Designing an online cultural communication module for pharmacy students across three countries

Abstract

Background and purpose: Healthcare professionals are required to interact with increasingly diverse cultural groups and complexity of culture. The purpose of this study was to design and disseminate an online cultural communication module for use by pharmacy students across three countries.

Educational activity and setting: Three pharmacy schools from Australia, the United States, and the United Kingdom developed 18 role-play videos demonstrating interactions between pharmacists and patients from diverse cultural groups. The videos were incorporated into an online module and implemented within each school's existing skills-lab and/or communication curricula in 2019. Students completed a survey and a reflection at the end of the module. Open-ended responses were analyzed qualitatively using an inductive approach.

Findings: 95% of students (n=500) across the three schools attempted the module. A total of 89% agreed the videos were useful in helping them understand the language and terms relating to cultural awareness in pharmacy, and 90% agreed the module helped them learn approaches to communicate with culturally diverse people in pharmacy. However, some students found the module lengthy and experienced technical issues with the platform. The majority of students identified awareness of cultural differences, respect for patient, and a person-centered approach as important when communicating with patients.

Summary: There is a growing need for appropriate training models to enhance cross-cultural skills and cultural awareness in healthcare professional training such as pharmacy. Collaborating internationally to develop a teaching innovation focused on widening understanding of culture and added to the depth of learning.

Keywords: Culture; Communication; Diversity; Collaboration; Pharmacy.

Conflict of interest: None

Disclosure(s): None

Background and purpose

Culture is a concept most people instinctively understand but may struggle to articulate. Culture is not limited to ethnicity and religion, but encompasses age, gender, sexual orientation, occupation, socioeconomic status, ethnic origin or migrant experience, religious or spiritual belief, and dis/ability.[1] Healthcare professionals are required to interact with increasingly diverse cultural groups and complexity of culture. The Process of Cultural Competence in the Delivery of Healthcare Services model by Campinha-Bacote,[2] perceives cultural competence as an "ongoing process in which the health care provider continuously strives to achieve the ability to effectively work within the cultural context of the client (individual, family, community)."

In the Center for Advancement of Pharmacy Education (CAPE) Educational Outcomes, cultural sensitivity is a subdomain within the Approach to Practice and Care Domain.[3] Graduating pharmacy students should be able to recognize the collective identity and norms of different cultures without overgeneralizing, demonstrate an attitude that is respectful of different cultures, assess a patient's health literacy and modify communication strategies to meet the patient's needs, and safely and appropriately incorporate a patients' cultural beliefs and practices into health and wellness care plans.[3] This necessitates a new approach in the way we educate students on communicating in a culturally safe manner. A variety of educational interventions including simulated patient activities, written cases and formal lectures, have shown positive changes in pharmacy students regarding enhanced cultural competency.[4]

This article describes the design, implementation, and evaluation of a pilot online pharmacy module for teaching cultural communication across three countries: the United States (US), the United Kingdom (UK), and Australia using the 3P Model of Classroom Learning by Biggs.[5] By working collaboratively, the team developed a sustainable resource representing culture from different perspectives, to be shared in order to aid cultural awareness in pharmacy students and inform educators globally of a possible approach to teach cultural communication. In this pilot, we aimed to evaluate the usefulness of the module in learning to communicate with culturally diverse people in pharmacy. There was no formal evaluation of changes in students' cultural competence.

Educational activity and setting

An innovative, collaborative, multi-institutional curricula design of an online module to further develop cultural communication in pharmacy was employed as a pilot study. This module was developed

as a global approach to teaching cultural communication at Monash University (Australia), University of North Carolina (US), and University College London (UK). It was delivered alongside existing skills-lab and/or communication courses to enhance skill development of pharmacy students.

Design of the online module

Bigg's[5] 3P Model of Learning describes the interaction of presage, process, and product. Presage describes the student factors and teaching context including student prior knowledge and experiences and teaching objectives. Process describes the level of learning, and product, the learning outcomes. The online module was designed to include an introduction to ensure all students across the three institutions received the same foundational understanding of cultural communication, and activities were designed to allow students to be able to reflect upon in the context of cultural communication.

Learning outcomes of the module for students were to: 1) describe the key terms and definitions in the context of delivering culturally safe healthcare; 2) identify strategies that can be used to approach communication with people from various cultures; 3) examine the participant's cultural worldview and values; and 4) reflect on the participant's cultural awareness and competence. The purpose of the pilot study was to determine the feasibility of implementation, therefore learning outcomes were not formally assessed.

The online module, titled Cultural Communication in Pharmacy Settings, was created using Articulate Storyline 360. The module included introductory didactic content, followed by videos and reflective exercises. Scenarios and video design were informed and reviewed for authenticity by provider, patient, and caregiver experiences. Each institution created 6 videos, no more than 5 minutes in length via in house creation utilizing a mix of faculty, students, and actors.

Didactic content included an introduction to culture, key terms for the delivery of culturally safe healthcare [e.g. cultural awareness, cultural sensitivity, cultural safety, cultural competence, cultural humility, ethnocentrism, prejudice, stereotype, discrimination], and person-centered care. Considering the different healthcare systems, we focused on the common patient care process instead of teaching content that may be country specific. The intention was not to educate on cultural groups, so the module was divided into three categories of pharmacist-patient interactions: 1) history taking, 2) medication administration, and 3) education/counseling. Each category focused on three diverse cultural groups and included two corresponding videos. Each pair of videos were different based on core concepts as outlined in Table 1. A total of 18 videos were integrated within the module; six videos in each of the

three categories. The entire module was designed to be reviewed by students independently with an anticipated completion time of less than 2 hours. History taking included communicating with an Australian Indigenous person, a person who spoke a different first language, and a person with different cultural beliefs. Medication administration included examples where education of devices may differ depending on religious background, a person with a disability, and a member of the aging population. The education/counseling category included communicating with a person identifying as LGBTQIA, a person experiencing mental health concerns, and a young female.

After each video, students self-reflected on three questions: 1) What cultural elements (if any) did you identify in the video?; 2) If you were the patient, how would you feel after this interaction?; 3) If you were the pharmacist in the interaction, what things (if any) would you have done differently?. The students could use these reflections during skills-lab and/or communication class discussions to further explore the topic. At the end of each of the three categories, students received a summary of key points.

Implementation of the module

The module was included in existing skills-lab and/or communication curricula for First Year students (P1) at Monash University Australia (MUA) and University College London (UCL) and for Second Year students (P2) at University of North Carolina (UNC). Completion was voluntary and learning objectives were not assessed. Implementation accounted for differences in teaching semesters across the three countries. The module was delivered via the institution's Learning Management Systems (LMS); Moodle® (MUA and UCL) and Sakai® (UNC).

Evaluation of module

The study was approved by the Monash University Human Research Ethics Committee, University of North Carolina Institutional Review Board, and University College London Research Ethics Committee. Students who did not consent to the study were still able to complete the online module and participate in the learning experience, however their data was excluded from analysis without penalty to their grade.

Students completed an end of module survey evaluating its usefulness in learning to communicate with culturally diverse people in pharmacy. The survey questions included four statements with a 5-point Likert scale of agreement ranging from strongly disagree to strongly agree (Table 2) and an open-ended question requesting for feedback on their experiences with the module. The module concluded with the

reflective question: "What is important for a pharmacist to be aware of when communicating with patients?".

All data was collected through the Articulate Storyline 360 tool and de-identified. Completion rates, student responses to the survey, and end of module reflections were analyzed. Open ended responses within the survey and the end of module reflection were analyzed qualitatively. All student responses were read, themes identified, and codes developed using an inductive approach.[6] The initial themes were developed by two research team members and analysis carried out using NVivo 11 (QSR International).

Findings

The module was piloted with a total of 525 pharmacy students in 2019 in March at MUA, April at UCL, and October at UNC. A total of 500 students (95.2%) attempted the module with 208 (41.6%) students completing the module. Partial completion (n=292, 58.4%) was recorded if students did not complete the activities or click the final icon to indicate completion. Students' evaluation of the online module is summarized in Table 2. A total of 88.9% (n=185) agreed the videos were useful in helping them understand the language and terms relating to cultural awareness and 90.4% (n=188) agreed the module helped them learn approaches to communicate with culturally diverse people.

Three themes were identified from the open-ended evaluation questions and key results are presented in Table 3. The three themes were: 1) usefulness of module and learning, 2) module design and 3) usability of the platform. Although the majority of students found the module useful, some students commented on module design (e.g. length and navigation). Three themes were identified from the end of module reflection and key results with representative quotes are in Table 4. The three themes were: 1) awareness of cultural backgrounds and differences, 2) respect for patient and 3) person-centred approach and empathy. The majority of students identified awareness of cultural differences, respect for patient, and a person-centred approach as important attributes when communicating.

Discussion

The module was created to support pharmacy student learning in cultural communication and awareness, with an aim to prepare students to work effectively across boundaries of culture. The module exposed students to international scenarios related to culture, not previously explored. It provided students with the opportunity to express their thoughts and understanding of culture in a safe space through the reflective components, subsequently bridging gaps within the classroom. This was

evidenced by the high proportion of students (79.8%) who would recommend the module to others. It is important to note that we did not collect student demographics including prior exposure to cultural training or their cultural background. Thus, future research could explore the impact of students' cultural background and prior exposure to culture on their cultural awareness in this module.

The innovation and strength of this module comes from the international collaboration of three pharmacy schools across three countries. Each institution contributed equally to the design of the module, agreeing on the learning outcomes and content through frank and honest discussion during planning and implementation. Existing teaching content, and the acknowledgement of the digital skills and resources that the team from each institution could offer also shaped division of work throughout this collaboration. This allowed the creation of a unique set of videos encompassing a variety of cultures, recognizing that while culture is diverse, commonalities can be found. The range and diversity of scenarios was identified as a useful element of the module and highlighted in students' open-ended evaluation. The module allowed students to gain exposure to a varied group of people, providing a rich experience while developing them as culturally competent healthcare professionals and as global citizens.

International collaboration is commonly practiced in research. However, co-development of educational experiences across global institutions is limited aside from student exchanges for experiential placements. In 2005, the United Nations Educational, Scientific and Cultural Organization (UNESCO) published their Framework for Priority action for change and development in Higher Education. It states "…The principle of solidarity and true partnership amongst higher education institutions worldwide is crucial for education and training in all fields that encourage an understanding of global issues….and the need for living together with different culture and value".[7] The strength of global collaboration across the three continents embraces the International Pharmaceutical Federation (FIP) Workforce Development Goals 8, Working with Others, and Goal 10, Equity and Equality.[8]

Equity and Equality is particularly important as we address the diversity within this module. Upward trends in migration[9] may mean patient and student demographics are increasingly diverse. It is therefore essential for educators and healthcare professionals to acknowledge they may be addressing an audience with backgrounds different from their own and appreciate both differences and similarities in how people live and communicate. The module may help to address this as indicated by 90.4% of students agreeing they learned approaches to communicate with culturally diverse people in pharmacy.

The module allowed for students to gain an appreciation of what culture means in other countries and how different ways of living are accepted and/or perceived in different societies. One student stated, "I think this was a great module. I loved all the different schools coming together on this from different countries!". It may also raise their awareness of their own unconscious bias towards different cultures, when viewed through the lens of another country. Acknowledging unconscious bias could help students further develop their communication and consultation skills, which if not addressed, could promote health inequalities.

Conducting this pilot brought together a research team of five individuals of varying backgrounds, all experienced teaching focused academics. In the course of building the strong partnership needed to deliver on this project we reflected on the diversity of our own academic bodies and what insights our own cultures helped inform or not inform our approach to teaching. Through discussion we reflected on the diversity of our student bodies, their experience and appreciation of cultures outside of their direct experience. Consideration was paid to how this might impact their ability to provide culturally sensitive care to their future patients and how the university experience could serve as a valuable opportunity to develop in this area. In addition, strong interpersonal professional relationships were developed which will strengthen future collaborations.

International projects can be full of challenging logistics including but not limited to differences in student progression through curriculum during different times of the year, navigating technical challenges with learning management systems, and data collection. However, throughout this experience, we have gained an appreciation and understanding of different educational approaches, and pedagogical research methods which can be applied at our own institutions. The synergy created when institutions from distinct regions of the globe collaborate is something that would be difficult to replicate authentically from one institution working alone.

A limitation of this study was the low completion rate. This could be attributed to the module not being summatively assessed. However, the remaining students registered as a partial completion, and this could be either due to not completing the activities or clicking the final icon to indicate completion. Another limitation was related to the LMS hosting the module. Students at UNC who used a different LMS reported technical issues not experienced to the same extent at MUA or UCL. Some students also commented the module was difficult to complete in one sitting.

This module allowed students to receive an introduction or reinforcement in cultural communication and to observe the application of these skills by viewing and reflecting on scenarios. This resource has the potential to bridge the gap between classroom education and application of person-centered care in the experiential setting. This is further evidenced by the themes that arose in their final reflections.

Regardless of year in the curriculum, these modules were designed to be used as a supplemental curricular resource. However, institutions should thoughtfully consider where in a student's training the modules would provide the greatest impact. Faculty could also consider the benefit of asking students to complete shorter sections of the module longitudinally to align with existing curricular content and decrease the time-burden for students. Additional future opportunities include an adaption to support interprofessional education (IPE) and a summative component such as an Objective Structured Clinical Examination (OSCE) assessing cultural communication. Any new design for future IPE sessions would require the creation of scenarios that reflect the professions involved both as individuals and working within multidisciplinary teams.

Summary

There is a growing need for appropriate training models to enhance cross-cultural skills and cultural awareness in health professional schools such as pharmacy.[10-11] This online module serves as an additional teaching tool to improve awareness of cultural communication skills and practice readiness as students reflected on the importance of cultural differences when communicating with patients. This was achieved through the introduction, reinforcement, and demonstration of skills needed in cultural communication. The emerging international collaboration of universities to develop a teaching innovation focused on widening understanding of culture, has added to the depth of learning experienced by both students and faculty. Further evaluation of student reflections undertaken while completing the online module will provide insights into the current level of students' cross-cultural skills, thereby guiding and informing educators how to better teach cultural communication and inform the creation of OSCE stations to assess students' cultural competence in a robust, meaningful, and objective way.

References

1. Capell J, Dean E. Cultural competence in healthcare: Critical analysis of the construct, its assessment and implications. J Theory Constr Test. 2007;11(1), 30-37.

2. Campinha-Bacote J. The Process of Cultural Competence in the Delivery of Healthcare Services: a model of care. J Transcult Nurs. 2002;13(3),181-184. https://doi.org/10.1177/10459602013003003

3. Medina MS, Plaza CM, Stowe CD, et al. Center for the Advancement of Pharmacy Education 2013 Educational Outcomes. Am J Pharm Educ. 2013;77(8),162. https://doi.org/10.5688/ajpe778162

4. Sales I, Jonkman L, Connor S, Hall D. A Comparison of Educational Interventions to Enhance Cultural Competency in Pharmacy Students. Am J Pharm Educ. 2013;77(4),76. https://doi.org/10.5688/ajpe77476

5. Biggs JB. From theory to practice: a cognitive systems approach. High Educ Res Dev. 1993;12(1), 73-86. https://doi.org/10.1080/0729436930120107

6. Thomas DR. A general inductive approach for analyzing qualitative evaluation data. Am J Eval. 2006;27(2),237-246. https://doi.org/10.1177/1098214005283748

7. United Nations Educational, Scientific and Cultural Organization. World Declaration on Higher Education for the Twenty-first Century: Vision and Action and Framework for Priority Action for Change and Development in Higher Education. https://unesdoc.unesco.org/ark:/48223/pf0000141952. Accessed 22 July 2021.

8. International Pharmaceutical Federation (FIP). The FIP Development Goals: Transforming global pharmacy 2020. https://www.fip.org/file/4793. Accessed 22 July 2021.

9. United Nations. Global Issues: Migration. Accessed 13 June 2022. https://www.un.org/en/global-issues/migration

10. American College of Clinical Pharmacy, O'Connell MB, Rodriguez de Bittner M, Poirier T, et al. Cultural competency in health care and its implications for pharmacy part 3A: emphasis on pharmacy education, curriculums, and future directions. Pharmacotherapy. 2013;33(12), e347-367. https://doi.org/10.1002/phar.1353

11. Poirier TI, Butler LM, Devraj R, Gupchup GV, Santanello C, Lynch JC. A cultural competency course for pharmacy students. Am J Pharm Educ. 2009;73(5),81. Accessed 13 June 2022. https://www.ncbi.nlm.nih.gov/pmc/articles/PMC2739064/

Table 1: Description of Videos Within the Module

Category	Lessons	Brief Video Description	Core Concepts
History taking interviews	Australian Indigenous people	The pharmacist questions whether the patient is Indigenous and their eligibility for a subsidy on their medicines	Acknowledging provider bias; communicating with patients with different entitlements
	People who speak a different language	The pharmacist gathers background information from the patient about their medication and social history	Acknowledging provider bias; communicating with patients when their first language is not the same as the pharmacist
	People of different cultural beliefs	The pharmacist collects information about the patient's use of natural/herbal medicines and vaccination status	Acknowledging provider bias; communicating with patients when there is a conflict in health beliefs
Medication administration and Device Use	People of different religious beliefs	The pharmacist providing information on eating after administering insulin to a Muslim patient observing Ramadan	Acknowledging provider bias; providing care when patients have different religious observances
	People with a physical disability	The pharmacist consults with a disabled patient and their family member who is also their main carer	Acknowledging provider bias; providing care when a communication barrier is present
	Older people	The pharmacist consults with an older patient with dexterity challenges	Acknowledging provider bias; providing care when a physical barrier is present
Education - Counselling	People who identify as LGBTQIA	The pharmacist questions the legitimacy of the prescription due to the patient's name change	Acknowledging provider bias; providing care by including patient in the decision-making process
	People suffering from mental health	The pharmacist challenges the patient's view of their medication taking experience	Acknowledging provider bias; providing care through joint decision making
	Young females	The pharmacist questions a young female patient's request about contraception and sexually transmitted infection prevention	Acknowledging provider bias; communicating with patients when there is a conflict in health beliefs

Table 2. Pharmacy Students Evaluation of the Online Cultural Communication Module (N=208)

Statement	Agree or Strongly Agree			
	All Students N=208[a] (%)	MUA N=88 (%)	UNC N=97 (%)	UCL N=23 (%)
The way the module materials were presented helped me to maintain my interest	170 (81.7)	79 (90.0)	73 (75.3)	18 (79.0)
The module helped me learn approaches to communicate with culturally diverse people in pharmacy	188 (90.4)	84 (95.0)	81 (83.5)	23 (100)
The videos were useful in helping me understand the language and terms relating to cultural awareness in pharmacy	185 (88.9)	84 (95.0)	79 (81.4)	22 (96.0)
I would recommend this module to others	166 (79.8)	77 (88.0)	70 (72.2)	19 (83.0)

[a]Number of students who completed the module

Table 3: Key Themes from Student Open-Ended Feedback on Their Experiences with the Online Cultural Communication Module and Representative Quotes

Themes	Key Results	Representative Quotes
1. Usefulness of Module and learning	Students expressed that the module provided exposure to situations and cultural scenarios they may otherwise not have considered or come across. Comments were also made with regards to the international collaboration and the module helping students prepare for real life practice.	"I think this was a great module. I loved all the different schools coming together on this from different countries!" – *UNC student* "I thought this module was super helpful! They presented situations that made me aware of cultural situations I had not previously thought of." – *UNC student* "I enjoyed the wide spread of circumstances and issues the module was able to highlight." – *UNC student* "I think that it was helpful to be given this module early on in the course to make us more aware of how to correctly communicate with patients with a range of different cultural beliefs so that we can work on implementing this in the future" – *UCL student* "It was interesting to see the wide range of approaches and scenarios." – *UCL student* "I think learning about these different scenarios really broadened my understanding of different cultures that I was unaware of and how to deal with these types of situations." – *MUA student* "These modules were brilliant and provided a thorough learning process. I loved watching the videos and gaining the insight to a real life pharmacy situation whilst learning." – *MUA student*
2. Module Design	The use of different versions of the same role play allowed students to make comparisons, however students found navigation of the module, the time required for completion and the volume of information challenging, suggesting the module design could be broken down to smaller chunks which may also simplify navigation.	"Somewhat hard to navigate at first though." – *UNC student* "If this was broken down into three smaller modules that could be completed at three different times that would make the modules more convenient." – *UNC student* "I believe there should only be one reflection for every video pair, that way the viewer can quickly identify what one pharmacist did wrong whereas the other did correctly." – *UNC student* "good to see a good role-play and a bad role-play for comparison" – *UCL student* "It is quite a lengthy process, maybe consider only asking for a written response to one of the clips for each scenario." – *MUA student* "There was just too much information and it took very long to complete. The videos started to get repetitive and boring and I was losing interest as I progressed through the videos." – *MUA student*

| 3. Usability of the platform | Students flagged that the useability affected by technical issues and potential accessibility issues of the module. The technical issues were mainly reported by students from UNC. | "This module is extremely glitchy. It automatically refreshes for me sometimes. Other times, it just freezes on certain parts. - *UNC student*

Subtitles would be great on the videos as the volume was pretty quiet-- otherwise good material!" – *UNC student*

"The video playback is kind of strange, I am unable to rewind or move forward to different parts of the video." – *UNC student*

"… whenever I suspended the module to complete later it wouldn't save some of my progress. I had to repeat some sections because of this" – *UNC student*

"If there is caption in the video, I think it will be helpful for us to understand the conversation much better." – *MUA student* |

Table 4: Key Themes and Representative Quotes to Students' End of Module Reflections on What is Important for a Pharmacist to be Aware of when Communicating with Patient

Themes	Key Results	Representative Quotes
Awareness of cultural backgrounds and differences	The majority of students identified the importance of being aware of cultural differences and beliefs when communicating with patients. Students recognized the potential impact of cultural awareness on achieving an optimal patient outcome.	"A pharmacist should take into account a patient's religious, cultural and personal beliefs. This can be made aware of by asking a patient or if the patient raises concerns. It is important for a pharmacist to provide a treatment that is compatible with the patient" – *UCL student* "Pharmacists need to be aware of the different personal and cultural beliefs a patient may have and be willing to help make their medications work for the patients['] specific situation"- *UNC student* "Pharmacists need to be aware of cultural differences that may interfere with the planned treatment strategies and work with patients to establish a trusting relationship" – *UNC student* "You must be aware of the patient's cultural background, your own cultural background, and biases or stereotypes that you may not realize you have internalized, you must be aware of their level of trust and respect, you must be observant of their nonverbal cues, and you must also be aware of what their health goals and values are and how that plays into their therapy" – *UNC student* "It's important to be aware of cultural differences between the pharmacist and patient and to be accepting and non-judgemental towards the patients*" – *MUA student* "Cultural differences and beliefs and how it may affect the way they consume medications and how they may affect distance or contact between patient and pharmacist" – *MUA student*

Respect for patient	Students conveyed that in addition to an awareness of the differences in cultures that respecting these differences in patients are as important, for patient communication.	That we are respectful of different cultures and that we do not show discrimination or prejudice, etc. Also that we should always treat patients with empathy and respect. – *MUA student* It is important for a pharmacist to respect their patients and to listen and respond appropriately in order to provide the best possible care for the patient and to ensure the patient feels safe and comfortable. – *MUA student* It is important to be accepting and respecting of these things when communicating with patients in order for them to feel comfortable and accepted – *MUA student* The pharmacist should make sure to be respectful towards the patients cultural beliefs at all times and consider them when counselling - *UCL student* It is important for a pharmacist to be respectful and aware of factors that are impatient to patients and how those factors could impact their care/adherence/outcomes. – *UNC student* All patients are going to be different, and they are all going to carry with them different circumstances that have shaped their lives. It is important to treat them all with respect and equity as every patient deserves the best from us as pharmacist when providing care. – *UNC student* Always be respectful of a patient's personal beliefs. Just because a pharmacist is an expert in their field doesn't mean that they are allowed to berate patients for having different beliefs from theirs. – *UNC student*
Person-centred approach and empathy	Students described the importance of communicating with a person-centered approach and to show empathy to patients where appropriate. They explain that regardless of culture, the patient should be communicated with holistically.	This will allow care to be patient tailored and the pharmacists can display empathy as the situations differ for all patients. – *MUA student* Each patient has their own set of special needs that must be catered to. A pharmacist can't assume that all patients are the same and thus must be treated the same. The most important thing pharmacists can do to prepare for these special encounters is to educate themselves on special populations and their needs. – *UNC student* Meet the patient where they are at, do not judge, listen carefully, ask questions, do not make assumptions, affirm their statements, and work in harmony with the patient to provide them with the best possible care. – *UNC student* Make sure the patient is listened to and address their concerns – *UCL student*