Diversity in Health and Care 2009;6:77–84

Research paper

Enhancing the cultural competence of healthcare professionals through an online course

Fiona Kelly BA
School of Psychology, University College Dublin, Ireland

Irena Papadopoulos PhD MA(Ed) BA DipN Ed DipN NDN Cert RN RM
Professor of Transcultural Health and Nursing, Research Centre for Transcultural Studies in Health, Middlesex University, London, UK

What is known on this subject

- Health services in Western countries face the challenge of providing care to increasingly diverse populations.
- A key step in developing culturally sensitive services is the training of health and social care professionals in cultural competence.
- Previous studies have revealed both advantages and disadvantages to distance learning as compared with classroom learning.

What this paper adds

- This paper introduces a novel way of developing and enhancing skills in cultural competence for healthcare professionals.
- The paper adds to the body of evidence which shows positive learning outcomes for students who take part in online courses.
- This paper may provide a useful model for other educators to develop an online learning course.

ABSTRACT

With the marked growth of in-migration to many Western countries over the past few decades, health services face the challenge of providing care to increasingly diverse populations. Minority ethnic groups encounter cultural, linguistic and institutional barriers in accessing health services and in the quality and continuity of their care. A key step in developing culturally sensitive services is the training of health and social care professionals in cultural competence. This article describes an online course on cultural competence for health and social care professionals as an example of good practice. This 8-week course aims to enhance knowledge and skills in cultural competence through an interactive online learning environment. The paper begins with a general introduction to the concept of cultural competence in healthcare and the rationale behind it. It then examines the advantages and disadvantages of online learning as opposed to traditional classroom learning. The many advantages of online learning are discussed, including the flexibility for the learner to fit the course around their work and family commitments. The advantages and disadvantages of the course are subsequently examined from the viewpoint of the students through the course evaluation. This evaluation showed that the three critical elements for running a successful online course were present, namely content, learner support and learning activities. All received positive evaluations from the students. In conclusion, it is clear that online courses on cultural competence can be successful, so long as they are well designed and supported.

Keywords: cultural competence, healthcare professionals, online learning

Introduction

In recent decades, many Western countries have experienced an influx of immigrants, creating more culturally and ethnically diverse societies. In response to this increasing cultural diversity, health services can no longer focus solely on the needs of culturally homogeneous populations. In 2001, Duffy claimed that there was a cultural crisis in healthcare in the West that demanded urgent attention. Unfortunately, this crisis still remains today. To meet the needs of a multicultural society, healthcare professionals are now facing the challenge of providing culturally and linguistically appropriate services (Anderson *et al*, 2003).

Definition of culture, competence and cultural competence

There is a lack of consensus about the actual definition of cultural competence (Johnson *et al*, 2004; Papadopoulos *et al*, 2004). However, most definitions are variants of one developed by mental health researchers two decades ago, which defines cultural competence as a set of congruent behaviours, attitudes and policies, which come together in a system, agency or among professionals, that enables effective work in cross-cultural situations (Cross *et al*, 1989). Culture refers to integrated patterns of human behaviour that include the languages, thoughts, communications, actions, customs, beliefs, values and institutions of ethnic, religious or social groups. Competence encompasses the ability to function effectively at both an individual and organisational level within the context of the cultural beliefs, behaviours and needs presented by clients and their communities (Anderson *et al*, 2003). Cultural competence in healthcare describes the ability of systems to provide care for patients with diverse values, beliefs and behaviours, including tailoring delivery to meet patients' social, cultural and linguistic needs (Betancourt *et al*, 2005).

Rationales for the importance of cultural competence in healthcare

There are many rationales for the implementation of culturally competent care. First, the problem of racial and ethnic health disparities is well documented and well known in health and policy arenas. The provision of culturally competent care has the potential to reduce these disparities (Anderson *et al*, 2003; Beamon *et al*, 2005; O'Connell *et al*, 2007). Secondly, every patient has a set of cultural beliefs and experiences that shape the way they think about health and illness, which is known as their *explanatory model*. Explanatory models of illness refer to the ways in which people conceptualise and understand illness, its consequences and how best to treat it. These beliefs will greatly influence a person's perceptions of healthcare as well as their adherence to medication, and treatment outcomes (Kaur Kundhal, 2003). Thirdly, to ensure comfort, patient care must be explained and delivered in the patient's preferred language, via an interpreter if necessary, so that all information is comprehensible (Beamon *et al*, 2005). According to O'Connell *et al* (2007), poor adherence to medication, toxicities, and harm to a patient can all result from the inability to understand a prescription. Furthermore, a lack of culturally sensitive care can compromise the quality of the healthcare that the patient receives (Anderson *et al*, 2003). The need for cultural competence is also frequently discussed at the level of patient–healthcare professional interaction. Research suggests that culturally competent care may improve both the relationship and communication between the patient and the healthcare professional (Kripalani *et al*, 2006).

Training in cultural competence can relieve some of the anxiety and fear that many healthcare professionals experience when working with patients from cultures different from their own (Smith, 1998). According to Wilson (2004), encountering patients with different cultural beliefs can be a challenge for healthcare professionals. In such circumstances, adequate training may reduce the risk of misinterpretation, miscommunication and misdiagnosis. In a systematic literature review and analysis of studies evaluating training interventions to improve the cultural competence of healthcare professionals, Beach *et al* (2005) claim that excellent evidence exists that cultural competence training improves these professionals' knowledge, attitudes and skills. However, most of the conceptual frameworks emphasise that cultural competence is an ongoing and evolving process, and that a lifelong commitment to self-reflection and continued education is essential if one is to become culturally competent (Campinha-Bacote, 1998; Trevalon and Murray-Garcia, 1998; Webb and Sergison, 2003). Campinha-Bacote (1999) encourages healthcare professionals to view cultural competence as more of a journey rather than an ultimate goal.

Current approaches to promoting cultural competence

There are many current approaches to cultural competence education. Kripalani *et al* (2006) differentiate between knowledge-based programmes, attitude-based curricula and skill-building educational programmes. Carrillo *et al* (1999) warn against a categorical approach to teaching cultural competence that focuses on specific characteristics of certain groups of people. However, the authors endorse the recommendation made by Crandall *et al* (2003) that training should be based on one framework chosen from those available to design course content and educational experiences and to help to determine changes in the students' knowledge, skills and attitudes.

What is online learning?

Advances in computer and information technologies are changing and revolutionising the way in which education and training are delivered (Kim and Bonk, 2002, p. 36). According to Greenberg (1998), online or distance learning is 'a planned teaching/learning experience that uses a wide spectrum of technologies to reach learners at a distance and is designed to encourage learner interaction and certification of learning.' An online course is one that is primarily Internet-based, where the teacher and learner are separate in space and possibly in time. According to Oliver (1999), it is important that some of the course materials remain offline to provide some diversity for the students.

The effectiveness of the online learning experience is influenced by a number of different factors (Ng, 2007). In terms of the course design, the course content, learner support and learning activities are the three critical elements for effective online learning (Oliver, 1999). Liu (2008) describes the formation of an online community as another essential element for high-quality online learning. Many studies have found online learning to be as effective as traditional classroom learning. For example, a study by Neuhauser (2002) that compared two sections of the same course, with one section online and asynchronous, and the other face to face, found no significant differences in test scores, assignments, final grades or participation grades. Four out of the five students found the course to be as effective as or more effective in terms of their learning compared with the typical face-to-face course. In a recent satisfaction study of 250 students, Drennan *et al* (2005) reported that student satisfaction was influenced by positive perceptions of technology and the ability to work alone. According to Martin *et al* (2005), it is crucial that an online course is based on interaction, in order to prevent passive learning and encourage students to remain actively engaged in the learning process.

Advantages of online learning

There is an abundance of well-validated research that has provided reliable findings about the value of online learning. The development of the Internet and various technologies has allowed a much broader and diverse population to participate in online learning. One commonly stated advantage is the anonymity of participating in an online course. Merryfield (2003) proposes that online discussion acts as a veil to protect people from the inhibitions they may usually experience in face-to-face interactions. Online discussion may also give participants the confidence to express their opinions and ideas because everyone has the same opportunity to 'speak up.' Merryfield (2003) also highlights the advantage of technology in linking people from across the world. Connecting people from diverse backgrounds adds to the experience by providing new ideas, interpretations and perspectives. Course instructors may also have different cultural backgrounds, and their practical knowledge and experiences enrich the learners' online experience by exposing them to knowledge that cannot be found in books. The great advantage of asynchronous discussion through, for example, online forums or Internet discussion boards is that it allows more time for reflection and deep thinking, as there is no urgency about the need for a response (Curtis and Lawson, 2001). Participation is flexible, and students can contribute on their own terms, so there is less social pressure to conform (Carr-Chellman and Duchastel, 2000). Each student can also view other students' postings and learn from other people's opinions and perspectives on issues. Hanna and de Nooy (2003) claim that asynchronous communication is also important for people who do not have English as their first language, as it allows them to reflect and to answer in their own time. Second-language participants may find it difficult to keep up with the fast-paced discussion that can occur in a traditional classroom setting (Warschauer, 1996; Merryfield, 2003).

Online learning environments facilitate access to course materials 24 hours a day, seven days a week, independent of geographical location. This ease of access enables students to complete assignments during their most productive time and in the comfort of their own home (Oliver, 1999). Lebaron and Miller (2005) highlight the benefit of access to a global range of resources. Instructors are also more accessible, as students are not restricted to office hours and can

communicate via email, with the instructor responding at his or her convenience. The online environment may also make instructors more approachable to students. According to Martin *et al* (2005), tutor availability is an important component of an online course, where students feel that they can contact their tutor at any time during their study.

Many distance learners differ from traditional university students in that they are already actively engaged in the workplace (Carr-Chellman and Duchastel, 2000). The flexible delivery of learning materials online is an obvious advantage, as it accommodates students' work and family commitments (Kim and Bonk, 2002). Hannay and Newvine (2006) found that students strongly preferred online distance learning, as it enabled them to work at their own pace and to balance their other commitments more easily. Online learners who are already in the workplace can be more motivated and have more clearly defined goals than traditional undergraduate students (Dibiase, 2000).

Disadvantages of online learning

Despite the obvious advantages of online learning, some problems have also been noted in the literature. First, online courses and teaching are more time-consuming and require more continuous attention to meet students' needs than teaching in a traditional classroom setting (Carr-Chellman and Duchastel, 2000; Barnard *et al*, 2007).

Secondly, Murray (2001) argues that one of the reasons for student attrition in online courses is precisely the misconception that online classes are easier to complete than traditional classes. Frankola (2001) claims that adult online learners drop out of online courses for many reasons, including a lack of time, lack of motivation, problems with technology, lack of student support, poorly designed courses or substandard instructors.

A third disadvantage that has been noted is the lack of human interaction and the absence of non-verbal cues. The absence of vocal and non-verbal cues in the text-only interactions can also lead to misunderstandings during the online interactions (Curtis and Lawson, 2001). Bullen (1998) argues that online communication is inferior to face-to-face interaction in that it hinders participants' ability to clarify and challenge assumptions and to construct meaning through verbal exchanges.

Finally, the quality of instruction can also be a disadvantage in distance learning. Instructors must be motivated and properly trained to ensure maximum learning outcomes for participants (Valentine, 2002). Wilson (2001) proposes that cultural discontinuities found in online situations can greatly affect the relationship between the teacher and the student. These discontinuities may arise because of differences in worldview, culturally specific vocabulary and concepts, the linguistic characteristics of the learner, and learner motivation.

The course described in this article

Course aim and structure

According to Kai *et al* (1999), healthcare professionals working with ethnically diverse patients are continually seeking support. The aim of the stand-alone course, *Promoting Cultural Competence in Health and Social Care Practice*, run by Middlesex University in the UK, was to help health and social care practitioners to enhance their skills and knowledge in working with ethnically diverse, multicultural populations, and to encourage the promotion of cultural competence in healthcare settings. This paper presents an evaluation of this course, the first of its kind in the UK, which was developed by the second author (RP). The data used are derived from the participants ($n = 5$) of the first cohort.

The course was delivered as a distance learning programme, using Middlesex University's learning environment OASISplus, via the Internet. Each student was supplied with a copy of the course reader to help to facilitate their online learning. All other course materials were available online. Students were expected to source other online material in support of their individual learning. Electronic access to the Middlesex University Library for the duration of the course aided this task.

The course took place over a period of eight weeks and consisted of 150 hours of learning. This consisted of ten hours of introduction to online learning, 50 hours of reading of online lecture materials, e-tutorials and e-feedback, 50 hours of taking part in e-discussions with peers and completing self-assessment exercises, and 40 hours of preparing a reflective online journal and completing theme and module evaluations online. Students were presented with a timetable which clearly stated the start and end dates of all course themes. All online activities had specific dates for student

participation. Activities included quizzes, preparing and posting PowerPoint presentations, chat-room discussions and posting on discussion boards. Dates when the course teaching team were available for individual e-tutorials were also provided.

Course syllabus

The course syllabus was based on the model of cultural competence described by Papadopoulos *et al* (1998), which consists of four stages of development. Each of the five themes in the course reflected the stages in the model. The first theme acted as an introduction to the model, and the subsequent four themes included cultural awareness, knowledge, sensitivity and competence. The first stage of the model, namely cultural awareness, begins with an examination of our own personal beliefs, values, identity and cultural history, and how these influence our own lives and the lives of patients/clients for whom we provide care. The second stage, cultural knowledge, involves a commitment to learning about different cultures and their beliefs, values and practices. The third stage, cultural sensitivity, emphasises the importance of the development of equal and appropriate relationships between the health or social care practitioner and their patient/client. Effective interpersonal communication and trust are essential to the development of such relationships (Papadopoulos, 2006). The final stage, cultural competence, can only be reached by achieving a true understanding of the first three stages, and it involves the assimilation of this understanding in the skills necessary to practise cultural competence in the workplace. An important part of this stage is to both recognise and challenge any form of discrimination, including racism, in the healthcare setting (Papadopoulos, 2006).

Participant assessment

The assessment scheme incorporated both formative and summative assessment. The formative assessment included self and peer assessments, where students were encouraged to assess their learning through the various self-assessment tests available online. The summative assessment was in the form of a reflective online journal. This journal acted as a continual dialogue for students as they progressed through the course. Students were expected to make regular entries and to write around 300–500 words per week, with references to the literature. The aim of the journal was to help students to focus on each week's theme and how it influenced their thinking, as well as anticipating how their learning achievements could be applied to their professional work.

Course evaluation

The participants

The data used in this article were derived from the five participants of the first cohort. These consisted of a white English qualified midwife residing in the UK and undertaking a Masters course in midwifery, three Greek qualified nurses residing in Greece, two of whom were undertaking a Masters course in nursing at a Greek university, while the third was studying for a doctoral degree at a Greek university, and an Irish student studying for a doctoral degree in psychology and residing in Ireland. All of the participants were female.

The method

The course was evaluated through weekly online questionnaires which focused on the learning activities of the week and the technical aspects of the course. On completion of the course, a module evaluation form was completed online by all of the participants, who were asked for their opinions on a range of course elements, such as the tutor and module coordinator support, peer support, navigation of the programme, usefulness of the material provided and covered, and finally an overall evaluation of the course in terms of enhancing professional cultural competence. Both the weekly and end-of-course evaluation tools captured qualitative and quantitative data. The participants were informed that any reporting of the evaluation would be done anonymously. Permission to use the data for this article has been granted by all of the participants.

The evaluation results

Tutor support

All of the participants agreed that the tutors were courteous, helpful, and assisted them in achieving the learning outcomes. The teaching support was successful in encouraging students to maximise their learning by means of the questions, comments and discussion points provided both in general group discussions and in the reflective journals. As one student noted, 'It was great to feel that there was always support there if we needed it.'

Peer support

Another clear advantage was the peer support that existed during the course, with continual online interaction between the students via the online discussion

boards and email. A third of the students agreed that the discussion boards promoted learning. The following comment by a student illustrates this:

> '[The discussions boards] gave us the opportunity to voice our opinions and to look at other people's opinions on issues. It also enabled us to learn about each others' cultures. It also made it feel more of a class environment and that you were not completing the module alone.'

The facilitation of asynchronous discussion was an additional strength of this course, as it accommodated the students' work and family commitments. Students had time to reflect on the discussion points and to add their own opinions in their own time. The online presentations were very popular with the students, and were 'easily comprehended and very informative.' In the course evaluation all of the participants agreed that the online quizzes promoted learning. As one participant noted:

> 'The quizzes enabled us to put what we had learned into real-life scenarios experienced every day working in healthcare. It added to the practicality of the course. They were fun and got us thinking!'

Cultural diversity

The students and tutors were themselves from diverse backgrounds, and this enhanced the learning experience by providing new perspectives and ideas to reflect on. When asked during the course evaluation if the module was useful overall, one student indicated that it was, because 'You have the chance to get in touch with contemporary opinions of students of other countries.'

System navigation and workload

All of the students also agreed that the online course was easy to use and had a manageable workload. Although they were new to distance learning, they agreed that any initial anxiety disappeared as they learned to navigate around the system. One student noted in their reflective journal that:

> 'My first excitement about having the course through an e-learning programme, quickly [turned] out to be my anxiety! So inevitably I found myself wondering if I could ever make it with the course and all this [new] knowledge. ... In conclusion, my experience through my continuing 'new' knowledge supplies me with new stimulations and raised my awareness for further searching and learning. ... Eventually, it wasn't so difficult.'

Improving cultural competence

In terms of improving cultural competence, the students were in complete agreement that the course was very beneficial and met all of their expectations: 'The module covered so many useful topics and gave great insight into the whole area of cultural competence in healthcare.'

The participants felt that the course was extremely helpful in fostering their understanding of the elements that lead to cultural competence: 'It was very useful because it promoted cultural sensitivity, knowledge and awareness.'

Reflecting on the importance of enhancing individual cultural knowledge, one student commented:

> 'I had never imagined, not even thought, the degree to which ethno-history could finally have an impact on [the] habits, customs, awareness, way of thinking, structure, culture of a country.'

Some of the participants had previous knowledge in the area of cultural competence in healthcare. However, these students appeared to have a much greater understanding of the area on completion of the course. This is reflected in the following reflective journal extract:

> 'I found the distinction between culture-generic and culture-specific competencies very useful. I have read a lot of literature on cultural competency, but have not come across such a distinction.'

One of the major learning outcomes of the course, which was commented on by students in their reflective journals, was the realisation that being culturally competent is an ongoing learning experience and one which requires commitment:

> 'I realised that upon completing this course, I am only at the beginning of a never-ending learning experience to develop and improve my cultural competency. I think it is important to always remember that developing personal cultural competency is an ongoing commitment. It is imperative that as health practitioners we constantly assess and reflect on our encounters with people from different ethnic backgrounds to our own and grow from both the improvements we make and from the mistakes.'

Shortcomings of the course

Despite the many clear advantages of the course, a few drawbacks were noted. First, only five students enrolled on this new course. Secondly, all of the participants were female. In future courses it would be preferable to have a gender balance among participants to allow for both male and female perspectives and experiences. Thirdly, the group failed to organise the chat-room activities as recommended by the course. Even so, some participants agreed that the chat rooms could promote learning. As one of them stated:

> 'I think that in principle they can [promote learning] because it should imitate a classroom discussion. However, we did not use this medium at all. This may be because we are all new to distance learning modules.'

Finally, most of the participants reported some problems with accessing the computer helpdesk and the library online.

Discussion and conclusion

This paper focused on the evaluation of an online distance learning course that was designed to promote cultural competence among healthcare professionals. From the results of the students' evaluations, it is clear that the findings from this course compare favourably with the current literature on running a successful online course. The three critical elements for effective online learning, namely the content, learner supports and learning activities (Oliver, 1999), all received positive comments in the student evaluations. A good online community is essential for the success of an online course (Liu, 2008). All of the students agreed that a supportive online community had been created, which in turn helped to promote learning. According to Curtis and Lawson (2001), asynchronous discussion allows time for reflection and deeper thinking. Such benefits were also noted in the evaluation, with participants commenting on the advantage of being able to reflect on issues and contribute to the discussion in their own time. Merryfield (2003) proposes that the advantage of creating a culturally diverse online community is that it greatly enhances the learning experience. This was noted by all of the participants in the course evaluation. Barnard *et al* (2007) argued that time commitment can be an issue with online courses. However, this was not found to be the case with this course, as all of the participants claimed that the workload was manageable and that their personal and professional commitments were accommodated. Valentine (2002) noted that if the quality of instruction is poor, this can be a disadvantage of distance learning. The results of the course evaluation revealed that the participants found the quality of instruction to be high, with constant availability of tutor support.

Overall, this course proved successful in promoting cultural competence in health and social care professionals through online learning. However, the authors recommend that future online courses recruit larger numbers of participants and achieve a gender-balanced online community in order to enhance learning. Course designers should ensure that all of the learning resources are accessible to students. Students should aim to make use of the chat-room facilities to promote further discussion on course topics. In conclusion, the success of this course may provide a useful model for other educators.

REFERENCES

Anderson LM, Schrimshaw SC, Fullilove MT *et al* and the Task Force on Community Preventive Services (2003) Culturally competent healthcare systems: a systematic review. *American Journal of Preventive Medicine* 24:68–77.

Barnard L, Osland Paton V and Rose K (2007) Perceptions of online course communications and collaboration. www.westga.edu/~distance/ojdla/winter104/barnard104.html (accessed 15 June 2008).

Beach M-C, Price EG, Gary TL *et al* (2005) Cultural competence: a systematic review of health care provider educational interventions. *Medical Care* 43:356–73.

Beamon C, Devisetty V, Forcina Hill JM *et al* (2005) *A Guide to Incorporating Cultural Competency into Medical Education and Training.* www.healthlaw.org/library/attachment.77331?print (accessed 16 June 2008).

Betancourt JR, Green AR, Carrillo JE *et al* (2005) Cultural competence and health care disparities: key perspectives and trends. *Health Affairs* 24:499–505.

Bullen M (1998) Participation and critical thinking in online university distance education. *Journal of Distance Education* 13:1–32.

Campinha-Bacote J (1998) *The Process of Cultural Competence in the Delivery of Healthcare Services: a culturally competent model of care.* 3rd edn. Cincinnati, OH: Transcultural C.A.R.E. Associates.

Campinha-Bacote J (1999) A model and instrument for addressing cultural competence in health care. *Journal of Nursing Education* 38:204-7.

Carr-Chellman A and Duchastel P (2000) The ideal online course. *British Journal of Educational Technology* 31:229–41.

Carrillo JE, Green AR and Betancourt JR (1999) Cross-cultural primary care: a patient-based approach. *Annals of Internal Medicine* 130:829-34.

Crandall SJ, George G, Marian GS *et al* (2003) Applying theory to the design of cultural competency training for medical students: a case study. *Academic Medicine* 78: 588–94.

Cross TL, Barzon BJ, Dennis KW *et al* (1989) *Towards a Culturally Competent System of Care: a monograph on effective services for minority children who are severely emotionally disturbed.* Washington, DC: CASSP Technical Assistance Center, Georgetown University Child Development Center.

Curtis DD and Lawson MJ (2001) Exploring collaborative online learning. *Journal for Asynchronous Learning Networks* 5:21–34.

Dibiase D (2000) Is distance education a Faustian bargain? *Journal of Geography in Higher Education* 24:130–36.

Drennan J, Kennedy J and Pisarksi A (2005) Factors affecting student attitudes toward flexible online learning in management education. *Journal of Educational Research* 98: 331–40.

Duffy ME (2001) A critique of cultural education in nursing. *Journal of Advanced Nursing* 36:487–98.

Frankola K (2001) Why online learners drop out. *Workforce* 80:53–9.

Greenberg G (1998) Distance education technologies: best practices for K-12 settings. *IEEE Technology and Society Magazine* 17:36–40.

Hanna BE and de Nooy J (2003) A funny thing happened on the way to the forum: electronic discussion and foreign language learning. *Language, Learning and Technology.* http://llt.msu.edu/vol7num1/hanna/default.html (accessed 12 June 2008).

Hannay M and Newvine T (2006) *Perceptions of Distance Learning: a comparison of online and traditional learning*; http://jolt.merlot.org/documents/MSO5011.pdf (accessed 4 June 2008).

Johnson RL, Saha S, Arbelaez JJ *et al* (2004) Racial and ethnic differences in patient perceptions of bias and cultural competence in health care. *Journal of General Internal Medicine* 19:101–10.

Kai J, Spencer J, Wilkes M *et al* (1999) Learning to value ethnic diversity: what, why and how? *Medical Education* 33:616–23.

Kaur Kundhal K (2003) Cultural diversity: an evolving challenge to physician–patient communication. *JAMA* 289:94.

Kim KJ and Bonk CJ (2002) Cross-cultural comparisons of online collaboration. *Journal of Computer-Mediated Communication.* http://jcmc.indiana.edu/vol8/issue1/kimandbonk.html (accessed 7 June 2008).

Kripalani S, Bussey-Jones J, Katz MG *et al* (2006) A prescription for cultural competence in medical education. *Journal of General Internal Medicine* 21:1116–20.

Lebaron J and Miller D (2005) The potential of jigsaw role playing to promote the social construction of knowledge in an online graduate education course. *Teachers College Record* 107:1652–74.

Liu S (2008) Student interaction experiences in distance learning courses: a phenomenological study. *Online Journal of Distance Learning Administration.* www.westga.org/~distance/ojdla/spring111/Liu111.html (accessed 1 June 2008).

Martin GN, Brunswick N and Jolic N (2005) Developing an online undergraduate course in introductory psychology. *Journal of Health, Social and Environmental Issues* 6:11–23.

Merryfield M (2003) Like a veil: cross-cultural experiential learning online. *Contemporary Issues in Technology and Teacher Education* 3:146–71.

Murray B (2001) What makes students stay? *eLearn Magazine.* http://elearnmag.org/subpage.cfm?section=articlesandarticle=22–1 (accessed 12 June 2008).

Neuhauser C (2002) Learning style and effectiveness of online and face-to-face instruction. *American Journal of Distance Education* 16:99–113.

Ng K-C (2007) Replacing face-to-face tutorials by synchronous online technologies: challenges and pedagogical implications. *International Review of Research in Open and Distance Learning.* www.irrodl.org/index.php/irrodl/article/view/335/764 (accessed 11 June 2008).

O'Connell M-B, Korner EJ, Rickles NM *et al* (2007) Cultural competence in health care and its implications for pharmacy. Part 1. Overview of key concepts in multicultural health care. *Pharmacotherapy* 27:1062–79.

Oliver R (1999) Exploring strategies for online teaching and learning. *Distance Education* 20:240–54.

Papadopoulos I (ed.) (2006) *Transcultural Health and Social Care: development of culturally competent practitioners.* Edinburgh: Churchill Livingstone.

Papadopoulos I, Tilki M and Taylor G (1998) *Transcultural Care: issues for health professionals.* London: Quay Books.

Papadopoulos I, Tilki M and Lees S (2004) Promoting cultural competence in healthcare through a research-based intervention in the UK. *Diversity in Health and Social Care* 1:107–15.

Smith JS (1998) Concept analysis: cultural competence. *Journal of Cultural Diversity* 5:4–10.

Trevalon M and Murray-Garcia J (1998) Cultural humility versus cultural competence: a critical distinction in defining physician training outcomes in multicultural education. *Journal of Healthcare for the Poor and Underserved* 9:117–26.

Valentine D (2002) Distance learning: promises, problems and possibilities. *Online Journal of Distance Learning Administration.* www.westga/~distance/ojdla/fall53/valentine53.html (accessed 7 June 2008).

Warschauer M (1996) Comparing face-to-face and electronic communication in the second language classroom. *CALICO Journal* 13:7–26.

Webb E and Sergison M (2003) Evaluation of cultural competence and anti-racism training in child health services. *Archives of Disease in Childhood* 88:291–4.

Wilson MS (2001) Cultural considerations in online instruction and learning. *Distance Education* 22:52–64.

Wilson DW (2004) Cultural diversity: what do we fear? *Diversity in Health and Social Care* 1:145–50.

CONFLICTS OF INTEREST

None.

ADDRESS FOR CORRESPONDENCE

Ms Fiona Kelly, School of Psychology, Newman Building, University College Dublin, Belfield, Dublin 4, Ireland. Tel: +353 1 716 8147; fax: +353 1 716 1181; email: f.kelly@ucd.ie

Received 24 October 2008
Accepted 2 April 2009