaching method that utilises Aboriginal processes of learning to enhance dietetics students' knowledge about Aboriginal history, culture, diet, and health. There is a need for universities to support Aboriginal content being delivered through Aboriginal processes of learning and commit to ongoing support of such programs. Universities and/or health disciplines wishing to conduct a

tailored cultural immersion experience need to consider ways to additionally embed Torres Strait Islander content. Cultural immersion is one teaching method to enhance student knowledge and can be a part of a programmatic and integrated approach that embeds Aboriginal content throughout the whole curriculum.

AUTHOR CONTRIBUTIONS

AD, LB, and BP co-design of the cultural immersion; AD and BP conceived the study; AD, MAF, AR, and BP performed methodology; AD, JV, MN, MI, and JWSC collected the data; AD and JV conducted the quantitative analysis; AD, JC, and BP conducted the qualitative analysis; AD and BP drafted the manuscript; JC, MAF, AR, and MN involved in significant input into the review and editing. All authors have read and agreed to the published version of the manuscript.

FUNDING INFORMATION

Faculty of Medicine and Health, The University of Sydney (funding for the cultural immersion day).

CONFLICT OF INTEREST STATEMENT


None to disclose.

DATA AVAILABILITY STATEMENT

The data that supports the findings of this study are available in the supplementary material of this article.

ORCID

Alyse Davies  <https://orcid.org/0000-0002-9448-7539>

Margaret Allman-Farinelli  <https://orcid.org/0000-0002-6478-1374>

Anna Rangan  <https://orcid.org/0000-0003-1815-844X>

REFERENCES

1. AIATSIS. Australia's First Peoples. 2022. <https://aiatsis.gov.au/explore/australias-first-peoples>
2. Martin K, Mirraoopa B. Ways of knowing, being and doing: a theoretical framework and methods for Indigenous and Indigenous re-search. *J Austr Stud*. 2003;27(76):203-214. doi:10.1080/14443050309387838
3. Yunkaporta T. *Aboriginal Pedagogies at the Cultural Interface*. Professional Doctorate (Research) Thesis. James Cook University; 2009. <https://researchonline.jcu.edu.au/10974/>
4. Yunkaporta T. 8 ways Aboriginal pedagogy from Western NSW. WNSW Dept Education and Training 2012. <https://www.8ways.online/about>
5. Bilton N, Rae J, Yunkaporta T. A Conversation about Indigenous Pedagogy, Neuroscience and Material Thinking. *Teaching Aboriginal Cultural Competence: Authentic Approaches*. Springer; 2020:85-97.
6. Manton D, Williams M. Strengthening Indigenous Australian perspectives in allied health education: a critical reflection. *Int J Indigenous Health*. 2021;16(1):223-242. doi:10.32799/ijih.v16i1.33218

7. Reser D, Simmons M, Johns E, et al. Australian Aboriginal techniques for memorization: translation into a medical and allied health education setting. *PLoS ONE*. 2021;16(5):e0251710. doi:10.1371/journal.pone.0251710
8. Webster E, Hall A, Hill Y, et al. Building cultural responsiveness in a mainstream health organisation with '8 Aboriginal ways of learning': a participatory action research study. *Aust N Z J Public Health*. 2022;46(4):517-523. doi:10.1111/1753-6405.13245
9. Christidis R, Lock M, Walker T, Egan M, Browne J. Concerns and priorities of Aboriginal and Torres Strait Islander peoples regarding food and nutrition: a systematic review of qualitative evidence. *Int J Equity Health*. 2021;20(1):1-220. doi:10.1186/s12939-021-01551-x
10. Murray E, Burgess N, Hardy T, et al. Advancing reconciliation: signposts for dietetics educators. *Nutr Diet*. 2023;80(3):325-330. doi:10.1111/1747-0080.12792
11. The University of Sydney. Our Aboriginal and Torres Strait Islander community. 2023. <https://www.sydney.edu.au/about-us/vision-and-values/our-aboriginal-and-torres-strait-islander-community.html>
12. Dietitians Australia. Accreditation standards for dietetics education programs version 3.0. 2022. <https://dietitiansaustralia.org.au/sites/default/files/2022-04/Dietitians%20Australia%20Accreditation%20Standards%202022.pdf>
13. Dietitians Australia. National Competency Standards for dietitians in Australia. 2021. <https://dietitiansaustralia.org.au/sites/default/files/2022-09/National%20Competency%20Standards%20for%20Dietitians%20in%20Australia.pdf>
14. Thackrah RD, Thompson SC, Durey A. "listening to the silence quietly": investigating the value of cultural immersion and remote experiential learning in preparing midwifery students for clinical practice. *BMC Res Notes*. 2014;7(1):685. doi:10.1186/1756-0500-7-685
15. Sopoaga F, Connor JL, Dockerty JD, Adams J, Anderson L. Training medical students in Pacific health through an immersion programme in New Zealand. *N Z Med J*. 2012;125(1349):37-45.
16. Brock MJ, Fowler LB, Freeman JG, Richardson DC, Barnes LJ. Cultural immersion in the education of healthcare professionals: a systematic review. *J Educ Eval Health Profess*. 2019;16:4. doi:10.3352/jeehp.2019.16.4
17. Smith JD, Wolfe C, Springer S, et al. Using cultural immersion as the platform for teaching Aboriginal and Torres Strait Islander health in an undergraduate medical curriculum. *Rural Remote Health*. 2015;15(3):3144.
18. Lenthall S, Moore L, Bower M, Stothers K, Raymond G, Rissel C. Reflections on an evaluation of the 'remote health experience' – an interprofessional learning, cultural immersion program. *Rural Remote Health*. 2022;22(4):1-9. doi:10.22605/RRH7237
19. Harris PA, Taylor R, Thielke R, Payne J, Gonzalez N, Conde JG. Research electronic data capture (REDCap)—a metadata-driven methodology and workflow process for providing translational research informatics support. *J Biomed Inform*. 2009;42(2):377-381. doi:10.1016/j.jbi.2008.08.010
20. Krueger RA, Casey MA. *Focus Groups: A Practical Guide for Applied Research*. Sage Publications; 2014.
21. Krueger RA. *Developing Questions for Focus Groups*. 1st ed. Focus Group Kit. SAGE Publications, Incorporated; 1997.
22. Malterud K, Siersma VD, Guassora AD. Sample size in qualitative interview studies: guided by information power. *Qual Health Res*. 2016;26(13):1753-1760. doi:10.1177/1049732315617444
23. Gale NK, Heath G, Cameron E, Rashid S, Redwood S. Using the framework method for the analysis of qualitative data in multi-disciplinary health research. *BMC Med Res Methodol*. 2013;13(1):117. doi:10.1186/1471-2288-13-117
24. O'Cathain A, Murphy E, Nicholl J. The quality of mixed methods studies in health services research. *J Health Serv Res Policy*. 2008;13(2):92-98. doi:10.1258/jhsrp.2007.007074
25. Knottnerus A, Tugwell P. STROBE—a checklist to strengthen the reporting of observational studies in epidemiology. *J Clin Epidemiol*. 2008;61(4):323.
26. McCartan J, Dart J, Adams K, Davidson Z, Brimblecombe J. Can integrating Aboriginal health content in undergraduate nutrition curricula foster student cultural capabilities? *Higher Educ Res Dev*. 2021;40(2):325-340. doi:10.1080/07294360.2020.1740182
27. Department of Health. Aboriginal and Torres Strait Islander health curriculum framework. 2014.
28. Larsen R, Reif L. Effectiveness of cultural immersion and culture classes for enhancing nursing students' transcultural self-efficacy. *J Nurs Educ*. 2011;50(6):350-354. doi:10.3928/01484834-20110214-04
29. Weuffen SL, Cahir F, Pickford AM. The centrality of Aboriginal cultural workshops and experiential learning in a pre-service teacher education course: a regional Victorian university case study. *Higher Educ Res Dev*. 2017;36(4):838-851. doi:10.1080/07294360.2016.1242557
30. Nakata M. The cultural interface. *Austr J Indigenous Educ*. 2007;36(S1):7-14.
31. Fogarty W, Schwab RG. *Indigenous Education: Experiential Learning and Learning through Country*. ANU, Centre for Aboriginal Economic Policy Research (CAEPR); 2012.
32. Australian Bureau of Statistics. Estimates of Aboriginal and Torres Strait Islander Australians. 2023. <https://www.abs.gov.au/statistics/people/aboriginal-and-torres-strait-islander-peoples/estimates-aboriginal-and-torres-strait-islander-australians>
33. Rae K, Bohringer E, Ashman A, Brown L, Collins C. Cultural experiences of student and new-graduate dietitians in the *Gomeri gaaynggal* ArtsHealth program: a quality assurance project. *Health Promot J Austr*. 2016;27(2):162-166. doi:10.1071/HE15028

SUPPORTING INFORMATION

Additional supporting information can be found online in the Supporting Information section at the end of this article.

How to cite this article: Davies A, Chen J, Allman-Farinelli M, et al. Cultural immersion in dietetics curricula: A method for ensuring Aboriginal pedagogies are used for Aboriginal educational content. *Nutrition & Dietetics*. 2024; 81(5):516-525. doi:10.1111/1747-0080.12900