

SHORT REPORT

Co-designing an educational escape room: Integrating the knowledge and perspective of Aboriginal and Torres Strait Islander people with the design of an educational activity for healthcare students

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Abstract

Introduction: Healthcare students undertaking placements in the Northern Territory come from many different universities. Having previously and successfully used an educational escape room to teach students about interprofessional practice and teamwork, we aimed to co-design a new escape room activity with a scenario that would support students on their cultural learning journey.

Methods: There were three stages involved in the development of the escape room session: 1) train Aboriginal and Torres Strait Islander people to facilitate a consultative workshop, 2) design and deliver a consultative workshop that enabled Aboriginal and Torres Strait Islander participants to contribute to, and decide on, the new escape room scenario and learning objectives and 3) develop the complete educational activity, including props, session plan and evaluation. Each stage was evaluated by both participants and researchers to ensure that it aligned with the core ethical values of spirit and integrity, cultural continuity, equity, reciprocity, respect and responsibility. The final education session was trialled and reviewed with Aboriginal and Torres Strait Islander participants providing feedback and ensuring the integrity of the co-design.

Outcomes and evaluation: Each of the project objectives were met, with the final educational escape room being offered to students undertaking a healthcare placement in Darwin.

Conclusion: The co-design process took significant time and effort but meant responsible and responsive engagement, which strengthened relationships, provided opportunities for skill development and produced an educational session that will continue to improve healthcare students' understanding of working with Aboriginal and Torres Strait Islander people.

Keywords: co-design; escape room; education; cultural; healthcare

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Introduction

Flinders University (hereafter “the University”) offers interprofessional, educational sessions to supplement the learning that healthcare students receive on clinical placements undertaken in the Northern Territory of Australia (NT). One of these sessions, *Nana’s Nightmare*, has harnessed the benefits of gamification by using an escape room to educate students about teamwork and interprofessional practice (Moore & Campbell, 2020). Educational escape rooms sit under the umbrella of “serious games” (van Gaalen et al., 2020) and are increasingly being used to enhance learning in tertiary settings.

Cultural training for clinical placements is highly valued by both healthcare students and their supervisors, and cultural competencies are reflected in many healthcare professions’ practice standards. Cultural safety has been described as an iterative process (Wylie et al., 2021), and cultural learning, or implementation into practice, as existing along a continuum from cultural “awareness” to cultural “competence” to cultural “safety”, where cultural safety requires self-reflection and critique (Kerrigan et al., 2020). Students undertaking placements in the NT come from many different universities, often with limited experience working with Aboriginal and Torres Strait Islander people, who may not have English as a first language and/or who reside in remote areas with strong cultural ties. In recognition of the cultural learning journey and to provide students with opportunities to reflect on the personal experiences, interactions and relationships between cultures in the NT, our educational team aims to offer learning opportunities throughout students’ placements. We had successfully engaged students in interprofessional learning in *Nana’s Nightmare* (Moore & Campbell, 2021) and hoped that by developing a new educational escape room, with the central character being an Aboriginal person, the University could provide another cultural learning opportunity for students.

Cultural responsiveness is a concept that Indigenous Allied Health Australia (IAHA) describe as “the active approach taken by individuals, organisations and systems to promote and maintain cultural safety” by responding “appropriately to the unique attributes of the people, families and communities with whom they work” (Conclusion, para. 2). The organisation states that the responsibility for ensuring culturally safe and responsive care lies with education providers, service providers, organisations and health professionals (IAHA, 2019) and that the development of responsiveness capabilities is a lifelong cycle (Stothers et al., 2020). This manuscript describes how the University developed a new educational escape room, *Care on Country: Getting out of Gammongedawai*, to encourage students to continue on the pathway to culturally safe practice by developing culturally responsive ways of thinking and working.

The aim of the study was to co-design an educational escape room activity with a culturally appropriate and relevant scenario. The objectives were to:

- train Aboriginal and Torres Strait Islander people to facilitate a consultative workshop

- design and deliver a consultative workshop that:
 - demonstrates to Aboriginal and Torres Strait Islander participants how escape rooms can be used as an educational tool
 - supports participants to suggest and discuss, through group work, alternative escape room scenarios that reflect their experience in the health system
 - decides on one scenario for development into an educational escape room activity
- develop the complete educational activity (escape room plus post-game debrief and learning) based on the agreed scenario, development to include documentation, lesson plans, props and puzzle equipment.

Methods

The research team included: LM and NC, two non-Aboriginal academics and allied health professionals with previous experience in educational escape room design and delivery; EK, a non-Aboriginal medical educator and general practitioner; and MB and KS, two Aboriginal researchers with experience in health, advocacy and education. MM, an Aboriginal researcher, acted as an advisor.

Ethics approval was granted by the Human Research Ethics Committee of the Northern Territory Department of Health and Menzies School of Health Research and the Aboriginal Ethics Sub-Committee (approval code 2020-3698). The training and workshop components of the project were undertaken from May to August of 2020.

The IAHA Cultural Responsiveness Framework (IAHA, 2019) focuses on respect for centrality of cultures, self-awareness, proactivity, inclusive engagement, leadership, responsibility and accountability. These foci and the core research values of spirit and integrity, cultural continuity, equity, reciprocity, respect and responsibility were used to guide this project and will inform the ongoing delivery of the educational sessions.

Participant recruitment

Invitations to be facilitators or participants at the consultative workshop were circulated through the University's staff email list, local health services, Indigenous organisations and social media using purposeful and snowballing approaches.

Pre-workshop training

Pre-workshop training was provided for facilitators and the research team by LM. This training provided the facilitators and researchers with new skills and knowledge around their role at the upcoming consultative workshop. The *Nana's Nightmare* educational escape room was demonstrated; reasons for this project were described; and the importance of different lenses and expertise was highlighted. Instruction was provided on yarning methods and ways to ensure that participant voices were heard at the upcoming workshop. The facilitators contributed ideas for cultural protocols at the workshop, including having both a male and female person assigned as a cultural interface.

Table 1*Roles of Individuals Involved in the Project*

Person	Aboriginal or Torres Strait Islander person	Researcher	Workshop facilitator	Workshop participant	Advisor
MM	x				x
MW	x			x	
GO	x			x	
CW	x			x	
KAB	x		x		
RF	x		x		
KM	x		x		
MB	x	x	x		
KS	x	x			
NC		x			
LM		x			
EK		x			

Consultative workshop

One week after training, the consultative workshop was run. The format of this workshop was based on yarning methods, which include more informal and relaxed discussions with time for relationship building and sharing of ideas (Bessarab & Ng'Andu, 2010; Geia et al., 2013; Walker et al., 2014) and an adaptation of the framework “How to plan a quality assurance workshop” from *Researching Indigenous Health: A Practical Guide for Researchers* (Laycock et al., 2011).

With the assistance of facilitators and researchers, participants were introduced to educational escape rooms and tasked with producing a new storyline that included a main character, setting, healthcare conditions and ideas for something that would make the students in the escape room feel a sense of time urgency.

Development of the Gammongedawai educational escape room activity

The months post workshop involved development of the puzzles and an introductory video, sourcing of props and equipment, refining learning objectives and writing the post-game debrief and learning part of the educational activity. Seeking advice from cultural advisors during this time helped the non-Indigenous educators to navigate any uncertainties that came up and to reinforce the importance of having an Indigenous person involved in each delivery of the final product.

Evaluation

At each stage of the project, evaluations and feedback were sought from participants, facilitators and researchers. There was allowance for both written and verbal feedback, however the verbal option was neither deemed necessary nor preferred by any contributors. The researchers were encouraged to self-reflect at each stage and share their experience and learnings amongst the team.

Outcomes and evaluation

Pre-workshop training

The first objective, to train Aboriginal and Torres Strait Islander people to facilitate at a consultative workshop, was met, with four people attending the virtual training session. Facilitators were a mix of genders and worked in a variety of roles within Flinders University and the Poche Centre for Indigenous Health. One of the researchers had a dual role as facilitator-researcher.

Consultative workshop

The second objective, to design and deliver a consultative workshop, was also met. Despite much initial interest, response to participant recruitment was low, with only three people attending on the day. Numbers may have been affected by COVID-19 pandemic concerns, the difficulty in explaining the unfamiliar escape room concept to people, low value seen in the potential benefits of their contribution or the infancy of relationships. There were, however, five additional Aboriginal people who were able to contribute alongside their roles as facilitators and researchers. It was decided to continue with the project in this smaller, revised, COVID-safe format, while acknowledging that smaller participant numbers would reduce diversity among the group.

At conclusion of the workshop, evaluation forms were filled out by participants, facilitators and researchers. Participants (MW, GO, CW) were asked to answer yes, no or unsure to the following questions:

- Did the facilitators and researchers explain properly what you had to do?
- Was there enough time to meet the other people there?
- Did you learn about escape rooms for teaching?
- Did you like the food?
- Did everybody respect you?
- Did you feel that other people listened to your ideas?
- Would you tell your friends to go to a workshop like this?
- Did you feel happy and relaxed at the workshop?

All three participants answered yes to each question and stated that they were happy with the final storyline chosen. In the space encouraging further comments, participants stated that they enjoyed coming together, sharing ideas and brainstorming.

The facilitators (RF, MB, KM, KAB) were asked to answer yes, no or unsure to the following questions:

- Did the researchers explain properly what you had to do at the workshop?
- Did you feel that your ideas were respected by the researchers?
- Did you learn something new about escape rooms for teaching?
- Do you think the participants in your group were comfortable sharing their ideas?
- Do you think that the researchers respected and valued the knowledge of Aboriginal and/or Torres Strait Islander participants?
- Do you think that the people in your group enjoyed the workshop?

All four answered yes to each question and stated that they were happy with the final story chosen. In other written comments, facilitators wrote about liking the sharing of ideas, that all participants contributed, the clear expectations and that the final scenario represented remote practice.

Researchers (MB, KS, EK, LM, NC) all felt that the workshop was productive and aligned with the core ethical values of spirit and integrity, cultural continuity, equity, reciprocity, respect and responsibility.

The educational escape room—Care on country: Getting out of Gammongedawai

The third, and final, objective, to develop a complete educational session, was achieved over the following 6 months with additional co-design. There was a meeting with one male (RF) and one female (MB) cultural advisor 3 weeks after the workshop to ensure that the developing session and puzzles remained true to the cultural intent. As a result of this meeting, an introductory video was produced. This video included input, voiceover, video and still images of one of the facilitators, who is also the Flinders University NT Elder on campus. The education session was trialled and reviewed with Aboriginal and Torres Strait Islander participants providing feedback and ensuring the integrity of the co-design.

The presence of an Aboriginal and/or Torres Strait Islander facilitator in each delivery of the educational session was important to participants to promote cultural safety, respect and integrity. Delivery of the educational sessions also includes explicit discussion around the heterogeneity of the population and the limitations of the knowledge gained from the session.

What next?

The Gamongedawai educational escape room has become a regular educational offering to healthcare students undertaking placement in Darwin. To address the low participant numbers in the project, feedback from Aboriginal and Torres Strait Islander people will be sought on an ongoing basis formally, e.g., at an IAHA conference workshop, and accepted informally.

Conclusion

Working together to improve healthcare student education was rewarding, and working relationships were strengthened. The time and effort involved was significant when compared with the usual teaching preparation by a single academic. However, to engage responsibly and responsively, adequate time to build relationships is essential. The richness of the final product developed and the sharing of collective knowledge over this time was invaluable.

Delivery of these sessions will provide ongoing opportunities for developing skills amongst Aboriginal and Torres Strait Islander staff and for growing teaching capacity within the University.

This project has been a positive addition to a growing relationship with the local community. It produced an educational escape room activity driven by the ideas and experiences of local Aboriginal and Torres Strait Islander people and successfully demonstrated cultural responsiveness in action.

Acknowledgements

The authors wish to acknowledge the expertise and generosity of the Aboriginal and Torres Strait Islander participants and facilitators who contributed by sharing their time, cultural knowledge and good humour. Without their input, we would not have been able to complete this project. Thank you to Clinton Washington, Gabe Oth, Kath Martin, Kelly-Anne Browne, Maree Meredith, Moses Wignes and Richard Fejo.

Conflicts of interest and funding

The authors believe that no conflicts of interest exist. Funding for this project was received via a Flinders University, College of Medicine and Public Health, Capacity Building Funds Grant.

References

- Bessarab, D., & Ng'andu, B. (2010). Yarning about yarning as a legitimate method in Indigenous research. *International Journal of Critical Indigenous Studies*, 3(1), 37–50. <https://doi.org/10.5204/ijcis.v3i1.57>
- Geia, L. K., Hayes, B., & Usher, K. (2013). Yarning/Aboriginal storytelling: Towards an understanding of an Indigenous perspective and its implications for research practice. *Contemporary Nurse*, 46(1), 13–17. <https://doi.org/10.5172/conu.2013.46.1.13>

- Indigenous Allied Health Australia (IAHA). (2019). *Cultural safety through responsive health practice*. <http://iaha.com.au/wp-content/uploads/2019/08/Cultural-Safety-Through-Responsive-Health-Practice-Position-Statement.pdf>
- Kerrigan, V., Lewis, N., Cass, A., Hefler, M., & Ralph, A. P. (2020). “How can I do more?” Cultural awareness training for hospital-based healthcare providers working with high Aboriginal caseload. *BMC Medical Education*, 20, Article 73. <https://doi.org/10.1186/s12909-020-02086-5>
- Laycock, A., Walker, D., Harrison, N., & Brands, J. (2011). *Researching Indigenous health: A practical guide for researchers*. The Lowitja Institute. <https://www.lowitja.org.au/page/services/resources/health-policy-and-systems/aboriginal-and-torres-strait-islander-leadership/Researching-Indigenous-Health-Guide>
- Moore, L., & Campbell, N. (2020). Effectiveness of an escape room for interprofessional learning. *Medical Education*, 54(11), 1047–1048. <https://doi.org/10.1111/medu.14327>
- Moore, L., & Campbell, N. (2021). Effectiveness of an escape room for undergraduate interprofessional learning: A mixed methods single group pre-post evaluation. *BMC Medical Education*, 21(1), Article 220. <https://doi.org/10.1186/s12909-021-02666-z>
- Stothers, K., Rollins, W., Egan, R., & Murray, D. (2020). Integrating cultural responsiveness into social work field education curriculum: Lessons from the community. In R. Egan, N. Hill, & W. Rollins (Eds.), *Challenges, opportunities and innovations in social work field education* (pp. 73–83). Taylor & Francis Group. <https://doi.org/10.4324/9780429453618>
- van Gaalen, A. E. J., Brouwer, J., Schönrock-Adema, J., Bouwkamp-Timmer, T., Jaarsma, A. D. C., & Georgiadis, J. R. (2020). Gamification of health professions education: A systematic review. *Advances in Health Sciences Education*, 26(2), 683–711. <https://doi.org/10.1007/s10459-020-10000-3>
- Walker, M., Fredericks, B., Mills, K., & Anderson, D. (2014). “Yarning” as a method for community-based health research with Indigenous women: The Indigenous women’s wellness research program. *Health Care for Women International*, 35(10), 1216–1226. <https://doi.org/10.1080/07399332.2013.815754>
- Wylie, L., McConkey, S., & Corrado, A. M. (2021). It’s a journey not a check box: Indigenous cultural safety from training to transformation. *International Journal of Indigenous Health*, 16(1), 314–332. <https://doi.org/10.32799/ijih.v16i1.33240>