"We Are Our Own Worst Enemies": A Qualitative Exploration of Sociocultural Factors in Dietetic Education Influencing Student-Dietitian Transitions

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ABSTRACT

Background The transition from student to dietitian is an implicit expectation of dietetic education. Although there has been an expanding literature around elements of competency-based education, little attention has focused on sociocultural aspects of learning and professional identity formation in dietetic education.

Objective The aim of this study was to explore sociocultural factors in dietetics education influencing the transition into the profession from the perspective of dietetics students and educators.

Design An exploratory qualitative study underpinned by social constructionism.

Participants/setting From March 2018 until June 2019, interviews (individual and group) with final-year students (n = 22), dietetic preceptors (n = 27), and university faculty members (n = 51) from 17 of the 18 universities in Australia and New Zealand with accredited dietetic programs were undertaken and explored sociocultural factors in dietetic education.

Analysis performed Data were analyzed into key themes using framework analysis and applying the sociocultural theory of landscapes of practice.

Results Sociocultural factors are powerful influences on the student-professional transition. Dietetic cultures and minicultures of cohesion, conformity, competition, and conflict aversion exist. Boundaries exist within learning environments, which can limit or pose challenges to professional identity formation and transition into the profession.

Conclusion Stakeholders involved in dietetics education play pivotal roles in shaping the microcultures students learn and work within, which influence and impact socialization and transition into the profession. Opportunities exist to re-vision curriculum and foster positive learning cultures with a focus on sociocultural learning, including supporting boundary crossing and professional identity development.
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DEVELOPING MEANINGFUL IDENTITIES AND competence on the journey to becoming a professional requires socialization into that profession.[1-5] Learning in academic and professional workplaces enables students to achieve competencies required for safe and effective practice and entry into the profession—an emerging area of enquiry within dietetics.[4,6-8] However, very little is known about identity development and sociocultural factors in the processes of becoming a dietitian.[5,9-14] Learning and professional development are social processes, in which individuals both shape and are shaped by the social worlds they encounter.[15] In this study, we have selected one of the sociocultural learning theories, specifically Wenger-Trayner and colleagues'

(2015) landscapes of practice, to explore the sociocultural factors involved in becoming a dietitian.[1]

LANDSCAPES OF DIETETIC PRACTICE

Wenger-Trayner et al propose that "the body of knowledge of a profession is best understood as a landscape of practice."[1(p13)] This consists of a dynamic, complex system of communities of practice and the boundaries between them.[1,16] All these practices have their own histories and regimes of competence, and there is "local knowing" within each practice with boundaries existing across the various practices.[1] Paying attention to boundaries between communities is key, as well as acknowledging multimembership in

those different communities and the associated experiences and challenges of traveling through the landscape. The communities of people and their various memberships are influenced by their own personal values, experiences, and identities as they move within the landscape. The landscape of dietetics may further be understood as including professional associations and regulations and diverse workplace settings existing within the landscape including hospitals, community settings, and food service settings, as well as research, teaching, management, and all their relevant organizational boundaries and policies.

Transitioning and Boundary Crossing Across the Dietetic Landscape

Becoming a dietitian involves considerably more than knowledge acquisition. On a students' journey to professional competence, students move within and between social landscapes, across boundaries and between different communities in their personal, social, and work lives, all the while developing their professional identities and competence. Transitions occur over time, requiring ongoing processes of adaptation due to changes in contexts, relationships, and identity.[17] Boundary encounters between different practices (eg, between academic and workplace environments and different workplaces) can be important opportunities for learning. However, they may also bring about significant challenges, both for learners and experienced members of the community alike.

Developing Professional Identities

Peoples' identities, that is who they are, give meaning to their lives and guide their behaviours.[18,19] It is important therefore to acknowledge that people have multiple identities, "rather than a singular unified sense of self."[20] The personal values, experiences, and identities a person travels with influence their journey through any landscape and in turn are influenced by the journey. One's identities come to embody the landscape through personal experiences of it. Journeying across a landscape incorporates the past and the future into a person's present identities.[1] People become personalized reflections of the landscape, its practices, its communities, and its boundaries. Figure 1 is a representation of the landscape of dietetic practice.

Study Aims and Research Question

To our knowledge, the application of landscapes of practice[1] has not previously been explored within the context of dietetic education. Indeed, very little is known about the nutrition and dietetics landscape in terms of sociocultural learning, boundaries, or developing professional identities, all of which influence and reflect individuals' transitions through a landscape. Furthermore, landscapes of practice fails to consider sufficiently the influence of cultural factors (eg, organizational culture, local practice cultures).[21] Culture is a complex concept resisting simple definitions.[15] Culture relates to shared patterns of understandings, behavior, and interactions, learned through socialization.[22] It can be considered through an identity perspective in terms of how people make sense of themselves within multiple cultural worlds and how they can affect or move beyond these cultural worlds.[15] Although there is a body of evidence describing culture in other health professions (eg, nursing,

RESEARCH SNAPSHOT

Research Question: What sociocultural factors in dietetics education are influencing the professional transition from student to practicing dietitian?

Key Findings: The transition from student to practicing dietitian involves interaction, participation, and engagement across numerous communities of practice, crossing boundaries and developing identities along the way. Cultures of conformity and homogeneity, competition, criticism and bullying, cohesion, and conflict aversion exist in the profession and influence engagement, learning, socialization, and transitions. Educators play a key role in supporting students' navigation and transition across multiple communities in the landscape of dietetic practice. Welcoming and supportive learning cultures that support professional growth and professional identity development are based on trusting/accepting relationships and honest dialogue and feedback.

medicine, occupational therapy),[22-26] the culture of dietetics is still relatively unknown.

This study therefore aims to explore sociocultural factors across the landscape of dietetic practice that influence dietetic students' professional transitions across academic and workplace contexts into the profession. Specifically, this research focuses on the stakeholders in the center of Figure 1 and their experiences in academic and workplace learning. In this study we answer the research question: What are the sociocultural aspects within dietetics education influencing dietetic students' transitions into the profession in Australia and New Zealand?

METHODS

Study Design

We undertook an exploratory qualitative study exploring professionalism in dietetic education across Australia and New Zealand using semistructured individual and group interviews. A social constructionist epistemology underpinned this research.[27] In summary, we were keen to develop understandings of how students learn to become dietitians, drawing on the assumption that how they come to know the world and make sense of their experiences is constructed through social interactions.[28,29] We therefore applied an interpretivist lens throughout this research, acknowledging multiple interpretations of reality.[28,30] Ethics approval was obtained from the Monash University Human Research Ethics Committee (approval number MUHREC 0431).

Context

Dietetic education in Australia and New Zealand involves a combination of academic and workplace learning. This involves interaction, participation, and engagement between numerous communities across the landscape of practice including students (enrolled in either undergraduate or postgraduate programs), educators based in universities, and preceptors situated in diverse workplace settings. Students undertake various work placements (minimum 100 days)
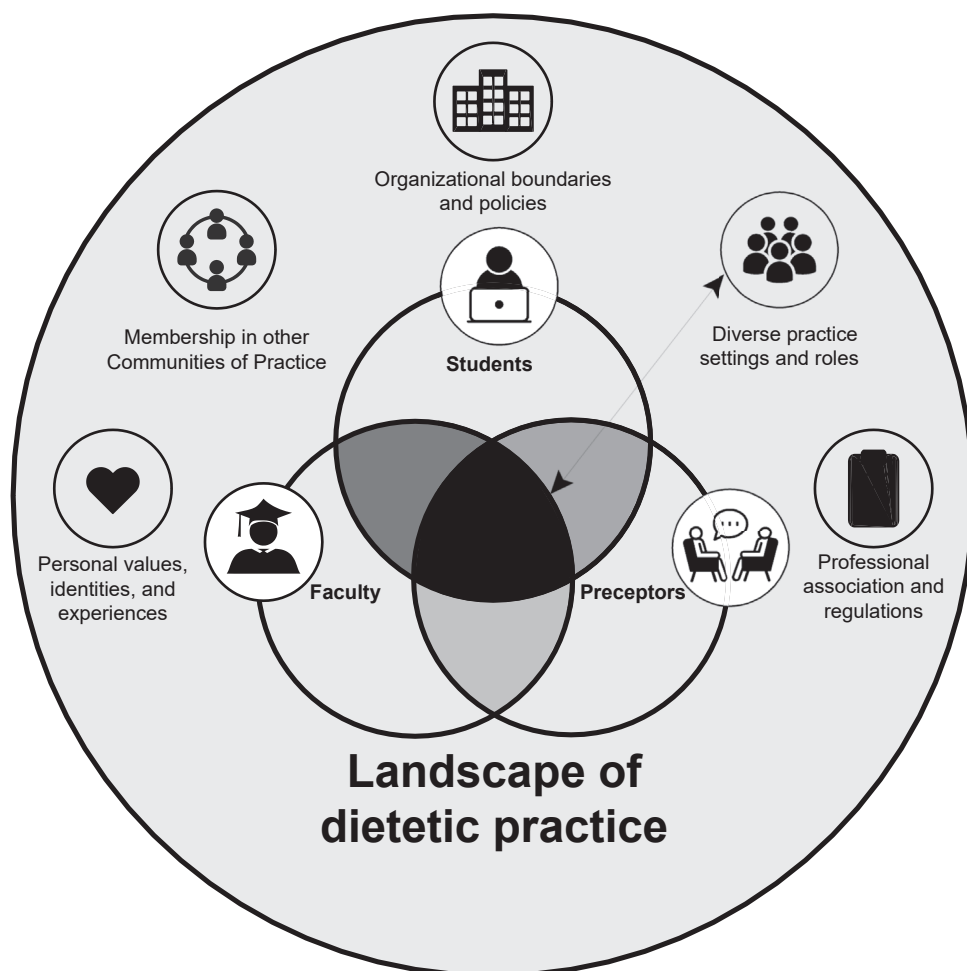
Figure 1. The dynamic system of communities of practice and boundaries between them that make up the dietetic landscape of practice and influence the transition from student to practitioner.

integrated throughout their university courses but predominantly toward the end. At the successful completion of their degree, graduates are considered to demonstrate the relevant professional competency standards and are thus deemed ready to enter the profession.[31,32]

Sampling and Recruitment

The study included 3 stakeholder groups: university faculty members with direct responsibility for dietetic education, workplace preceptors, and final-year dietetic students. We actively sought diversity in perspectives so we employed maximum variation sampling.[33] We also utilized information power to further guide our sampling.[34] University faculty members were invited by contacting the Department Heads of all accredited dietetic education programs in Australia and New Zealand (15 Australia, 3 New Zealand). Preceptors were invited via established university placement networks and snowballing. Students were invited via a flyer on their learning management systems and disseminated by program faculty members.

Data Collection

Data collection involved in-depth, semistructured, individual and group interviews (2-6 participants), exploring participants' perspectives and experiences of professionalism and dietetics education. All participants provided written or verbal informed consent prior to data collection and completed a personal details questionnaire. This included demographic and other details, including participants' self-selection of gender and cultural heritage identification. Participants self-selected into an individual or group interview with peers only (eg, preceptors were interviewed with other preceptors). The interview questions, developed as a team, drew on previously published research,[35,36] and the interview guide is included in Figure 2 (available at www.jandonline.org).

Data were collected by the first author from March 2018 to June 2019. Data collection occurred via Zoom (21 interviews) or teleconference (19 interviews) due to geographical distances with 11 interviews face-to-face. Study data collection finished when the sample (100 participants across 17 universities) was thought to have sufficient information power according to the 5 elements outlined by Malterud et al[34]: study aim (narrow), sample specificity (sparse), use of established theory (landscapes of practice), quality of dialogue (strong), and analysis strategy (cross-case). A total of 51 interviews (23 individual and 28 groups with 77 participants

total) ranging from 18 to 116 minutes were conducted (average = 50 minutes; total = 42 hours 52 minutes). All interviews were audio-recorded and transcribed verbatim by professional transcribers, and the transcripts checked and anonymized by the first author.

Data Analysis
An inductive, 5-step team-based framework analysis was employed.[37] Step 1 involved familiarization with the data, where we each independently analyzed a subsample of transcripts (and audios) related to the research questions for the broader research program. During this step, participants' perspectives of the sociocultural aspects of dietetics practice were identified. The research team agreed that it was important to explore these data further as they (a) provided important context for the teaching and learning of professionalism and (b) were a novel area worthy of further enquiry. We therefore developed our post hoc research question guiding this study at this early stage of framework analysis. In step 2, identifying a thematic framework for these data, the first author applied Wenger-Trayner and colleagues' landscapes of practice[1] to help interpret our data. Review of the health professions literature supported further refinement of this coding framework. In step 3, indexing, the first author imported the coding framework into NVivo (QSR International, version 11, 2019)[38] and used this to code all relevant data. The transcripts were simultaneously coded while playing the interview audios, so important linguistic cues not always apparent in the transcripts were not missed. All authors met 3 times during this coding phase to discuss findings and clarify ambiguities. In step 4, the first author then charted the coding, thereby interrogating patterns in the data and discussing these with the team. In the final step, mapping and interpretation, we interpreted the findings in light of theory and previous literature, through an iterative process of writing the results and preparing the manuscript.

Researcher Characteristics and Reflexivity
Our research team (all authors) completed a team reflexivity activity early in our research.[39] We have broad career, educational, and research experiences, with clinical and/or educational backgrounds in 3 health disciplines (dietetics, nursing, and health psychology). Although diverse qualitative research experience exists within our team, we share similar personal social constructionist epistemologies. In the context of dietetic education, author 1 and author 2 identify as dietitians and thus insider researchers, whereas author 3 and author 4 identify as dietetics outsiders.[40] As qualitative researchers, we acknowledge our active roles in the interpretive process.[41]

RESULTS
The sample comprised 100 participants (51 university faculty members, 27 preceptors, and 22 students) with the majority being female (n = 96) with a median age of 38 years (interquartile range = 29-46). See the Table for further details.

We examined the data to explore key features of landscapes of practice (cultures, boundaries, and identities) within dietetic education and therefore present our results in relation to these 3 themes and subthemes next (see Figure 3 for a summary of themes and subthemes). We present key

illustrative quotes demonstrating these themes in Figure 4. Although we present these themes discretely, themes are often highly interrelated, so we illustrate the interplay between these 3 themes in Figure 5, which explores eating practices and lunchroom boundaries.

Theme 1. Cultural Norms and Microcultures—Too Nasty, Too Nice, or Somewhere in Between?
Cohesion. Participants described diverse attitudes, values, norms, rituals, and practices underpinning dietetics cultures associated with teaching and learning professionalism. Although some participants proudly described positive professional cultures, others portrayed cultures that were reportedly challenging. Concerns were expressed that dietetics camaraderie was disintegrating, with fracturing occurring as dietetics expands. Some implied that the profession's identity was "crumbling," with a call for cohesion in the profession. Indeed, some participants commented that it was an interesting time in dietetics history, especially in light of increased external competitors including self-proclaimed, nonqualified nutrition experts (Figure 4, quote 1).

Conformity and Homogeneity. Participants talked disparagingly about conformity and lack of diversity in professional membership (particularly cultural and gender diversity) (Figure 4, quote 2). Such cultures of conformity and associated constraints included losing students and practitioners from the profession if they failed to fit predominant expectations or norms. The impacts and influences of a female-dominated profession were discussed by participants. Contrastingly, participants spoke positively about roles within dietetics evolving and becoming more diversified outside of traditional hospital roles, across the continuum of health care and in broader roles, viewed as essential for the future workforce to meet community needs.

Competition, Criticism, and Bullying. Competition was regularly discussed in terms of entry into dietetic programs, gaining employment, within dietetic teams, with student peers, and approaches to student supervision. Competition was largely bemoaned including stymying innovation with a tendency toward "tall poppy syndrome"—knocking people down rather than celebrating their successes (Figure 4, quote 3). Others described the profession as unkind, with participants sharing examples of criticism and bullying and their negative enduring impacts (Figure 4, quotes 4 and 5).

Conflict Aversion. Contrastingly, some talked of a culture averse to conflict, with participants suggesting that dietitians sometimes avoided direct confrontations about professionalism lapses and/or when emotions were involved, instead "sweeping things under the carpet." Participants were, however, optimistic for the profession's future as students were learning to facilitate and engage in hard conversations as part of conflict resolution skills in their programs (Figure 4, quote 6).

Theme 2. Boundaries
Varying Types of Boundaries. Various boundaries were discussed in our data including those between faculty and workplace environments and different geographical (eg,

Table. Demographic and workplace characteristics of dietitian faculty members, preceptors, and students who participated in interviews about sociocultural factors in dietetic education

Characteristic	University faculty members (n = 51)	Preceptors (n = 27)	Students (n = 22)	Total (n = 100)
	←————————————————————————n———————————————————————→			
Gender				
Female	49	26	21	96
Male	2	1	1	4
	←——————————————————————median, range——————————————————————→			
Age	43 (34-50)	37 (29-44)	24 (23-30)	38 (29-46)
	←————————————————————————n———————————————————————→			
First language				
English	46	27	19	92
Other	5	0	3	8
Cultural and ethnic identification[a]				
Oceanian	37	18	17	72
European	17	9	3	29
Asian	3	0	3	6
Sub-Saharan African	0	2	0	2
Aboriginal and/or Torres Strait Islander	0	0	1	1
Geographic diversity of participants				
Australia	**45**	**25**	**20**	**90**
Victoria	18	11	8	37
New South Wales	8	10	5	23
Queensland	12	2	6	20
Western Australia	4	1	0	5
South Australia	2	1	0	3
Australian Capital Territory	1	0	1	2
New Zealand	**6**	**2**	**2**	**10**
University/workplace diversity	17 of 18 Australian and NZ[b] universities with accredited dietetics programs: 5 UG[c]; 11 PG[d]; 1 offered both UG and PG	Diverse work contexts and settings including: public and private hospitals (adult and pediatric), subacute, food service, community and public health nutrition, private practice (metro = 18; regional/rural = 9)	From 9 of 18 ANZ[e] universities with accredited dietetics programs (14 UG and 8 PG students); 19 domestic and 3 international enrolled	17 of 18 universities in ANZ with accredited dietetic programs and multiple diverse work contexts and settings

Note. The bold numbers relate to the sub totals of participants from Australia and New Zealand.
[a]Classification comes from the Australian Bureau of Statistics Standard Australian classification of countries (2016) with some participants identifying with more than 1 classification.
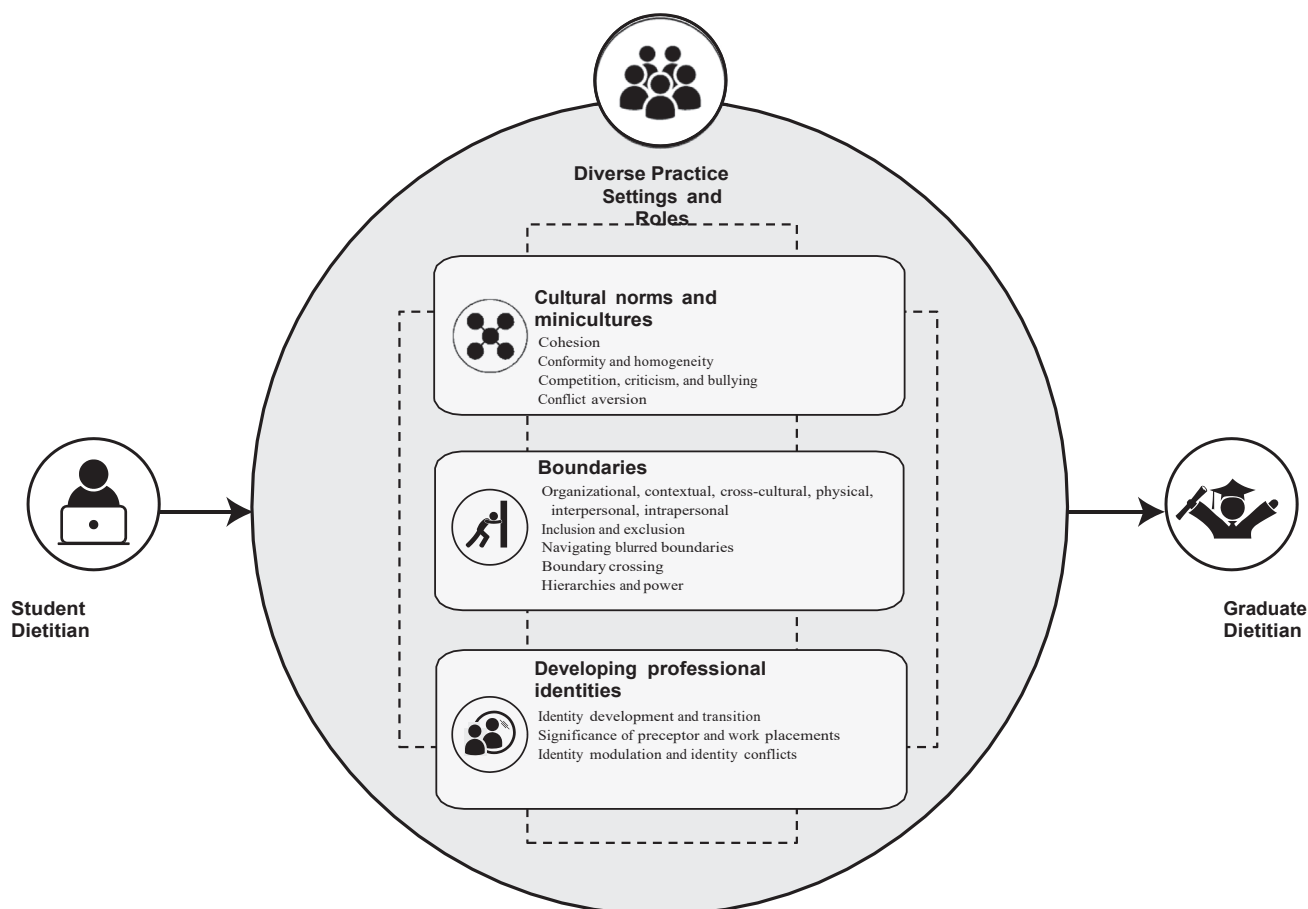[b]NZ = New Zealand.
[c]UG = undergraduate.
[d]PG = postgraduate.
[e]ANZ = Australia/New Zealand.

Figure 3. Key themes and subthemes relating to sociocultural factors in dietetic education influencing student-dietitian transitions.

urban and rural) and workplace settings (eg hospital and community). Other key boundaries included cross-cultural (for example, international students navigating colloquial humor), physical (eg, between student and preceptor areas), interpersonal (eg, students navigating relationships with peers, preceptors, educators, patients), and intrapersonal boundaries (eg, students modifying their personalities and beliefs to align with the learning environment (Figure 4, quotes 7 and 8).

Inclusion and Exclusion. Although some participants explained that boundaries were porous, functioning inclusively and engaging and supporting boundary crossing, other boundaries appeared exclusive, being harder to navigate and cross (Figure 4, quote 9). Participants explained that it was important to articulate expectations and practices varying across different contexts to streamline boundary crossing.

Navigating Blurred Boundaries. Some boundaries appeared more blurred, especially at the interpersonal level (eg, student-preceptor, student-patient), for example, sharing/disclosing personal information and navigating balancing between keeping some distance yet still giving oneself, enabling trust and relationship building to occur (Figure 4, quote 10).

Boundary Crossing. Participants commented that explicit discussions of expectations could assist boundary navigation, particularly interpersonal boundaries. Respecting boundaries seemed especially important for student-preceptor and student-university faculty member relationships. Participants reported that crossing the university-workplace boundary could be challenging for some students but was easily navigated by others (Figure 4, quote 11). Student participants acknowledged that although boundaries varied, they felt safer and more confident when clear expectations, policies, and procedures existed, and they felt welcomed into the community of practice (Figure 4, quote 12). Participants commented that older students seemed more confident in pushing against boundaries where they questioned the status quo.

Hierarchies and Power. Hierarchical and power imbalances described in academic and workplace learning contexts acted as vertical and horizontal boundaries. Participants talked about hierarchies across different domains within dietetics (eg, specialities, settings) with clinical dietetics privileged (Figure 4, quotes 13 and 14), as well as a pecking order relating to seniority. Hierarchies across different health care professions (eg, doctors and nurses) were also discussed, with a feeling that nutrition was not always valued by others.

Related themes and subthemes	Quote number	Illustrative quote
Theme 1: Cultural norms and microcultures		
Cohesion	1	"[T]here's a lot of judgment of dietitians against other dietitians . . . I don't think we need it because we've got so many external competitors to our profession and that we actually just need to be cohesive." AC18
Conformity and homogeneity	2	"I think it ties up to this idea of people wanting 'mini mes' maybe, like we want to kind of replicate ourselves in our profession and I think our profession is limited because we're too homogenous." AC38
Competition, criticism, and bullying	3	"[W]e are probably our own worst enemies . . . getting into dietetics is really competitive . . . it attracts a certain type of person . . . they're just not kind . . . we don't celebrate successes very well . . . As soon as someone kind of gets their head above the parapet . . . we'll slap them over the wrist for those things." AC6
	4	"I was definitely bullied . . . I've had plenty of scenarios where I don't know who my allies are at work, you know? And workplaces can be really political." PR73
	5	"[T]he dietitians that had been there for a year or 2 years, were so much more harsh and less inclusive than the more senior ones. The more senior ones were way more . . . confident in our ability, less sort of nitpicky, understood that we were learning, would include us at lunchtime . . . Whereas the new ones, it almost felt like they thought that we were a threat . . . And them picking on us, . . . like, really nitpicking on our work just took like a kick to the confidence I suppose, when a new graduate is sort of picking on the tiniest little things and you're still learning." ST08
Conflict aversion	6	"[T]raditionally those hard conversations haven't always been had, but maybe the next lot of professionals . . . will be able to do that sort of thing in the workplace, 'cause we're actually teaching them from the get-go this . . . very stuff." AC3
Theme 2: Boundaries		
Varying types of boundaries	7	"[S]taff room discussions, I've had students say you know, 'I'm feeling a bit uncomfortable because my supervisors are all talking about, um, you know the parties they've been to and maybe the partners they've just recently hooked up with' . . . I'm receptive to the fact that the student feels that that is inappropriate. Because usually it's the other way round." AC48
	8	"I used to work in . . . where students weren't allowed to cross a certain threshold. They were kept to a certain area." PR69
Inclusion and exclusion	9	"I found like going from a small . . ., rural hospital where I really felt a part of the team and then going to a really big metropolitan hospital, like quite shocking . . . in the rural setting I was really welcomed . . . And then went to the lunch room on my first day at the huge hospital . . . no one even basically looked up or said,

(continued on next page)

Figure 4. Themes, subthemes, and illustrative quotes relating to sociocultural factors in dietetic education.

Related themes and subthemes	Quote number	Illustrative quote
		'Hello' . . . I really felt out, outside . . . we aren't a part of the team." ST10
Navigating blurred boundaries	10	"I had one student recently . . . where . . . every conversation would come back to something about her personal life . . . there's a line between sharing about yourself but then not oversharing . . . I avoided the hard conversation because I didn't know how to have it." PR65
Boundary crossing	11	"I was not introduced to a single person. And like I'm not the type of person to accept that . . . I sat down and I introduced myself and asked them what their name was, . . . what role they did. I forced myself in. I felt incredibly awkward doing that. But like I had to initiate it. And then they started . . . engaging with me normally, . . . I thought . . . 'Am I that below you?' . . . It's the culture . . . it's almost like a power play and a bit of an initiation process." ST10
	12	"[O]n my second clinical placement, I was very embraced into the team. I had lunch with them every day. I went to the head of dietetics' house for dinner . . . I felt very welcome. It was a lot of fun . . . Um, it made me feel more confident working in the team. Because I think it made me feel like they respected my role there, . . . they respect that I'm one of their workers as well, even though I'm a student. Um, so I definitely felt a sense like, belonging in the team from that." ST06
Hierarchies and power	13	"I feel like there's a hierarchy in the specialties that you go into, and I think the paeds team put themselves on pedestals . . . The paeds intensive care unit dietitian, she thought she was God." ST17
	14	"[T]he community dietitians don't feel respected by the ward dietitians . . ." AC7
	15	"[Y]ou are an underling. You are on placement. You are a guest in their environment. I certainly wouldn't have felt comfortable saying anything." ST03
Theme 3: Developing professional identities		
Identity development and transition	16	"And it's kind of my understanding that when you go into degrees later in life you have a really clear idea about what you want from your marks and what you want from the career moving forward . . . when you're younger it's . . . quite hard." ST01
	17	"[W]e are helping these students transition . . . developing their identity as a dietitian and not a student anymore." AC78
Significance of preceptors and work placements	18	"I had that influence of the nurse educator saying negative things, and then my dietitian supervisor was just, 'No.' . . . Complete positives, and that's how she was with all her patients the whole time, and that really impacted me . . . It was patient centered to the nth degree . . . she never said anything derogatory about any of them . . . that was 2 years ago, and I still think about that, almost, you know, weekly." ST03
		(continued on next page)

Figure 4. *(continued)* Themes, subthemes, and illustrative quotes relating to sociocultural factors in dietetic education.

Related themes and subthemes	Quote number	Illustrative quote
	19	"[T]he worst thing is when you have a supervisor who's, um, whatever, negative or, um, a bully or something. And I think that contributes to them . . . learning how to be a professional." PR71
	20	"And I also say to them, 'I will treat you as my young colleague until you prove to me otherwise.' And they love it. They go, 'Ooh, she actually trusts me.' So, you know, to me that- that's all part of setting them up for success . . . " PR60
Identity modulation and identity conflicts	21	"I've had this 2-hour . . . session that I've listened to . . . I'm thinking, 'This is not professional' . . . I was communicating that to the university saying, 'I'm feeling really uncomfortable with this dietitian.' Um, I'm 10 years older than her and she's assessing me on professional behaviors. Yet, her professional behavior itself is not appropriate . . . I look really young, but I'm not . . . I've had a working life, and I'm a parent . . . But I've been treated at a level that I'm just not at." ST05
[a]AC = academic/faculty.		
[b]PR = preceptors.		
[c]ST = students.		

Figure 4. *(continued)* Themes, subthemes, and illustrative quotes relating to sociocultural factors in dietetic education.

Dietetic students described being disrespected, disregarded, and "talked over the top of" by medical and nursing staff. They described being "underlings," their feelings of exclusion, as well as fear about speaking up (Figure 4, quotes 15). Although processes and structures were thought to reinforce and enable power and hierarchy, such as "rules" for students in terms of communication channels and "not being allowed" in certain spaces and observed "pecking orders" within the profession, some described resistance to hierarchies and power, enabling boundary crossing and creating more supportive learning relationships when they felt safe.

Theme 3. Developing Professional Identities
Identity Development and Transitions. Some participants, across the 3 groups, stated that students sometimes lacked a clear understanding of the profession of dietetics at entry into and throughout their programs. It was sometimes not until placement that they developed an understanding of the role of a dietitian, with some students realizing they did not want to become dietitians. Postgraduate students appeared to have clearer visions of dietetics, with high levels of engagement described, particularly during placements (Figure 4, quote 16). Participants discussed developing identities and student-professional transitions or "metamorphism" (Figure 4, quote 17). Indeed, students' focus was thought to shift from predominantly self-orientated and fulfilling assessment and academic requirements to client centered and nutrition outcomes focused, connecting with dietitian identities and practices. Dietetics curricula (formal and informal) were thought to influence professional identity development, but participants expressed that more needed to be done and earlier in university curriculum and in placement environments to support professional identity development.

Significance of Preceptors and Work Placements. Participants revealed positive and negative influences and impacts of preceptors and work placements on students' developing professional identities and transitions (Figure 4, quotes 18 and 19). Identity development was reportedly enabled through positive relationships, including being welcomed and supported, along with opportunities for personal autonomy (Figure 4, quote 20). Hospital-based placements were identified as the most anxiety provoking for students, including the most challenging experiences affecting students' professional identity development.

Identity Modulation and Identity Conflicts. Emotion seemed to be associated with identity work in the data, with various identity tensions and identity renegotiations articulated as participants moved across practice boundaries. Students reported feeling unable to be themselves—of "acting" rather than "being" in some learning environments. This was described for international students with some cross-cultural challenges impacting their developing professional identities. Furthermore, some postgraduate and older students experienced identity tensions and conflicts with other identities such as being a parent (Figure 4, quote 21).

Intersecting Themes
Navigating workplace lunchroom conventions and mealtime practices, illustrated in Figure 5, appears to be a unique phenomenon in dietetics where culture, identity, and boundaries intersect and students' transitions appear to be facilitated or thwarted. Mealtime and lunchroom practices appear to be key features of the dietetics learning landscape when students are on work placement and learning to be a professional. Student and preceptor data provide interesting

Examples of interplay between themes and mealtime practices and lunchroom conventions	Illustrative quote
Sharing meals is an opportunity for professional socialization and helps to foster relationship building and boundary crossing and builds confidence and a sense of belonging, fostering professional identity development. **(Boundaries—inclusion/exclusion; identity development and transition)**	"[O]n my major placement, there was this sense of being embraced. You know, you are the new student, and we value you . . . So, meet us for lunch at 1 o'clock. Everyone comes to the cafeteria at 1 o'clock for lunch. And it was really contrasted with another friend's experience, who was told that she wasn't to sit with the dietitians at lunchtime . . . not to be embraced would have just been horrific for 8 weeks." ST03
Exclusive mealtime practices and distancing cultural norms can disrupt identity development and professional socialization. Within microcultures, an experienced preceptor expresses discomfort with some of the established mealtime practices. **(Cultural norms; boundaries—hierarchies and power, inclusion and exclusion)**	"I've heard of, of supervisors who don't wanna have lunch with their students . . . I think it's really shortsighted, too, they're going to be your colleague in 12 months' time . . . that horrifies me that people would create that power imbalance for no good reason." PR72
Mealtime conventions and rules are not always made explicit, yet students and newcomers are expected to be able to navigate these conventions successfully **(Boundaries—navigating blurred boundaries, physical, hierarchies and power; identity development and transition; cultural norms and minicultures)**	"[A] student goes on placement and they, um, they go to use the staff room, and they use a mug from the cupboard, and they don't know that . . . you don't do that. You bring your own mug, or actually you don't go into the staff room because it's not available for students. But they don't know that unless someone tells them." PR59
[a]PR = preceptors. [c]ST = students.	

Figure 5. Navigating workplace lunchroom and mealtime practices and sociocultural factors in dietetics education represented as the interplay between 3 themes of cultural norms, boundaries, and developing professional identities.

insights into mealtimes and illustrate the intersection of themes presented—culture, developing professional identities, and boundaries (Figure 5). This is of perhaps particular relevance and interest within the dietetics profession, given the key tools of our trade are linked to food and eating. Divergent perspectives exist around preceptors and students and the sharing of meals. Participants consistently reported the powerful influence mealtime practices have on either embracing or distancing students during their placement experience and how they appear to be an expression of the local culture. Welcoming and inclusive practices around sharing meals seems to support boundary crossing, fosters professional identity formation, and is indicative of positive and enabling cultures.

Talk mostly focused on mealtimes in hospitals rather than other placement environments, and typically, students were more often included and embraced in smaller teams and in rural areas more so than larger, metropolitan hospitals. Preceptors described colleagues not always being aware of how important it is to make students feel welcome and that mealtimes provide an important opportunity for professional socialization. Interestingly also within the data there are numerous examples of food-related talk and language, which may be a reflection of the dietetic profession and its connection to food and eating. For example: "[W]e're cookie cutter"; "[T]he identity as a dietitian is crumbling"; "[T]hey tend to eat each other."

DISCUSSION

Our findings provide novel insights into Australian and New Zealand dietetics cultures, including underresearched sociocultural factors influencing student learning and transitions into the profession.[9] Consistent with Wenger-Trayner and colleagues' landscapes of practice,[1] we identified 3 interrelated themes in our participants' talk—culture, boundaries, and identities—which we discuss next in light of theory and literature.

Cultural Norms in the Profession

Our findings provide unique perspectives into dietetics cultures across multiple contexts and settings. These include cultures of conformity and homogeneity, competition, criticism and bullying, cohesion, and conflict aversion, all potentially influencing engagement, learning, socialization, and transitions. Consistent with our findings, Morgan et al. suggest that unwelcoming environments lead to despondence and negative learning experiences.[4] Competition among dietetic students and lack of collegiality among dietitians have been described previously.[42,43] However, our findings extend these, illustrating that dietetics cultures operate at local levels (microcultures), as perceived by students, university faculty members, and preceptors, consistent with research explicating other female-dominated cultures

such as nursing.[23,24,44] Indeed, dietetics has long-standing leadership traditions involving cis-gender, White, heteronormative women.[45,46] Social dynamics within these microcultures appear important factors in enculturating learners into the profession.[23] Given that dietetic cultures are cocreated through social interactions, it is important for members of the dietetic landscape to be more cognizant of the language, the conversations, and the impacts on others—learners and colleagues alike. Preceptors and practitioners have been described as "culture brokers."[23] Our data suggest that more attention needs to be paid to the privileged positions that faculty members and preceptors hold in enculturating students into the dietetics landscape of practice. Educators should strive to create a landscape of practice that is based on trusting/accepting relationships and honest dialogue and feedback, ultimately serving to support professional growth and identity development.[25,46]

Boundaries

Our findings provide unique insights into boundaries within the dietetics landscape of practice, such as different types of boundaries including hierarchies and power, issues of inclusion/exclusion, navigating blurred boundaries, and boundary crossing.[2,47] Hierarchy and power were forms of vertical and horizontal boundaries omnipresent in our data, influencing learning and transitions into the profession. Although discussions of health care hierarchies and power are not new, there is scant literature exploring these issues in dietetics. Our data demonstrate that power and hierarchy operate more in some contexts than others, especially in the medicalized hospital environment. Although power may be redistributed to facilitate students' professional growth, this may require considerable reorganization of and relational approaches to professional placements.[1(p15),47]

Interestingly, boundaries are hallmarks of practice but are rarely formally marked for learners, making their navigation challenging sometimes.[1] Our findings demonstrate that boundary crossing could be smooth when supported by preceptors and educators with clear expectations and cultures of safety but were otherwise precarious and disabling without assistance and through uncertain terrain. Crossing boundaries, boundary encounters, and boundary partnerships are all crucial aspects of a landscape of practice and for developing knowledgeability or understanding the essence of functioning as a team member.[1,47] Boundaries between communities of practice are fertile settings for learning, with potential for sometimes unexpected learning.[1,2] Thinking about dietetics as a landscape of practice and respecting the multiplicity of boundaries within may enable educators and learners alike to reimagine their role in the landscape. For example, "What am I doing in *my practice* to facilitate, support, or obstruct boundary crossing?" Making boundaries a learning focus, rather than assuming "seamless applicability across contexts," in the dietetics landscape holds potential to support students' professional transitions.[1]

Identities Development

Our findings provide unique insights into the development of identities within the dietetics landscape of practice including identities development and transitions, the significant roles of preceptors and work placements, and identity modulation and conflicts. Although educators' roles in supporting student learning is well established in the dietetics literature,[6,12,43,48,49] their roles in students' identity development are rarely discussed.[42] Our findings provide new insights into some of the barriers to identity development in dietetics. Wenger-Trayner et al. assert that identity development is intrinsically emotional, yet emotions are significantly influenced by relationships with the landscape of practice.[1] Our findings suggest that preceptors are especially powerful gatekeepers influencing students' emotions, learning trajectories, and identity development, either facilitating or hindering students' boundary crossing. We share examples of learners' descriptions of "acting" rather than "being," reflecting identity conflicts. It is important for established dietitians to recognize students' vulnerable learner identities within the landscape of practice.[9] Indeed, how students are socialized into professions can impact how they perceive themselves and their sense of belonging.[24] Supporting students' identity development means "facilitating meaningful cross-border conversations and supporting multi-membership."[2(p508)] Creating welcoming, engaging, inclusive communities has a powerful impact on learning and identity development.[3,19,50] Each community within the landscape of practice ought to privilege diversity, permitting learners to develop their professional identities and maintain their sense of self.[3,50] This requires supportive relationships—actively and consciously assisting students in boundary crossing and identity development, thereby facilitating discovery of what it means to be a dietitian.[9,19]

Strengths and Limitations

To our knowledge, we are the first to employ landscapes of practice[1] within the context of dietetics education, highlighting that different contexts, settings, and communities provide different student-practitioner journeys. We included a large and diverse sample across 2 countries, representing 17 of the 18 Australian and New Zealand universities with accredited dietetics programs, and across diverse workplace and geographical settings. This study presents data from 3 participant groups (university faculty members, preceptors, and students). Our team-based analysis and reflexivity helped facilitate a rigorous and credible approach to data interpretation. However, our study is not without its limitations, and these need to be considered when drawing study conclusions. Although the gender composition of the study sample reflects the demographics of the dietetics profession, the perspectives of individuals who do not self-identify as female contributed only minimally to the data collected. Therefore, the findings may not reflect the perspectives of individuals who have other gender identities. We acknowledge that our findings may not reflect sociocultural factors influencing student-graduate transitions in other countries, especially those with different educational approaches and health care systems and differing requirements for entry into dietetic education programs. However, consideration of sociocultural factors and professional identity development has resonance for dietetics education internationally. Despite our large sample size, other important sociocultural factors influencing transitions across other dietetics landscapes of practice may not have been captured in our study.

RESEARCH IMPLICATIONS

Research is lacking internationally regarding dietetic educators,[43] so this study including multiple stakeholders across multiple landscapes of practice contributes novel findings about dietetics sociocultural learning. Although this multistakeholder approach begins to explore thorny issues of professional socialization, professional identity development, and culture in dietetics, further research is warranted in these areas, especially in countries with different dietetics education programs and health services delivery.

Educational Implications

Our findings regarding sociocultural factors in dietetic education have several educational implications. First, educators are advised to purposively consider the microcultures in which they help students learn, to better support students' boundary crossing, identity development, and transition into dietetics. Dietetics educators are perfectly positioned to shape the future workforce.[43] Our study findings invite educators to interrogate traditional ways of thinking and doing that serve as the foundation of education, socialization, and transition into the profession. Second, educators are encouraged to foster positive learning cultures, cultivating spaces for belonging and supporting learners in boundary crossing across the landscape of practice. Third, and mirroring the growing attention given to identity development in other health professions, our findings support that educators consider how the formal professionalism curriculum can be designed to optimally consider sociocultural learning, acknowledging dietetics as a landscape of practice and paying special attention to students' boundary crossing and professional identity development.[3,19,20,51]

CONCLUSIONS

Examining sociocultural learning including cultures, boundaries, and identity development is relatively new in dietetics. This research provides an opportunity for expanding current dietetics discourse using the theory of landscapes of practice. Sociocultural factors powerfully influence student-professional transitions and minicultures of cohesion, conformity, competition, and conflict aversion that exist with the profession. Professional identity formation is challenged due to boundaries that exist within learning environments. Dietetic educators are key stakeholders in supporting students navigate and cross boundaries. This study provides insights into and guidance for the profession in regards to the diversity across the dietetics landscape (including practices, settings, and roles) and the complexity of cultures and boundaries that students need to navigate to enter the profession.

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AUTHOR CONTRIBUTIONS

All authors conceptualized the design of the study. J. Dart completed recruitment and data collection. All authors contributed to the data analysis and interpretation of data. J. Dart drafted the paper and C. Rees, L. McCall, and S. Ash reviewed it critically and edited multiple iterations. All authors approved the final version.

Academics and Practitioners Interview Guide Version 2: January 24, 2018			
No.	**Question**	**Logic**	**Prompts**	**Secondary questions**
Introductory questions				
1	Can you tell me a little about yourself and role in dietetic education?	Introductions/icebreaker/ building rapport	Undergraduate/postgraduate workplace settings	
2	What are your understandings of professionalism for dietetics?	Introduction to the topic	Can you explain your understanding of professionalism as it relates to working as a dietitian please? What does professionalism mean to you?	
Student professionalism interactions				
3	We are interested in your interactions and experiences with students around issues of professionalism. What are your most recent or most memorable experiences with students related to professionalism or the lack of? (Let participants share their stories as uninterrupted as possible and only chip in with prompt questions if participants have not given full/rich narratives. For example: Where did it take place and who else was there? What happened? What did you do and why? How did you feel at the time and now?)	What impact did this experience (if any) have on your understandings and attitudes toward professionalism?	How has this experience influenced your thoughts and feelings toward teaching and assessing professionalism?	If participants are volunteering all negative experiences, prompt them to talk also about positive experiences and vice versa.
Managing lapses in professionalism/unprofessional behavior				
4	We are interested in approaches to managing and dealing with professionalism lapses in the university and workplace setting.	What are your experiences when a student has been engaged in professional lapses, and how has it been handled by the	Remediation strategies What supports/resources have been or might be helpful?	Has this/does this limit/affect students' progression? Can you share any examples?
				(continued on next page)

Figure 2. Interview guides used in individual or group interviews with participants to explore teaching, learning, and assessing professionalism in dietetic education in Australia and New Zealand.

Academics and Practitioners
Interview Guide Version 2: January 24, 2018

No.	Question	Logic	Prompts	Secondary questions
		university/in the workplace/placement setting?		
Teaching, assessing, and curriculum approaches to professionalism				
5	Professionalism hasn't always been explicitly taught and has been more a part of the informal and hidden curriculum. Invite participants to share their teaching and learning and assessment approaches in university and placement/workplace settings.	What are your approaches to teaching and learning and assessing professionalism in your: • dietetic program? • placement setting? • role/team?	Prompts Is there dedicated lecture(s)/unit? How does assessment occur on placement/at university? Who is involved?	
Strengthening professionalism recommendations				
6	Exploring areas for strengthening professionalism learning, teaching, and assessing and any other elements raised by participants. This part of the discussion will elicit participants' recommendations for developing/strengthening professionalism teaching, learning, and assessment. Prompt questions might include those in this row.	How might professionalism be strengthened in curriculum and placement experiences for dietetic students?	How might students learn professionalism better? What are your needs around professionalism to support/strengthen teaching and assessment?	What are current challenges/limitations to teaching and assessment of professionalism in university and workplace settings?
Thanks and termination of interview/focus group				
7	Are there any contributions you would like to make or questions you would like to ask that have not been covered?	Participant opportunity		
				(continued on next page)

Figure 2. *(continued)* Interview guides used in individual or group interviews with participants to explore teaching, learning, and assessing professionalism in dietetic education in Australia and New Zealand.

Academics and Practitioners Interview Guide Version 2: January 24, 2018			
No.	**Question**	**Logic**	**Prompts**	**Secondary questions**
8	I appreciate your time and contributions. Thank you for participating. Your descriptions of experiences and suggested recommendations have made a valuable contribution to the study.	Thanks and close		

Student Interview Guide Version 2.0 May 2018 Interview and focus groups with final-year dietetics students at course completion			
No.	**Question**	**Logic**	**Prompts**	**Secondary questions**
Introductory questions				
1	Can you tell me about yourself and where you studied dietetics	Introductions/icebreaker/ building rapport	Undergraduate/postgraduate	
2	What are your understandings of professionalism for dietetics?	Introduction	As a newly qualified dietitian, what does professionalism mean to you?	
Teaching and learning professionalism				
3	Now we are going to move on to how you were taught and how you learnt about professionalism. Professionalism isn't always explicitly taught—sometimes it can be more a part of the informal and hidden curriculum. (Explain hidden and informal curriculum.) First of all, I am interested in understanding how you were taught about professionalism in your course.	Teaching professionalism	Teaching methods Sessions Where—at university? On placement? Workplace?	Can you tell me about some of the teaching you recall related to learning about professionalism?
				(continued on next page)

Figure 2. *(continued)* Interview guides used in individual or group interviews with participants to explore teaching, learning, and assessing professionalism in dietetic education in Australia and New Zealand.

| Student Interview Guide Version 2.0 May 2018 | | | |
| Interview and focus groups with final-year dietetics students at course completion | | | |

No.	Question	Logic	Prompts	Secondary questions
4	What experiences during your course are most memorable in terms of how you learned about professionalism?	Learning professionalism	Where—at university? On placement?	What was memorable or significant about this experience? Why did it have an impact on you?
Assessment of professionalism				
5	Professionalism is a component of the Competency Standards that you have to meet to fulfill requirements for entry to practice. How was *your* professionalism assessed during your course?	Assessment approaches	Where? When in the course? By whom? Key assessment tasks? Evidence provided?	Can you tell me about the approaches used to assess your professionalism during your course?
6	Can you tell me (us) about your experiences of professionalism assessment?	Experiences of assessment	Summative/formative Assessors/context Remediation opportunities	I am interested in knowing more about how your professionalism was assessed.
Memorable professionalism dilemmas				
7	Research with other health care students has revealed some of them encounter professionalism dilemmas during their course—experiences that they have found challenging or confronting for a range of a reasons. They may be in relation to lapses in professionalism they have observed or been involved in. (Define professionalism lapses.) Can you share with me (us) any memorable professionalism dilemmas you experienced during your course while at university or on placement?	Exploration of memorable dilemmas Gathering narratives on memorable professionalism dilemmas	May have been on placement or at university Who was involved? Where?	How did you make sense of that experience? Opportunity provided to debrief/ support?
Thanks and termination of interview/focus group				
8	Are there any contributions you would like to make or questions you would like to ask that have not been covered?	Participant opportunity		
9	Appreciate your time and contributions.	Thanks and close		

Figure 2. *(continued)* Interview guides used in individual or group interviews with participants to explore teaching, learning, and assessing professionalism in dietetic education in Australia and New Zealand.