



Minerva Access is the Institutional Repository of The University of Melbourne

**Author/s:**

Mariño, RJ;Ghanim, A;Barrow, SL;Morgan, MV

**Title:**

Cultural competence skills in a dental curriculum: A review

**Date:**

2018-02-01

**Citation:**

Mariño, R. J., Ghanim, A., Barrow, S. L. & Morgan, M. V. (2018). Cultural competence skills in a dental curriculum: A review. *European Journal of Dental Education*, 22 (1), pp.e94-e100. <https://doi.org/10.1111/eje.12263>.

**Persistent Link:**

<https://hdl.handle.net/11343/292607>

Cultural Competence Skills in a Dental Curriculum: A review.

Rodrigo J. Mariño, C.D., M.P.H., Ph.D.

Principal Research Fellow and Reader

Oral Health Cooperative Research Centre

Melbourne Dental School

The University of Melbourne

Aghareed Ghanim, B.D.Sc., M.D.Sc., Ph.D.

Senior Clinical Fellow

Melbourne Dental School

The University of Melbourne

Su-yan L. Barrow, R.D.H., M.A., M.P.H., Ph.D.

Senior Lecturer

Melbourne Dental School

The University of Melbourne

Mike V. Morgan, B.D.Sc., Ph.D.

Head of School

Melbourne Dental School

The University of Melbourne

Direct correspondence and requests for reprints:

A/Prof Rodrigo Mariño

Melbourne Dental School

The University of Melbourne

Melbourne, Vic. 3010, Australia

Tel.: +61 (0)3 9341 1558

This is the author manuscript accepted for publication and has undergone full peer review but has not been through the copyediting, typesetting, pagination and proofreading process, which may lead to differences between this version and the [Version of Record](#). Please cite this article as [doi: 10.1111/eje.12263](https://doi.org/10.1111/eje.12263)

This article is protected by copyright. All rights reserved

Fax: +61 (0)3 9341 1597

E-mail: [r.marino@unimelb.edu.au](mailto:r.marino@unimelb.edu.au)

# Author Manuscript

DR. RODRIGO MARINO (Orcid ID : 0000-0002-3061-843X)

Received Date : 22-Aug-2016

Revised Date : 09-Jan-2017

Accepted Date : 30-Jan-2017

Article type : Original Article

Cultural Competence Skills in a Dental Curriculum: A review.

#### Abstract

This study aims to analyze and evaluate the extent of transcultural content in the current curricula of the Doctor of Dental Surgery (DDS), Bachelor of Oral Health (BOH) and Master of Nursing Science (MNSc) courses at the University of Melbourne. Methods: The study was conducted in two phases: a quantitative review and assessment of the current DDS, BOH and MNSc curricula at the University of Melbourne; and interviews with various staff from the University of Melbourne who were responsible for curriculum development for these courses. Results: Staff from the DDS, BOH and MNSc courses concurred on the importance of transcultural skills, the necessity of covering cultural issues relevant to the main ethnic groups in Australia, obstacles faced and the lack of evaluation methods for cultural competency. The Nursing curriculum had the most extensive coverage of transcultural content throughout both years of the course (total 71 formal contact hours; mean 36 formal contact hours per year). In contrast, modules on transcultural skills were limited to the first two of the three year BOH course (54 hours; 18 hours) and only the first of the four year Dental curriculum (40 hours; 10 hours). Conclusion: The DDS course showed less time devoted to formal teaching of these concepts compared to the Nursing and BOH courses despite showing a noticeable improvement from a previous assessment conducted in 2006. It is hoped that the DDS course continues to further increase the transcultural content and find ways to incorporate more transcultural education.

## Introduction

Currently in Australia, 28% of the population of 22 million people is born overseas (1,2). This mirrors a corresponding increase in both the proportion of overseas-born patients accessing public oral health care. Data from the public dental health services show that migrant groups represent a significant proportion of the public patients' base (3). In view of this trend, it is inevitable that future oral health professionals will be required to work with different cultures and across cultural borders to deliver oral health care that is culturally sensitive and responsive to a multicultural population base. In addition, the demographics of the Australian dental student population has shifted from a predominantly Anglo-Australian or European background to one that is of Asian origin (4-6).

All health events are culturally mediated. Therefore, cultural variation may influence interaction between the clinician and the patients, potentially leading to a cultural background mismatch, the creation of barriers in the provision and delivery of health care and the subsequent loss of rapport with these patients. In order to address this and attain cultural competency, it is paramount that students in health profession courses, including dentistry, receive relevant training and exposure such that they acquire the knowledge to understand culturally influenced health behaviors. Additionally, student must develop the ability to communicate effectively with patients from cultural backgrounds different from their own as well as possess the appropriate understanding of cultural values, beliefs, attitudes, practice and skills necessary for effective service provision to a transcultural population base (7-10).

Cultural competence in health care is defined as 'a set of congruent behaviors, attitudes, and policies that come together among professionals and that enables them to work effectively in cross-cultural situations' (11). The goal of culturally competent health care services is to provide the highest quality of care to every patient, regardless of race, ethnicity, cultural background, English proficiency or literacy (12). Cultural competency represented by five interdependent key elements: cultural awareness, cultural knowledge, cultural skill, cultural encounters and cultural desire (12).

Research mainly in the fields of medicine and nursing emphasized the importance of the role of culture in influencing the attitudes of patients regarding their health beliefs, health related behaviors and practices, seeking health care, treatment compliance as well as professional practitioner-patient relationship (12-15). Furthermore, those authors suggest that health professionals who are sensitive to cultural expectations are more likely to be successful in

achieving good health outcomes amongst their patients and stress the importance of moving towards the provision of culturally competent health care through transcultural training.

In comparison to medicine and nursing, the literature on transcultural dental education is relatively limited. Nevertheless, it shows an increased awareness of its importance, recognition that it is a learned process, elements it should contain as well as calls for its integration into the dental curriculum (12,15-23). Moreover, publications on transcultural dental care examine the oral health status among ethnic minorities, their use of oral health care services as well as their oral health beliefs, knowledge, attitudes and behaviors (24-26).

Studies have confirmed the impact of socio-cultural factors on the oral health of culturally diverse groups and identified difficulties, including basic language facility and the comprehension of mandatory managed care, as being amongst the major common barriers to the provision and attainment of quality dental care (17, 27-29). Ensuring cultural or even linguistic matching is often not possible (30). This further emphasizes the importance of implementing effective transcultural skills training in dental education (17-20, 28, 31).

Over the past few years, there is a growing interest for the provision of transcultural dental education in Australia. A recent study explored the extent to which cultural competence is included in Australian and New Zealand dental programs' curricula (32). Nicholson and her collaborators concluded on the need to further develop an evidence based cultural competency education. Most notably, the Australian Dental Council (ADC) guidelines explicitly highlight cultural safety and sensitivity as one of the key professional attributes and competencies of a qualified oral health professionals and one of the key domains for inclusion into the curricula. The guidelines stressed that education providers seeking to have their education and training programs accredited by the ADC will need to demonstrate that the program enables students to achieve the required professional competencies (33, 34). Additionally, the National Health and Medical Research Council has developed a guide on how to integrate cultural issues into the planning and delivery of health care and services as a way to get a better health outcome for Australia (7).

A previous study in 2006 at the University of Melbourne, showed that transcultural content was under-represented, had a low formal profile and its delivery restricted to staff from a narrow spectrum of academic and professional background in the former 5-year Bachelor of Dental Science course as compared to the 6-year Bachelor of Medicine, Bachelor of Surgery and 4-year Bachelor of Physiotherapy courses (22).

With the introduction of the Melbourne Model at the University of Melbourne, the Bachelor of Dental Science was replaced by the graduate professional entry degree (Doctor of Dental

Surgery), which began in 2011 and requires the completion of an undergraduate Bachelor's degree of at least three years in duration with prerequisites, which are part of the core program of the Bachelor of Biomedicine course at the University of Melbourne.

This study aims to provide information regarding the current transcultural skill content within the dental curriculum in preparing future dental professionals for effective management of patients from culturally diverse backgrounds in the dental practice. The study explores and compares the representation of transcultural content within the current curricula of four health science disciplines at the University of Melbourne, namely, the Doctor of Dental Surgery (DDS), Bachelor of Oral Health (BOH), Bachelor of Biomedicine (BBiomed) and Master of Nursing Science (MNSc) courses. The study also compares present results with previous reviews of these contents in the dental curriculum at the University of Melbourne.

#### Methods

In order to examine the extent to which transcultural education has been incorporated into the curricula, all written and current documentation, including the course curricula, course handbook, course guide, student information, timetables and lecture notes from the DDS, BOH and MNSc courses as well as the BBiomed course handbook were assessed and reviewed. This involved the identification and quantification of the number of formal contact hours and credit points allocated in each year to the teaching transcultural skills via lectures, seminars, tutorials, workshops, field visits, practicals, problem-based learning, case studies or online courses as well as the class size. To achieve comparability with the 2006 study (22), the evaluation of the presence of transcultural content was based on the following five themes:

1. Psychosocial and Cultural Determinants of Health
2. Cultural Diversity Concepts
3. Transcultural and Aboriginal concept of health and illness
4. The Clinician-Patient Relationship
5. Effective communication skills

Following the courses review and after approval from the University of Melbourne's Human Research Ethics Committee, academic staff from those courses that had major responsibilities for curriculum development were identified and invited to participate in a semi-structured interview (two from the MNSc course, one from the DDS course, one from the BOH course, and one from the BBiomed course). Nonetheless, despite several follow-ups sent from

March to August 2013, staff from the BBiomed course did not respond to the invitation and were thus excluded from the interviews.

Six broad topics were addressed in the interviews in order to gain additional information along with clarification of information obtained from the quantitative analysis. These topics are presented in Box 1. Upon completion of each interview, tapes were transcribed. Once transcribed, thematic analysis was conducted (37). Each transcript was read and all relevant themes or concepts were recorded in separate codes. Themes and key word analysis were conducted to allow the researchers to better understand and to identify the nature and perceptions of the interviewees regarding the teaching of cultural competence and communication skills. Data collection and analysis extended from March and August 2013.

## Results

Review of the curriculum content in the three courses indicates that the 2-year MNSc course had the greatest emphasis on formal teaching of transcultural skills content, followed by the BOH course (See Table 1). For the MNSc course, approximately 71 hours were set aside for the teaching of transcultural content throughout both years as part of the core curriculum. In the 3-year BOH course, there were approximately 54 hours allocated to the teaching of those contents in the first two years as part of the core curriculum under the subjects. In the 4-year DDS course, approximately 40 hours were assigned to the teaching of transcultural content as part of the core curriculum (See Table 1).

In all three courses, the delivery of transcultural concepts was primarily through lectures. However, in the DDS and BOH courses, contents delivery were also, through workshops, seminars, and tutorials, which were fairly even, but considerably less when compared to lectures. In the MNSc course, although delivery of transcultural concepts was primarily through lectures, it was secondarily through practicals. The representation of formal transcultural contact hours through tutorials was minimal (See Table 1). In the DDS and BOH the transcultural curriculum followed a traditional model (See Table 1). In the transcultural curriculum in the MNSc course was a mixture of a traditional, integrated, hybrid and embedded model.

In the dental courses, the transcultural curriculum main focus was on the importance of psychosocial influences, cultural factors, the clinician-patient relationship and effective communication skills in the access and provision of culturally competent oral health care (See Table 2). However, the BOH expanded those transcultural contents to include and emphasize on the social determinants of oral health and its contribution towards the provision

of a patient-centered model of care. The MNSc transcultural curriculum showed an integration of the social determinants of health, the clinician-patient interaction, effective communication skills, cultural diversity and safety with an emphasis on Australian aboriginals' health (See Table 2).

In the DDS and BOH course, assessment of transcultural competency comprised of written examinations, presentations, essays as well as formative self and peer-reviewed feedback on performances in each workshop/seminar/tutorial session and an online video. The assessment of this competency in the MNSc course consists of not only written examinations and essays, but also includes oral examinations, self and peer-reviewed audio recordings of performances, online quizzes as well as lab and clinical attendance (See Table 2).

The teaching of transcultural content was not found to be part of the core curriculum in the BBiomed course. Instead, 38 transcultural modules were available in the BBiomed course as subjects, which were optional subjects designed to encourage learning across a broad range of disciplines. Data on the number of DDS and MNSc students who had undertaken transcultural breadth subjects during their undergraduate was not ascertained.

Academics interviewed from the three courses concurred on their awareness of the importance of including transcultural content into their respective curricula and cited the demographic changes in Australia and the obligation of healthcare workers to meet the transcultural needs of patients under their care as key reasons for supporting its inclusion into the curriculum. In addition, they concurred on covering a greater scope of culturally and linguistically diverse community groups within their respective curricula instead of focusing on a particular group.

Staff from the three disciplines indicated the inclusion of transcultural content when their respective courses first commenced, with continual modifications made over time. Dental staff further recommended the incorporation of additional transcultural content into their curriculum in addition to introducing a system that promoted student feedback/evaluation at the end of the second and third years to enable better regulation of the transcultural content within the DDS course. Similarly, BOH staff proposed for an increase in both the transcultural health content within their curriculum as well as the number of student placements in culturally and linguistically diverse communities. Nursing staff advocated for an increased integration of multiculturalism into their course.

The interviewees disclosed the presence of traditional and embedded transcultural content in the curricula of the three courses where cultural competency skills were taught and learnt by the direct interaction between healthcare workers and patients in a clinical setting.

The absence of any form of evaluation specific to transcultural competency and the necessity of undertaking further research in transcultural education, were acknowledged. Interviewees put an emphasis on the need to evaluate students' attitudes towards cultural competency training, as evident by "we are not really formalizing on assessment at the moment, it has to be more developed and integrated". Interviewees expanded on additional barriers to the inclusion of transcultural content into the curricula, these could be grouped into: time constraints; costs; and shortage of expert staff.

Regarding future plans for the improvement of transcultural content within the curricula, academics from the DDS and BOH courses suggested the inclusion of simulation activities involving actors, which would provide a "more realistic scenario" and "students will be able to adapt easier in seeing new patients", thus, emphasizing the provision of a more realistic experience relating to the interaction and management of culturally and linguistically diverse patients. In contrast, according to staff from the MNSc, this model of teaching and learning had been recently implemented in the MNSc course, in conjunction with the school of medicine and physiotherapy and was described as a "*great success*" with "*hopefully more collaboration occurring in future*".

#### Discussion

On analysis of transcultural skills content, it appeared that the MNSc course had the greatest emphasis on formal teaching of transcultural skills content, followed by the BOH course. The DDS course seems to emphasize theoretical aspects, rather than providing opportunities practice those skills. Considerable variation was also found with regards to course content, teaching methods and credentials of teaching staff involved, compared to the MNSc.

It could be argued, that different health care professionals may need different cultural training. Still, oral health clinicians and patients have to interact at a very intimate level within minutes of meeting (19). Behavioral changes that are lasting require numerous opportunities for practice and ongoing reinforcement. Research in this field has suggested that the most effective method of teaching transcultural skills should be continuous with a gradual increase in complexity (19,38). Without a solid foundation of transcultural theory and basic principles in earlier years, it would be more difficult for students to be able to fully understand more practical and complex material in subsequent years such as managing patients that are not only difficult to communicate with, but that are also of a culturally different background. For this reason, it is suggested introducing cultural competence and communication skills in the first clinical year and continue training over the clinical years (19).

Despite the comparatively lower number of hours devoted to teaching of transcultural concepts in the Dental curriculum, there was evidence of an improvement for the new DDS course compared with a previous study which analyzed the former Bachelor of Dental Science course (22). Whilst, data from the study was not absolutely comparable, there was an increase from an average of 5 hours per year to an average of 10 hours per year.

In the clinical setting, students had to apply their transcultural skills in the management of patients. The extent to which transcultural skills contents were taught in the context of clinical training could not be clearly determined in terms of hours or impact. Nevertheless, a recent study explored clinical supervisor's insight into the clinician-patient exchange within the clinical context. Clinical supervisors felt that cultural competence would benefit from curriculum enhancement (39). Students in clinical settings were able to utilize and reinforce their skills learnt from formal teaching as well as informally acquire new skills, often with feedback from their clinical supervisors (39). However, while the "hidden" learning within the clinical setting should be acknowledged, by no means it substitutes for formal teaching with didactic and organized educative sessions. Developing an adequate level of competence in transcultural skills had been shown to be difficult if students were left to rely solely on their personal experience and reflection regarding patient encounters (13).

The difficulties of measuring contents have been highlighted, as there are no established methods to assess curricula contents, in particular when informal teaching is involved (40). Thus, although collection of course material was performed in a systematic and detailed manner, with significant care and effort advocated to cross-referencing and standardization of data collection with criteria, there were limitations to the methodology including a degree of subjectivity in the estimation of contact hours and some relevant contents may have been missed. For example, transcultural content formed only a portion of the total content of some lectures and seminars and hence a subjective estimation had to be made of how much of the total lecture or seminar time was actually allocated to transcultural teaching.

Some limitations should be acknowledged when interpreting these findings. Data obtained may not necessarily be able to be extrapolated to other Dental, Oral Health or Nursing courses at other Universities in Australia. It is likely that different schools will have variations to differing degrees in how transcultural skills are taught. However, this need will only continue to increase in countries like Australia. Having those skills would endure a more positive health outcome (40). Acknowledging the obvious barriers of time and financial constraints, it is hoped that Dental schools will continue to further increase the transcultural content and find ways to support and incorporate more transcultural education formally.

Further collaboration with other dental schools in Australia and New Zealand or within the Universitas21<sup>(1)</sup> would be useful.

In addition to triggering the development of and improvements in healthcare curricula that places a higher emphasis on transcultural education, it is expected that the data obtained from this study serves to highlight the importance of cultural competency in healthcare, establish an effective and reproducible methodology for the assessment of transcultural skills content and encourage further research by other interested parties in this area. Additionally, as suggested by authors in the field (41), there is a need to move from descriptive studies to more evaluative research on the effects of cultural competence on clinical behaviors and health outcomes for culturally diverse patients.

#### Disclosure statement

The authors declare no conflict of interest.

#### References

1. Australian Bureau of Statistics. 2014 Census of Population and Housing: Media Releases and Fact Sheets, 2014, cat. no. 2914.0.55.002. 2015. AT: <http://www.abs.gov.au/ausstats/abs@.nsf/7d12b0f6763c78caca257061001cc588/5a47791aa683b719ca257306000d536c>. (accessed 24 February 2016).
2. Australian Bureau of Statistics. Migration, Australia, 2013-2014, cat. no. 3412.0. 2015. AT: <http://www.abs.gov.au/ausstats/abs@.nsf/Products/84074889D69E738CCA257A5A00120A69>. (accessed 24 February 2016).

---

<sup>(1)</sup>Universitas 21 is a global network of research-intensive universities, working together to foster global citizenship and institutional innovation through research-inspired teaching and learning, student mobility, connecting our students and staff, and wider advocacy for internationalization.

3. Mariño R, Calache H, Whelan M. Dental status and socio-demographic profile of adult users of public oral health care services in Victoria, Australia. *J Theory Pract Dent Public Health* 2013;1: 16-23.
4. Mariño R, Morgan M, Winning T, Thomson W, Marshall R, Gotjamanos T, Evans W. Sociodemographic backgrounds and career decisions of Australian and New Zealand dental students. *J Dent Educ* 2006;70:169-178.
5. Hawthorne L. Health workforce migration to Australia – trends and outcomes 2004-2010, scoping paper on international health professionals. Adelaide, SA: Health Workforce Australia. 2011. AT: [http://rcpsc.medical.org/publicpolicy/imwc/Ethical\\_Integration\\_Australia.pdf](http://rcpsc.medical.org/publicpolicy/imwc/Ethical_Integration_Australia.pdf). (accessed 27 July 2016).
6. Mariño R, Au-Yeung W, Habibi E, Morgan M. Socio-demographic backgrounds and career decisions of Australian oral health professions students. *J Dent Educ* 2012;76:1241-1249.
7. National Health and Medical Research Council. Cultural competency in health: A Guide for policy, partnerships and participation. 2006. AT: <https://www.nhmrc.gov.au/guidelines-publications/hp19-hp26>. (accessed 27 July 2016).
8. Wagner JA, Redford-Badwal D. Dental students' beliefs about culture in patient care: self-reported knowledge and importance. *J Dent Educ* 2008;72:571-576.
9. Jenks A. From “Lists of Traits” to “Open-Mindedness”: Emerging issues in cultural competence education. *Cult Med Psychiatry* 2011;35:209-235.
10. Lie DA, Lee-Rey E, Gomez A, Bereknyei S, Braddock CH 3rd. Does cultural competency training of health professionals improve patient outcomes? A systematic review and proposed algorithm for future research. *J Gen Intern Med* 2011;26:317-325.
11. Cross T, Bazron B, Dennis K, Isaacs M. Towards a culturally competent system of care, Volume I. Washington, DC: Georgetown University Child Development Center, CASSP Technical Assistance Center. 1989. AT: <http://files.eric.ed.gov/fulltext/ED330171.pdf>. (accessed 27 July 2016).
12. Campinha-Bacote J. The process of cultural competence in: the delivery of healthcare services. A culturally competence model of care. *J Transcult Nurs* 2002;13:181-184.

13. Campinha-Bacote J. A model and instrument for addressing cultural competence in health care. *J Nurs Educ* 1999;38:203-207.
14. Betancourt JR. Cross-cultural medical education: conceptual approaches and frameworks for evaluation. *Acad Med* 2003;78:560-569.
15. Carey JA, Madill A, Manogue M. Communication skills in dental education: a systematic research review. *Eur J Dent Educ* 2010;14:69-78.
16. Pine C, McGoldrick P. Application of behavioural sciences teaching by UK dental undergraduates. *Eur J Dent Educ* 2000;4:49-56.
17. Formicola A, Stavisky J, Lewy R. Cultural competency: Dentistry and Medicine learning from one another. *J Dent Educ* 2003;67:869-875.
18. Gerzina TM, Worthington R, Byrne S, McMahon C. Student use and perceptions of different learning aids in a problem-based learning (PBL) dentistry. *J Dent Educ* 2003;67:641-653.
19. Hannah A, Millichamp CJ, Ayers KM. A communication skills course for undergraduate dental students. *J Dent Educ* 2004;68: 970-977.
20. Kassebaum DK, Hendricson WD, Taft T, Haden NK. The dental curriculum at North American Dental Institutions in 2002-03: A survey of current structure, recent innovations, and planned changes. *J Dent Educ* 2004;68:914-931.
21. Larson K, Ott M, Miles J. International cultural immersion: en vivo reflections in cultural competence. *J Cult Divers* 2010;17:44-50.
22. Mariño R, Hawthorne L, Morgan M, Bata M. Transcultural skills content in a dental curriculum: a comparative study. *Eur J Dent Educ* 2012;16:e33-e40.
23. McHarg J, Kay E, Coombes L. Students' engagement with their group in a problem-based learning curriculum. *Eur J Dent Educ* 2012;16: e106-e110.
24. Kwan SY, Bedi R. Transcultural oral health care and the Chinese--an invisible community. *Dent Update* 2000;27:296-299.
25. Mariño R, Wright FAC, Minas IH. Oral health among Vietnamese using a community health centre in Richmond, Victoria. *Aust Dent J* 2001;46:208-215.
26. Mariño R, Minichiello V, MacEntee M. Understanding oral health beliefs and practices among Cantonese speaking older Australians. *Australas J Ageing* 2010;29:21-26.

27. Mariño R, Wright FAC, Minichiello V, Schofield M. Oral health through the life experiences of older Greek and Italian adults. *Aust J Prim Health* 2002;8:20-29.
28. Mariño R, Wright FAC, Schofield M, Minichiello V. Factors associated with self-reported use of dental health services among older Greek and Italian immigrants. *Spec Care Dentist* 2005;25:29-36.
29. Smith A, MacEntee MI, Beattie BL, Brondani M, Bryant R, Graf P, Hornby K, Kobayashi K, Wong ST. The influence of culture on the oral health-related beliefs and behaviors of elderly Chinese immigrants: a meta-synthesis of the literature. *J Cross Cult Gerontol* 2013;28:27-47.
30. Mariño R, Wright FAC, Minichiello V, Schofield M. Oral health beliefs and practices among Greek and Italian older Australian: a focus group approach. *Australas J Ageing* 2002;21:193-198.
31. Croft P, White DA, Wiskin CM, Allan TF. Evaluation by dental students of a communication skills course using professional role-players in a UK school of dentistry. *Eur J Dent Educ* 2005;9:2-9.
32. Nicholson S, Hayes M, Taylor J. Cultural competency education in academic dental institutions in Australia and New Zealand: A Survey Study. *J Dent Educ* 2016;80:966-974.
33. Australian Dental Council. Professional competencies of the newly qualified dentist. 2016. AT: <http://www.adc.org.au/documents/Professional%20Competencies%20of%20the%20Newly%20Qualified%20Dentist%20-%20February%202016>. (accessed 25 July 2016).
34. Australian Education International. International Student Data 2015. 2015. AT: <https://www.aei.gov.au/research/International-Student-Data/Pages/InternationalStudentData2011>. (accessed 24 February 2016).
35. Rich SK, Keim RG, Shuler CF. Problem-based learning versus a traditional educational methodology: a comparison of preclinical and clinical periodontics performance. *J Dent Educ* 2005;69:649-662.
36. Snyman WD, Kroon J. Vertical and horizontal integration of knowledge and skills - a working model. *Eur J Dent Educ* 2005;9:26-31.

37. Liamputtong P. Making Sense of Qualitative Data Generic principles regarding qualitative data analysis. In Liamputtong P. (Ed.): Research Methods in Health. Foundations for Evidenced Based practice. 2nd Edition. South Melbourne, Victoria, Australia: Oxford University Press, 2013.
38. Yoshida T, Milgrom P, Coldwell S. How do U.S. and Canadian dental schools teach interpersonal communication skills? J Dent Educ 2002;66:1281-1288.
39. Mariño R, Ghanim A, Morgan M, Barrow S. Cultural competency of dental students: clinical supervisors' perceptions. Eur J Dent Educ 2016; DOI: 10.1111/eje.12227.
40. Schwarz JL, Witte R, Sellers SL, Luzadis RA, Weiner JL, Domingo-Snyder E, Page JE Jr. Development and psychometric assessment of the healthcare provider cultural competence instrument. Inquiry 2015; DOI: 10.1177/0046958015583696.
41. Spencer C, Macdonald R, Archer F. Surveys of cultural competency in health professional education: A literature review. JEPHC 2008;6:1-17.

Box 1. Interview schedule.

1. In relation to educational programs on cultural diversity/communication skills for the students:
  - 1.a. Are these programs optional or compulsory (e.g., core subject; elective subject)?
  - 1.b. In which years is the training offered?
  - 1.c. When were the transcultural contents first incorporated?
  - 1.d. Are these programs stand-alone courses; or components of more than one course?
  - 1.e. Are the programs interdisciplinary with other faculties?  
If Yes: which academic department is mostly responsible for the programs?
  - 1.f. Curriculum type involved (e.g., traditional, integrated, hybrid or embedded model (35,36)).
  - 1.g. What is the teaching method (e.g., lectures, seminars: PBL; case studies; patient observation; research project; presentations; videos; etc.)?
  - 1.h. Please provide details about teaching staff backgrounds or specialties (e.g.,

multiculturalism studies, public health studies, social and behavioral science, others).

2. What are the resources and transcultural reference materials available?
3. Evaluation of transcultural competencies:
  - 3.a Do you have any pre- and post-course evaluation of the students' attitudes about cultural diversity?
  - 3.b. What is the assessment format?
  - 3.c. If not, do you plans to have one next year?
4. How do you recognize the importance of these programs (motivation)?
5. Challenges faced with respect to delivering transcultural education:
  - 5.a. Is there any issue related to the current program?
  - 5.b. What challenges and barriers do you face with respect to delivering transcultural education?
  - 5.c. Whether there are issues or not; Do you have any plans for improvement of the programs in the future years?
6. What are the future directions of the course?

Author Manuscript

Table 1. Curriculum type, credit points and formal contact hours relating to transcultural skill content in the Doctor of Dental Surgery (DDS), Bachelor of Oral Health (BOH) and Master of Nursing Science (MNSc) courses at the University of Melbourne

Course	Year	Course	Curriculum Type	Credit points	Lecture Time	Seminar Time	Tutorial Time	Workshop Time	Field Visit Time	Practical Time	Total Time
DDS (80 students)	1	Introduction to Professional Practice	Traditional	12.5	19	7	6	8	-	-	40
BOH (35 students)	1	Society and Health 1A	Traditional	12.5	6	6	-	-	-	-	12
		Society and Health 1B	Traditional	12.5	3	2	-	-	-	-	5
	2	Health Promotion 2A	Traditional	12.5	20	-	6	-	-	-	26
		Health Promotion 2B	Traditional	12.5	5	-	4	-	2	-	11
MNSc (110 students)	1	Nursing Assessment and Care	Embedded	25.0	10	-	-	-	-	-	10
		Clients with Acute and Chronic Illness	Hybrid, Embedded	25.0	5	-	-	-	-	4	9
		Foundations of Nursing	Traditional, Hybrid, Embedded	12.5	11	-	6	-	-	6	23

2	Mental Health and Illness	Integrated, Hybrid	25.0	3	-	-	-	-	8	11
	Clients with Acute and Chronic Illness	Hybrid, Embedded	25.0	5	-	-	-	-	4	9
	Nursing as Practice	Hybrid, Embedded	25.0	5	-	-	-	-	4	9

Table 2. Key concepts delivered, assessment format staff background and resources relating to transcultural skill content in the Doctor of Dental Surgery (DDS), Bachelor of Oral Health (BOH) and Master of Nursing Science (MNSc) courses at the University of Melbourne

Course	Course	Key concepts delivered <sup>*</sup>	Assessment format <sup>§</sup>	Background of teaching staff <sup>†</sup>	Resources <sup>*</sup>
DDS	Introduction to Professional Practice	1,2,3,4,5	1,3,4,5	1,4,5	1,2,3,4,5
BOH	Society and Health 1A	1,2,3,4,5	4	1,4	1,2
	Society and Health 1B	1,2,3,4,5	1,4	1	1,2
	Health Promotion 2A	1,4,5	1,3,4	1	1,2
	Health Promotion 2B	1,2,4,5	4	1	1,2
MNSc	Nursing Assessment and Care	1,4,5	4,7,8	2	1,2,3,4
	Clients with Acute and Chronic Illness 1	1,4,5	1,2,4,7,8	2,5	1,3,4,6

	Foundations of Nursing	1,2,3,4,5	4,6	2,3,4,5	1,2,3,4,6
	Mental Health and Illness	4,5	1,4,5	2	1,2,3,4,6
	Clients with Acute and Chronic Illness 2	1,2,3,4,5	1,2,4,7,8	2,5	1,3,4,6
	Nursing as Practice	1,4,5	1,2,4,7,8	4,5	1,3,4,6

¥: 1) Psychosocial and Cultural determinants of health; 2) Cultural diversity concepts; 3) Transcultural and Aboriginal concept of health and illness; 4) The clinician-patient relationship; 5) Effective communication skills.

§: 1) Written Exam; 2) Oral Exam; 3) Presentation; 4) Essay; 5) Audio / Video recording with self rating and classmate rating; 6) online quiz; 7) lab attendance; 8) clinical attendance.

†: 1) Melbourne Dental School; 2) Department of Nursing; 3) Other departments within the University of Melbourne; 4) Onemda VicHealth Koori Health Unit; 5) External Staff.

\*: 1) Textbook; 2) Class notes; 3) Websites; 4) Articles; 5) Fact sheets; 6) Learning Management system video.