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Student success strategies: Approaches to navigating and understanding the determinants of health outside the classroom

Daniel Terry ^{a,b}, Blake Peck ^{a,b}, Andrew Smith^c and Swapnali Gazula ^b

^aSchool of Nursing and Midwifery, University of Southern Queensland, Ipswich, Australia; ^bInstitute of Health and Wellbeing, Federation University, Ballarat, Australia; ^cMercy Health Home Care Services, Mercy Health, Ballarat, Australia

ABSTRACT

Research approaches to better engage student learning regarding the determinants of health are somewhat limited. The present study highlights the evolution of an authentic fieldwork assessment and the strategies nursing students used as they navigated the assessment for learning activity outside the classroom, and how these impacted student's performance. A cross-sectional study examined learning strategies, assessment challenges and concept understanding according to academic performance among students over a 2-year period. Among the 282 (19.7% response rate) students, success encapsulated making time, planning, good organisation, checking in and making time. Being less successful centred on being busy with other courses or employment. Poorer performing students were less likely to understand the assessment requirements or just ran out of time. Performance-based assessments remain relevant to nursing student learning. However, students must explicitly understand their benefits, be motivated to engage, have the capacity to persevere and seek clarification if understanding is not achieved.


KEYWORDS

Nursing; learning; performance-based assessments; determinants of health

Introduction

A 3-year baccalaureate programme is to be completed to become a Registered Nurse in Australia, which may be similar to or considered shorter compared to other programmes globally. Nevertheless, students are to develop a comprehensive understanding of nursing for entry level practice in a multitude of clinical settings (Lee et al., 2023). In genuinely meeting this mandate of comprehensively preparing students, it follows that an understanding of the broad determinants of health needs to be completed, which include more specific social determinants are addressed within nursing curriculum (Mackey et al., 2018; Stupans et al., 2019). The determinants of health include

CONTACT Daniel Terry  Daniel.Terry@unisq.edu.au  School of Nursing and Midwifery, University of Southern Queensland, PO BOX 4393 Raceview LPO, Raceview, QLD 4305, Australia

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social, economic, physical environment, as well the persons individual characteristics and behaviours (Garcia, 2022; WHO, 2017).

Through ever more focused research, students need to develop a greater understanding that the determinants of health have a significant role to play in the experience of health and illness for every individual (Garcia, 2022). Despite the clarity of the links between the determinants of health and nursing practice, Mackey et al. (2018) suggest that substantial work is still required to effectively integrate the study of public health and health determinants into Australian nursing and healthcare education. Perhaps not surprisingly, there is limited literature that provides robust evaluation of approaches that have been employed within higher education settings to better engage students in the learning of the concepts regarding the determinants of health (Dundas et al., 2017; Stupans et al., 2019).

In addition to engaging students with broader thinking regarding health and its contributing factors, academics have attempted to implement a number of teaching methods that include: Blended online Learning, Team-Based Learning, The Flipped Classroom and Just-In-Time Learning as part of Bachelor or Nursing programmes (Alberti et al., 2021; Jowsey et al., 2020; Williams-Ware et al., 2021). Despite these enhanced and evidence-based approaches to learning and teaching, there has been some resistance among students who have indicated a strong preference for didactic learning (Peck et al., 2021). Despite this, research highlights that didactic approaches tend to focus on more surface learning geared towards passing an essay or exam rather than developing deep learning that impacts clinical reasoning, reflective practice, good patient care or an understanding the health needs of the wider community (Biggs et al., 2022).

Approaches to learning, such as case studies, hands on activities, problem or inquiry based-learning or experiential learning opportunities, where learning is achieved by working through real life situations, are particularly relevant in health and nursing (Jager et al., 2020). Despite this, there are other models being incorporated into nursing education both at the undergraduate and postgraduate level (Lockey et al., 2022; Özbay & Çınar, 2021). Disruptive innovations such as the assessment for learning rather than assessment of learning have been suggested, which encompass activity or competency-based learning and even gamification within learning (Biggs et al., 2022; Bryan & Clegg, 2019; Chisholm, 2019).

These assessments for learning models are where students undertake what is referred to as 'authentic' or 'performance-based assessments' which enable students to develop critical thinking through challenges that elicit the use of complex and holistic skills (Kleemola et al., 2022). These assessments require students to do more than passively learn in a sedentary learning environment, but assessments for learning tasks are focused on the evidence of achievement rather than the ability to do more than measure the recall of facts, systems and processes. These assessments measure a student's capacity to use the material they have learned in real-life situations to apply learning (Biggs et al., 2022; Chisholm, 2019; Kleemola et al., 2022).

As such, in an endeavour to evolve from the contemporary higher education model, there are opportunities for the inclusion of different, and arguably more, innovative teaching and learning approaches, such as performance-based assessments. These could form both formative and summative assessments that enable greater and wider use within current nursing and healthcare education practice that

facilitate a much deep learning experience among students (Dundas et al., 2017; Stupans et al., 2019). Many of these approaches offer a more dynamic approach for teaching and learning, where there is greater emphasis on performance outcomes, higher levels of satisfaction among students, with more impactful learning and reflection among student cohorts (Bryan & Clegg, 2019; Kleemola et al., 2022). These authentic performance-based approaches to learning are particularly in the era of academic integrity, plagiarism and using artificial intelligence to complete assessments (Biggs et al., 2022).

Population health as a discipline of knowledge has been demonstrated to represent, at times, a troublesome series of conceptualisations to address through a Bachelor of Nursing curriculum and other applied health disciplines (Godfrey & Martin, 2016; Jager et al., 2020). However, it is necessary to have a broader focus of health among nursing and healthcare students, extending beyond the acute care setting, which was recently highlighted from the recent global pandemic (Badowski et al., 2021). There needs to be a fundamental shift towards public and primary healthcare in addition to acute care (Badowski et al., 2021). Collectively, the authors have been centrally involved in the conceptualisation, development and implementation of population health ideas into health-related Bachelor level programmes of study for some time and have identified and evaluated several different strategies, which led to the development of an 8-week case study fieldwork workbook assessment (Supplementary file 1).

In addition to the ongoing development and various iterations of the assessment and anecdotal feedback from students, it was noted that student engagement and academic performance associated with the assessment were mixed. To ensure clarity, blended online course content, team- and problem-based learning materials and class time were used to ensure each element of the assessment was scaffolded. This scaffolding also encompassed both the location and how to review data, the number of anticipated community visits, instructions on engaging with the community using the five senses, exploring experiences using Gibbs (1988) reflective cycle, note taking, as well as outlining photographic composition and requirements. Supporting students to undertake and report back on the fieldwork workbook assessment was interwoven throughout the course and was central to ensure equity among those unfamiliar with performance-based assessments.

As such, within the context of the innovative development of the fieldwork workbook assessment, the purpose and aim of this study were to identify the strategies used by students to learn as they navigated an assessment for learning activity and consider how this may have impacted student performance. The objective was to review the innovative assessment that had undergone several iterations within the course to inform its future development while allowing the intricacies of assessments to be critiqued. The process also provided further insight into student study practices to better inform how to improve the assessment to meet the needs of future students, while guiding other education providers who may encounter issues engaging students to learn population health concepts.

Methods

A cross-sectional design was used to examine academic performance and use of an assessment for learning among first year nursing students undertaking a primary health unit within a Bachelor of Nursing programme. The study was conducted between 2018 and 2019 through an Australian university, which has campuses in rural, regional and peri-urban centres, to provide a wide range of perspectives and views.

Sample

All first-year nursing students studying a 3-year bachelor's degree at an Australian university and completing the specific health determinants course were invited to participate in a questionnaire in 2018 ($n = 695$) and 2019 ($n = 735$) that examined the 'fieldwork assessment task'.

Data collection tool

Data were collected using a questionnaire that included demographic questions associated with participant characteristics such as study mode, campus, international student status, while also asking academic performance questions related to the grade received for the specific assessment task. Additional quantitative questions pertained to the strategies which the students undertook to achieve their assessment grade, including what processes they used and how effective these proved to be. Lastly, students were asked to respond to five qualitative open-ended questions and to reflect on when during the 8-week fieldwork assessment task they felt their knowledge and skill of using this type of learning started to develop. Other qualitative questions focused on when the student began to 'see their community differently' beyond the requirements of the assessment task. The questionnaire took between 5 and 10 minutes to complete.

Data collection

Data collection occurred between November and December of each year, prior to the global pandemic, as an additional evaluation of the course and to support the further development of the assessment for learning task. Administration staff were provided with an invitation letter from the researchers to be forwarded to all nursing students via email. The invitation included a web link to the Plain Language Information statement regarding student participation, where students gave informed consent, and could then undertake the survey online. A follow-up recruitment email was sent from administration staff to nursing students in weeks 2 and 4 post initial invitation until an adequate sample size ($n = 282$) was obtained to meet 95% CI (MOE $\pm 7\%$).

Data analysis

Quantitative data were cleaned, checked and analysed using Statistical Package for the Social Sciences (SPSS, Version 24.0) (IBM Corp, 2016). Descriptive and inferential statistics were used to analyse data and included Chi-square tests and Pearson's

correlation (r). Correlation sample size required to adequately conclude whether a correlation coefficient differs from zero is: $n = 196$ (α [2 tailed] = 0.05, $\beta = 0.2$, ρ [expected correlation] = 0.2). The strength of correlation was defined as large ($r = 0.50$ – 1.0), medium ($r = 0.30$ – 0.49) and small ($r = 0.10$ – 0.29). Significance was determined at two-tailed $p \leq 0.05$.

Qualitative data analysis was undertaken from the open-ended responses within the questionnaire, in which individual students provided short responses (10–20 words) through to lengthy comments (more than 100–150 words) associated with their experiences. Deductive thematic approach was selected to be used in the study to allow a simple method to systematically identify recurring themes. The approach provides an analysis of particular aspects of the dataset which are determined by pre-specified code-book and interpreted through a particular theoretical lens (Byrne, 2022). Overall, the data analysis was conducted by three researchers (A1, A2 and A3). Several quotations are included to illustrate and support the findings that emerged from the textual responses. The important points and issues emerging from the qualitative data were identified and are discussed in detail.

Ethical considerations

Ethical approval was provided by the Federation University's Human Research Ethics Committee (HREC 18-129A). The invitation to participate in the anonymous survey was sent at the end of the semester to reduce bias or impact on students' studies and reduce the risk of coercion. No incentives were offered to participants.

Results

A total of $n = 282$ students (response rate 19.7%) participated in this study. The characteristics of participants indicated that they were predominantly on-campus face-to-face (standard) students (65.1%), and the majority were permanent residents or citizens. When examining student performance on the fieldwork workbook assessment task,

Table 1. Participant characteristics.

Demographic information	2018		2019		Total	
	n = 159	(%)	n = 123	(%)	n = 282%	
Study mode						
• Flexible (on-line)	53	33.3%	44	35.7%	97	34.4
• Standard (on-campus)	106	66.7%	79	64.3%	185	65.1
Campus where student was enrolled						
• Campus 1 (Regional)	62	39.0%	43	35.5%	105	37.5
• Campus 2 (Regional)	49	30.8%	21	17.4%	70	25.0
• Campus 3 (Metropolitan)	48	30.2%	57	47.1%	105	37.5
International student	9	5.7%	17	14.1%	26	9.3
Assessment task						
• High distinction (80.0–100.0%)	42	26.4%	44	37.7%	86	31.2
• Distinction (70.0–79.9%)	27	17.0%	35	29.9%	62	22.5
• Credit (60.0–69.9%)	28	17.6%	23	19.6%	51	18.5
• Pass (50.0–59.9%)	36	22.6%	13	11.1%	49	17.7
• Fail (less than 50.0%)	26	16.4%	2	1.7%	28	10.1

over half (53.7%) of students received grades of 70.0% and above, while more than one-third (36.2%) of students had received grades of 50.0% to 69.9%, as outlined in Table 1.

Students who performed 'well' in the assessment (grade of 70.0% and above) were asked to indicate what they felt were the main reasons for their success. They indicated that success was due to at least five main factors, which included making time to do the assessment task (84.3%), making a plan when to undertake the assessment (76.1%), having good organisation (64.2%), ensuring they read through information provided by the lecturer and any regular updates regarding the assessment (57.7%) and setting a specific time to undertake the assessment task (56.9%).

Qualitative responses gave further insight into successful achievement of the assessment task among these students. For example, students stated 'I learned to pace myself and do a little of the assignment at a time', 'I need to stay focused and make time to do big assignment tasks', 'time management and dedication is required to finish the task', 'setting specific timeframes to work on the task', 'doing the fieldwork at a certain time every week helped my routine to ensure I completed the task', while another student stated, 'the assessment allowed me to establish better studying and working habits, allowing me to work better within other subjects'.

In addition, those students who had fair performance (grades of 50.0% to 69.9%, $n = 100$) and those who demonstrated poorer performance (grades less than 50.0%, $n = 28$) were asked to indicate the main reasons they were challenged by the assessment. These two student groups indicated that the principal reason for being challenged by the assessment was due to being busy with other courses, they did not understand the assessment requirements or ran out of time. Specifically, a significant difference occurred between fairer and poorer performing students. In this case, a higher proportion of poorer performing students did not understand the assessment question and ran out of time as outlined in Table 2. It must be noted that there was no correlation among poor and fair students regarding not understanding the assessment and running out of time, $r(122) = .002, p = .986$.

Within the qualitative responses, the principal reason students felt they were not successful in the assessment were related to extrinsic factors, such as family and work commitments, and intrinsic factors such as not understanding what was needed to be done, being unmotivated and the assessment being very different to other assessments in their undergraduate nursing degree (essays, tests and exams). However, the fair and poorer performing cohort also indicated that there were several strategies they could have used better to improve their performance. Key statements included 'I need to communicate with my lecturer when things are not clear', 'ask more questions to gain

Table 2. Top five reasons participants were challenged by the assessment.

	Fair performance,		Poor performance,		Chi-square <i>p</i> -value
	<i>n</i> , %		<i>n</i> , %		
Busy with other courses	36	36.0%	14	50.0%	.071
Did not understand assessment requirements	36	36.0%	15	53.5%	.016*
Busy with employment	29	29.0%	9	32.1%	.779
Ran out of time	20	20.0%	11	39.2%	.020*
Did not plan properly	25	25.0%	11	39.2%	.090
Did not ask the lecturer questions	14	14.0%	6	21.4%	.213

* $p \leq 0.05$.

Table 3. When participants had grasp on the assessment task.

When had grasp on the assessment	Good performance,		Fair performance,		Poor performance,	
	n,	%	n,	%	n,	%
Week 1	10	8.1%	10	11.5%	2	7.1%
Week 2	3	2.4%	2	2.3%	0	0.0%
Week 3	19	15.4%	8	9.2%	0	0.0%
Week 4	15	12.2%	6	6.9%	1	3.6%
Week 5	10	8.1%	5	5.7%	1	3.6%
Week 6	21	17.1%	5	5.7%	3	10.7%
Week 7	8	6.5%	5	5.7%	1	3.6%
Week 8	15	12.2%	8	9.2%	3	10.7%
Don't know	22	17.9%	38	43.7%	17	60.7%

clarity', 'to plan ahead', 'I need to plan better' and 'I need to manage my time better and be more organised'. One key statement highlighted some of the issues were centred on embarrassment when a student stated, 'I didn't understand and was concerned about looking stupid by asking for help when everyone else seemed to understand'.

Beyond the factors that support or challenge student performance, participants were asked to indicate at what point over the 8-week assessment period did they feel they had a grasp on the assessment. As outlined in Table 3, higher performing students were more likely to have an overall grasp on the assessment task, with a third of the cohort having a grasp by week 4, while almost two-thirds achieved this outcome by week 6. However, several students provided further insights. For example, two students stated, 'the penny dropped only after completing the assessment task by week eight', and 'I felt confused with this assessment until close to completion, when I could finally see the bigger picture', while another stated 'I'd say week four [was] . . . when I started [to] realised the benefits of the project and to actually enjoy the work I was doing'. Lastly, one student stated, 'despite a lot of the complaining going on [social media], I actually thought it was fairly straight forward, I'm not really sure how some people were so confused?'

These findings were significantly different between good, fair and poorer performers ($\chi^2 = 42.657$, $df = 14$, $p = .001$), where 29.9% fair performing students and 10.7% of poor performing students felt they had a grasp by week 4 of the assessment. This was further clarified by some students who stated, 'at no time did I feel like I understood the topics or requirements', 'I did not understand the purpose of the assignment and how it relates to nursing', 'I just didn't see the relevance of the assignment', while another stated 'I was confused at first, probably because I read comments on [social media] that people wrote, all saying different ways you were supposed to do it [the assessment task]. In the end, I simply ignored the comments and looked into it myself'.

It was anticipated that the number of visits into the community may have an impact on student performance; however, it was found that there was no significant difference between each cohort ($\chi^2 = 31.927$, $df = 22$, $p = .081$). Higher and poorer performing students undertook a number of visits out in the field, with fair performing students being in the field less than their counterparts. Overall, at least a third of all students, regardless of their performance, had visited their chosen community more than eight times throughout the assessment period, equating to at least one visit a week over the assessment period (Table 4).

However, higher performing students purposefully went into the community and then returned to take photographs and undertake incidental observations to confirm the

Table 4. Number of times purposefully undertaking fieldwork in the community.

When had grasp on the assessment (<i>n</i> = 122)	Good performance, n, %		Fair performance, n, %		Poor performance, n, %	
0 times	0	0.0%	1	1.4%	0	0.0%
1 time	7	5.7%	2	2.9%	0	0.0%
2 times	5	4.1%	4	5.7%	0	0.0%
3 times	13	10.7%	5	7.1%	3	13.6%
4 times	26	21.3%	4	5.7%	4	18.2%
5 times	15	12.3%	8	11.4%	2	9.1%
6 times	17	13.9%	10	14.3%	4	18.2%
7 times	3	2.5%	5	7.1%	1	4.5%
8 times	8	6.6%	4	5.7%	1	4.5%
More than 8 times	21	17.2%	27	38.6%	7	31.8%
I don't know	7	5.7%	0	0.0%	0	0.0%

information they had discovered. One student succinctly stated 'half of the time was for observation and research; the other half was for taking photographs. I also observed my community many more times while out doing other things like shopping'.

Conversely, fair and poorer performing students also planned, but did not always spend a lot of time in the field. Their experience was often achieved using vehicles to take photographs and lacked the immersive experience of being 'in' the community, walking on the streets, observing sights, experiencing smells and examining the intricate details of the community. Several students confirmed this when stating 'I drove around town taking photos', 'got all my assessment work done at home and went out with a list and took photos', 'I never purposefully went to do the assessment, but did it while I was already in town' and 'I went to many places in one day to minimise my driving around'. Thus, rather than the number of times being important, it was the immersive, purpose and potentially the time processes that was involved with the assessment exercise that remained vital to the overall performance of the student.

When high-performing students were asked at what point over the 8-week assessment period did they feel they were reflecting more on what was being observed when undertaking the fieldwork, only 29.5% stated that they were looking and understanding at their community differently by week 4. However, by week 6, 59.1% had indicated that they were seeing their community with a newfound understanding that was couched within the determinants of health. Students' individual comments followed this same pattern when stating, 'about week 4–5 I learned more, I started to interpret and identify with my observations and research more', 'halfway through the community fieldwork I started looking for causes to health and observing more of health risks in the community', while another student stated 'the further I got into the assignment I learned more about the reason why determinants of health issues were present. Previously I would have looked at the health issue, but not really understood why this health issue existed'.

Students were also asked if the assessment made them look and understand what nurses do beyond the acute care sector. It was indicated that all students had a variety of perspectives which was often based on individual performance. As such, several higher performing students indicated 'the role of a nurse is far reaching and can be very community focused and involved', 'I understand more now that a big part of a nurse's role is to look at a patient's situation in depth not just their illness' and 'the assessment

really brought home the importance of patient-centred care'. Conversely, both fair and poorer performing students had indicated 'It doesn't change my mind that much', 'I didn't get how it was to do with nurses', 'No, I see no correlation', 'I don't understand the link between the assignment and nurses', while one student stated 'Nurses don't really need to know the [determinants of health], they just need to be able to adapt and act quickly in situations of healthcare'.

Finally, students were asked if the assessment made them consider community or primary health nursing as a career pathway. It was indicated that 53.4% ($n = 79$) of higher performing students would consider non-acute care nursing employment, while only 36.0% ($n = 36$) of low and 32.1% ($n = 28$) of poorer performing student felt they would consider community or primary health nursing career in the future. At times, written responses were mixed between the three cohorts and were often centred on not wanting to consider primary health due to previous experiences and having set goals around acute and paediatric nursing. Other responses from various students were that they had really gained an understanding and appreciation for primary health through the assessment task, which was something they wanted to explore further into the future.

Discussion

The engagement of students in the learning of concepts related to the determinants of health within a Bachelor of Nursing programme has proved troublesome for some time (Mackey et al., 2018). Several iterations of a major assessment have been undertaken as a mechanism to improve not only the learning outcomes but the overall engagement of students in the learning of these concepts to inform their future practice in every setting. This study suggests that an innovative approach using the assessment 'for' learning pedagogy where students physically engage with a specific location to undertake an assessment 'on foot', that engages the senses through immersive experiences, was overwhelmingly considered positive. Interestingly, the use of 'photo-elicitation' as a means of engaging students in learning the role of the determinants of health has been found elsewhere as a valuable strategy (Andina-Díaz, 2020; Haffejee, 2021; Stupans et al., 2019).

A key finding in this study is that students who had a sound grasp of the material by week 4 tended to perform better in this course as observed amongst other nursing students (Denham et al., 2018). Interestingly a small number of students identified they perceived they had a grasp of the course materials, but in fact performed poorly, which may suggest perhaps a staggered release of the assessment be provided so as to ensure that key elements are being given time for consolidation of understanding, akin to scaffolding the assessment (Biggs et al., 2022). These findings also provide an opportunity for future research to investigate the links between perceived and actual comprehension in an assessment task and overall performance.

Students who performed better in the assessment task highlighted that they engaged in practices of what would be considered being a 'good' student – planning, organisation, engage with the learning materials and academic staff which is reflected throughout the literature (Ghasemi et al., 2018). In contrast, those students who had poorer performance identified issues related to the prioritisation of time for learning and assessment activities in that they ran out of time due to poor time management, or they were unsure of the learning expectations in that they did not understand the assessment itself. These factors

are echoed across other research which has examined the mechanisms for poorer performance among students (Ghasemi et al., 2018; McNally et al., 2019). However, it is noted that there was correlation regarding not understanding the assessment and this impacting the student's capacity to gauge the time required or needed to complete the 8-week assessment task, suggesting other factors may have an impact. Within this context, the finding may also be moderated in the context of academic literacy which has been shown to be associated with difficulties engaging in the learning content (McNally et al., 2019). Interestingly, students indicated there was a tendency to prioritise learning in other courses not associated with health determinants. Previous research has demonstrated that students in nursing programmes have a propensity to prioritise what they consider to be the more acute care focused subject areas (Calma et al., 2019). It is arguably this cohort of students that we are seeking to engage to create opportunities for future research in understanding this phenomenon.

Further, it was found that time, number of visits and the students who purposively and physically visited key community settings experienced greater understanding and improved outcome associated with their assessment task. As such, students who attended the community setting with a distinct purpose to photograph specific, and often pre-determined, aspects of the town showed improved performance.

Ultimately, the motivation for, the time and how students engaged with the community that had the greatest impact were identified. It must be noted that there may be additional external factors, such as work, schedules and other courses, that may have impacted student capacity to engage with the community in less-than-ideal ways that may have impacted learning. Although not explored in detail within this study, this finding highlights the need to explore this further through future research.

In addition, while reflective thinking was not a specific measure within this study, the planned approach identified by the higher performing students would signal something analogous to the critical reflection, as highlighted by Stupans et al. (2019), who also used photography as a vehicle for engaging students in learning about health determinants. This highlights student engaged in a form of reflective practice and suggests the fieldwork workbook assessment provides evidence regarding the value of this form of learning approach compared to the more traditional tasks that are centred on assessment 'of' learning approaches.

Limitations

A cross-sectional design indicates relationships between variables; thus, the findings should be considered carefully. The university where they study was undertaken has campuses in rural, regional and peri-urban locations with a high proportion of local on-campus students. In addition, the percentage of participating students may not be representative of the total student cohort, which may make it difficult to generalise the findings to other higher education settings that use fieldwork within a community setting as an approach to learn about the determinants of health. Future research may benefit from undertaking additional interviews with students regarding their experience; however, research must consider any biases that may occur if students self-nominate interview participation.

Implications

The performance-based assessment, although being developed and evolving within an Australian context, has wider application as an assessment for learning approach internationally. The nature of the assessment is to enable student to have an immersive experience to understand the complexity of the determinants of health and their interconnection to health, healthcare and population outcomes, particularly among vulnerable groups. As such, there is capacity for this fieldwork learning approach, centred around primary health care, to be used in most nursing and healthcare teaching and learning settings. Given the economic, sociocultural and political characteristics of each country, the framework of the assessment will be meaningful to the individual students and the overall context in which they will learn and work. The assessment approach enables key determinants of health concepts to be observed, while understanding how they may look, act or feel in the wider community. The approach enables students to make more nuanced connection between the determinants of health and the health of a population, while supporting their own reflection.

Given the low-fidelity nature of the assessment, which occurs as close as possible to where people live and work, the assessment has the capacity to adapt and evolved based on the understanding of the students and place in which the assessment may be implemented. For example, key determinants of health within a Western developed context may be considered vastly different to key determinants that students may need to understand and appreciate within non-western developing context. The principles of the assessment remain the same; however, the key elements that student are then to focus their energies are determined by the context in which the assessment occurs. However, the assessment could be slightly modified to meet the learning objectives and requirements of the overall nursing or health programme. The benefit of such local adaptability enables learning to have clear relevance for future nurses who will care for patients or clients that are influenced by the local variations or socio-ecological factors that are critical to determinants of health (Kim et al., 2023).

Conclusion

Overall, the use of fieldwork, inclusive of photography and research, has and continues to be used as a vehicle for student exploration of the determinants of health within a community. Performance-based assessments such as fieldwork enable student understanding regarding how determinants relate back to or impact health outcomes, while also enabling insights into how understanding the determinants of health is relevant to the nursing practice. Moving beyond essays, tests and exams that focus on assessment of learning, students must explicitly understand what is being required when challenged by fieldwork assessments that focuses on assessment for learning. In addition, students must be motivated to engage with these unique assessments, have the capacity to persevere and be patient with the process, while also seeking clarification from key sources if an understanding is not being achieved. Although the responsibility befalls the student to engage with the fieldwork assessment, it remains incumbent upon nursing programmes to enable learning through explicit instruction, guidelines, while also

supporting student to trust the assessment process in the pursuit of knowledge regarding the determinants of health.

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Notes on contributors

Daniel Terry: With a background in nursing, his research interest research interests encompass the overarching generalist theme of Rural Health. His research includes rural health workforce that incorporates nursing student career trajectory, rural medical, nursing and pharmacy employment and profession longevity, while also examining workforce grit and improving workforce learning through communities of practice.

Blake Peck: Blake is involved in childhood injury, asthma management, and is leading a large clinical trial seeking to improve the management of incontinence in children. Other work includes understanding the decision-making process of children and families in rural areas attending hospital for emergency care, and a keen interest in issues of rural health workforce.

Andrew Smith: Andrew has more than ten years of experience in academia, with a focus on student learning and leadership. Andrew has been a key driver in public health nursing and student learning centred on primary health care. Andrew remains a key supporter of student nursing learning.

Swapnali Gazula: With more than ten years in higher education, Swapnali has a background in peer tutoring within tertiary health profession educational programs along with a key research focus in chronic ill-health and workforce.

ORCID

Daniel Terry  <http://orcid.org/0000-0002-1969-8002>

Blake Peck  <http://orcid.org/0000-0002-2444-9780>

Swapnali Gazula  <http://orcid.org/0000-0002-1139-1129>

Data availability statement

Data may be available upon request through the corresponding author and upon authorisation of the Federation University Australia Human Research Ethics Committee.

References

- Alberti, S., Motta, P., Ferri, P., & Bonetti, L. (2021). The effectiveness of team-based learning in nursing education: A systematic review. *Nurse Education Today*, 97, 104721. <https://doi.org/10.1016/j.nedt.2020.104721>
- Andina-Díaz, E. (2020). Using photovoice to stimulate critical thinking: An exploratory study with nursing students. *Revista Latino-Americana de Enfermagem*, 28, 1–8. <https://doi.org/10.1590/1518-8345.3625.3314>

- Badowski, D. M., Spurlark, R., Webber-Ritchey, K. J., Towson, S., Ponder, T. N., & Simonovich, S. D. (2021). Envisioning nursing education for a post-COVID-19 world: Qualitative findings from the frontline. *Journal of Nursing Education, 60*(12), 668–673. <https://doi.org/10.3928/01484834-20211004-03>
- Biggs, J., Tang, C., & Kennedy, G. (2022). *Teaching for quality learning at university* (5th ed.). Open Universities Press.
- Bryan, C., & Clegg, K. (Eds.). (2019). *Innovative assessment in higher education: A handbook for academic practitioners*. Routledge.
- Byrne, D. (2022). A worked example of Braun and Clarke’s approach to reflexive thematic analysis. *Quality & Quantity, 56*(3), 1391–1412. <https://doi.org/10.1007/s11135-021-01182-y>
- Calma, K. R. B., Halcomb, E., & Stephens, M. (2019). The impact of curriculum on nursing students’ attitudes, perceptions and preparedness to work in primary health care: An integrative review. *Nurse Education in Practice, 39*, 1–10. <https://doi.org/10.1016/j.nepr.2019.07.006>
- Chisholm, O. (2019). Curriculum transformation: From didactic to competency-based programs in pharmaceutical medicine [perspective]. *Frontiers in Pharmacology, 10*(278). <https://doi.org/10.3389/fphar.2019.00278>
- Denham, S. A., Tietze, M., Allam, Z., Talleff, J., Schrum, N., & Wang, T. (2018). Academic success of undergraduate nursing students. *Nurse Education in Practice, 33*, 172–177. <https://doi.org/10.1016/j.nepr.2018.08.013>
- Dundas, K. J., Hansen, V., Outram, S., & James, E. L. (2017). A “light bulb moment” in understanding public health for undergraduate students: Evaluation of the experiential “this is public health” photo essay task [original research]. *Frontiers in Public Health, 5*(116). <https://doi.org/10.3389/fpubh.2017.00116>
- Garcia, R. (2022). Social determinants of health. In F. A. Gary & M. J. Lotas (Eds.), *A population health approach to health disparities for nurses: Care of vulnerable populations* (pp. 107–130). Springer.
- Ghasemi, M. R., Moonaghi, H. K., & Heydari, A. (2018). Student-related factors affecting academic engagement: A qualitative study exploring the experiences of Iranian undergraduate nursing students. *Electronic Physician, 10*(7), 7078–7085. <https://doi.org/10.19082/7078>
- Gibbs, G. (1988). *Learning by doing: A guide to teaching and learning methods*. Further Education Unit. Oxford Polytechnic.
- Godfrey, N., & Martin, D. (2016). Breakthrough thinking in nursing education: The baccalaureate big 5. *JONA: The Journal of Nursing Administration, 46*(7/8), 393–399. <https://doi.org/10.1097/nnn.0000000000000364>
- Haffejee, F. (2021). The use of photovoice to transform health science students into critical thinkers. *BMC Medical Education, 21*(1), 237. <https://doi.org/10.1186/s12909-021-02656-1>
- IBM Corp. (2016). *IBM SPSS statistics for windows, version 24.0*.
- Jager, F., Vandyk, A., Jacob, J. D., Meilleur, D., Vanderspank-Wright, B., LeBlanc, B., Chartrand, J., Hust, C., Lalonde, M., Rintoul, A., Alain, D., Poirier, S., & Phillips, J. C. (2020). The Ottawa model for nursing curriculum renewal: An integrative review. *Nurse Education Today, 87*, 104344. <https://doi.org/10.1016/j.nedt.2020.104344>
- Jowsey, T., Foster, G., Cooper-Ioelu, P., & Jacobs, S. (2020). Blended learning via distance in pre-registration nursing education: A scoping review. *Nurse Education in Practice, 44*, 102775. <https://doi.org/10.1016/j.nepr.2020.102775>
- Kim, J., Yang, E., Jeong, J. Y., & Thapa, B. (2023). Regional disparities in green space access and associations with adult obesity: An urban–rural comparison in Florida. *Journal of Leisure Research, 1–25*. <https://doi.org/10.1080/00222216.2023.2204885>
- Kleemola, K., Hyytinen, H., & Toom, A. (2022). Exploring internal structure of a performance-based critical thinking assessment for new students in higher education. *Assessment & Evaluation in Higher Education, 47*(4), 556–569. <https://doi.org/10.1080/02602938.2021.1946482>
- Lee, T., Damiran, D., Konlan, K. D., Ji, Y., Yoon, Y. S., & Ji, H. (2023). Factors related to readiness for practice among undergraduate nursing students: A systematic review. *Nurse Education in Practice, 69*, 103614. <https://doi.org/10.1016/j.nepr.2023.103614>
- Lockey, A., Bland, A., Stephenson, J., Bray, J., & Astin, F. (2022). Blended learning in health care education: An overview and overarching meta-analysis of systematic reviews. *The Journal of*

- Continuing Education in the Health Professions*, 42(4). <https://doi.org/10.1097/CEH.0000000000000455>
- Mackey, S., Kwok, C., Anderson, J., Hatcher, D., Laver, S., Dickson, C., & Stewart, L. (2018). Australian student nurse's knowledge of and attitudes toward primary health care: A cross-sectional study. *Nurse Education Today*, 60, 127–132. <https://doi.org/10.1016/j.nedt.2017.10.003>
- McNally, S., Azzopardi, T., Hatcher, D., O'Reilly, R., & Keedle, H. (2019). Student perceptions, experiences and support within their current Bachelor of nursing. *Nurse Education Today*, 76, 56–61. <https://doi.org/10.1016/j.nedt.2019.01.032>
- Özbay, Ö., & Çınar, S. (2021). Effectiveness of flipped classroom teaching models in nursing education: A systematic review. *Nurse Education Today*, 102, 104922. <https://doi.org/10.1016/j.nedt.2021.104922>
- Peck, B., Smith, A., Terry, D., & Porter, J. E. (2021). Self-regulation for and of learning: Student insights for online success in a Bachelor of nursing program in regional Australia. *Nursing Reports*, 11(2), 364–372. <https://doi.org/10.3390/nursrep11020035>
- Stupans, I., Baverstock, K., & Jackson, M. (2019). Photo-essay as an assessment strategy for learning about the determinants of health: Students' experiences. *Collegian*, 26(1), 146–150. <https://doi.org/10.1016/j.colegn.2018.07.002>
- WHO. (2017). *Determinants of Health* <https://www.who.int/news-room/questions-and-answers/item/determinants-of-health>
- Williams-Ware, K. S., Watts, S. O., & Wang, C. (2021). Student perceptions of a cardiac skills laboratory using a just-in-time teaching approach. *Journal of Nursing Education*, 60(8), 472–475. <https://doi.org/10.3928/01484834-20210723-02>