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Making the most of person-centred education by integrating flipped and simulated teaching: An exploratory study

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ABSTRACT

Preparing a person-centred nursing workforce to work in diverse settings is a global health priority. Nursing students’ first placement experience is a key transitional moment that shapes professional understanding and motivation to become a nurse. This paper reports the outcomes of combining flipped and simulated learning to enhance nursing students’ understanding of person-centred care, the professional nursing role and preparation for placement. The study design was exploratory, the setting, an undergraduate nursing program in an Australian University. Participants included first year nursing students, academic tutors and clinical facilitators. Data collected via survey, semistructured interviews and focus group discussion were analysed descriptively and thematically.

Over 90% of students surveyed considered the unit structure, content and resources prepared them well for placement. Pre-class preparation and simulated tutorial activities facilitated student engagement and knowledge translation. Students, tutors and clinical facilitators valued the person-centred approach. Tutors considered the unit materials and focus enhanced students’ professional understanding. Clinical facilitators deemed students well-prepared for placement. These results from multiple perspectives, though limited, support combining the flipped classroom and person-centred simulation in nursing education as a strategy to prepare students for clinical placement, translate person-centred values into practice and promote professional understanding and role socialisation.

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1. Introduction

Person-centred care is recognised by the World Health Organisation (WHO, 2015) as central to providing quality healthcare. The Australian Commission on Safety and Quality in Health Care (ACSQHC), like counterparts in other countries, is committed to a patient-centred health system and safer, higher quality care (ACSQHC, 2011; Kitson et al., 2013). To address these priorities, educational institutions need to educate health professionals in ways that prepare them to practice person-centred care in diverse and complex health care settings (Green and Bull, 2014; WHO, 2015).

Person-centred care involves “putting the patient first, supporting families and designing care to take account of individual patient needs and preferences” (Fawcett and Rhynas, 2014, p.1239). The core elements of person-centred care are patient participation and involvement, the relationship between the patient and health care professionals and the context where care is delivered (Kitson et al., 2013; McCormack and McCance, 2006). Person-centred care encompasses a holistic view of health care whereby the care process is collaborative and driven by the preferences and individual needs of people, their family, culture and social situation (Dossey and Keegan, 2012; Kitson et al., 2013).

2. Background

To practice person-centred care, priority needs to be given to students learning how to communicate effectively and build sincere empathetic relationships (Currie et al., 2015; Kitson et al., 2013). However, on reviewing the literature, Grant and Jenkins (2014) found that students were rarely taught how to communicate effectively. Others have found that students commonly practice the skills they need for nursing in simulation laboratories that mimic acute settings and prioritise technical rather than
communicative competence (Cant and Cooper, 2010; Green and Bull, 2014). Focusing on acute care and technical skills risks creating a workforce ill-prepared for the person-centred, integrated models of care needed to address global health priorities (Fawcett and Rhynes, 2014; WHO, 2015).

The personal and professional challenges faced by nursing students in transitioning from the university to the practice setting and applying theoretical knowledge in these settings is well documented (Cooper et al., 2015; Gore et al., 2011). However, preparing nursing students for their first exposure to the professional role is also important because it constitutes a key transitional moment that influences their motivation to become a nurse (Leducq et al., 2012; McKenna et al., 2010). According to Andrew and colleagues (2009, p.15) “the move into nursing is akin to a rite of passage involving a transition from one way of life to another” and “students need to learn how to behave like nurses.” The first placement shapes students’ role identity, course trajectory and commitment to completing the course (Andrew et al., 2009; Leducq et al., 2012; McKenna et al., 2010), a matter of increasing concern to Universities (O’Flaherty and Phillips, 2015). Calls for education reform to more appropriately prepare graduates for the clinical reasoning and higher-order skills associated with managing the complexity of contemporary health care (Benner et al., 2009) align well with technological advances and changing expectations of millennials (Bristol, 2014; Hanson, 2016).

Society’s escalating use of technology has driven widespread educational reform, shifting expectations of teachers and students towards technology-mediated education, student-centred, simulated and team-based learning (River et al., 2016; Kiteley and Ormrod, 2009). However, the value of these changes and blending of education modalities remain largely unknown (River et al., 2016). The flipped classroom compliments changing expectations and inverts the roles of teachers and learners, such that students enter the classroom with foundational understanding of the content and teachers facilitate interactive engagement, application and critical thinking (Bethivhas et al., 2016; Brooks, 2015). Whereas in team-based learning there is a sharing of roles (Morris, 2016), the flipped model adopts a heutagogical approach whereby students are responsible for their own learning (River et al., 2016).

Under the flipped classroom approach, students’ first exposure to new material occurs before class, usually by means of directed reading, online lecture and multimedia materials (Bristol, 2014; Hanson, 2016; Towle and Breda, 2014). Class time is interactive, dedicated to assimilating, applying and progressing understanding to higher levels (Bristol, 2014; Towle and Breda, 2014; Brooks, 2015). The readiness of millennial students for technology-mediated learning (Kiteley and Ormrod, 2009; Towle and Breda, 2014) makes it timely to offer more e-learning resources pre-class and capitalise on the benefits of integrating the flipped approach with team-based simulated learning (Bristol, 2014; Missildine et al., 2013; River et al., 2016).

While much attention has been dedicated to examining the flipped classroom in health faculties (Bethivhas et al., 2016), studies usually focus exclusively on the flipped classroom, student and staff satisfaction or comparing exam results. While some studies have blended e-learning with team-based learning (River et al., 2016), none, to the authors’ knowledge, incorporate an integrated approach that examine the effects of combining a flipped model with structured team-based simulated learning, higher-order learning and knowledge translation in the real world of practice, or incorporate the perspectives of learners, teachers and industry. This is an important oversight because as stated by (Bristol 2014, p. 45), “one of the great benefits of flipping the class room is that the classroom can become a clinical learning environment.”

The need in nursing education to prioritise clinical reasoning and higher-order learning has contributed to simulation becoming a dominant modality (Benner et al., 2009; Lapkin et al., 2010). Simulated learning is an approach to teaching and learning that replicates real-world practice environments, in safe, immersive learning spaces (Cant and Cooper, 2010; Warland, 2011). Accordingly, simulated learning is considered core to promoting technical skills, patient safety, communication and professional understanding (Gore and Thomson, 2016).

To align with recent shifts towards person-centred and integrated healthcare, the foundational nursing unit at this Australian university was revised to more effectively prepare students to transition into diverse nursing roles and practice settings (Green and Bull, 2014; WHO, 2015). This university, like others nationally and internationally, operates within a highly competitive and complex higher education environment. The undergraduate nursing program, delivered in two states and across four campuses, has experienced significant growth in the number and diversity of students (Courtney-Pratt et al., 2011). The complexities of implementing teaching and learning changes in this environment are compounded by differences in staffing profile at each campus and health system jurisdictions. This project was a direct outcome of two lecturers, (authors) reconceptualising and reconfiguring a first year nursing practice unit after participating in a peer-assisted teaching scheme (Carbone et al., 2014). The term ‘unit’ is utilised, knowing that other nomenclature such as ‘subject’ and ‘course’ are often used interchangeably (Carbone, 2014).

To foster student understanding of person-centred care and the breadth of nursing practice, course content was reconfigured and adapted to combine a flipped classroom model and interactive team-based person-centred simulated learning activities. First-year nursing students (n = 476) undertook the revised unit over a 13-week semester. The unit included online learning resources, weekly lectures and 2 h simulated tutorials followed by two weeks of full-time clinical placement. A key focus of the revised unit was to prepare students to maximise the effectiveness of the interactive simulated tutorials. To this end, directed readings, multi-media e-learning resources and lecture content were provided online prior to class. Pre-reading was carefully selected to build foundational understanding of person-centred care and to this end, incorporated scenarios and nursing contexts that considered people in a range of settings including, acute and aged care, General Practice, community health and at home.

Tutorial groups of up to 25 students, provided a formalised structure that facilitated team-based learning. Person-centred scenarios were developed for group activities that reflected core foundational skills; for example, communication, hand-washing and wound management. Each skill was practiced in spaces simulating acute care, community and residential spaces. To trigger students to consider the person, their needs and preferences, the family and the environment, laboratory scenarios focused on people across the lifespan and from different cultural and linguistic backgrounds. For instance, wound dressings were practiced on people with a cognitive impairment in the community setting, a refugee with English as third language and a practising Jehovah’s
Witness in an acute care setting.

The aims of this study were to evaluate an integrated flipped and simulated teaching intervention designed to enhance the concept of person-centred care, broaden first year nursing students' understanding of the professional nursing role and prepare them for their first professional placement.

3. Research design

An exploratory mixed methods design, approved by the University Human Research Ethics Committee, was utilised to evaluate the effectiveness of a practice-based flipped teaching intervention from multiple perspectives. The study involved first year undergraduate students, academic tutors and clinical facilitators at an Australian University. The research questions explored whether the unit design:

1) enhanced student satisfaction;  
2) promoted the concept of person-centred care;  
3) broadened nursing students' understanding of the professional nursing role;  
4) prepared them adequately for their first professional placement.

The qualitative aspect of the study was augmented by triangulating students' qualitative data with associated results of online unit surveys for that semester (n = 476) and the preceding year (n = 465). Convenience sampling was employed for the qualitative component of the study. Students, academic tutors and clinical facilitators were invited by email to provide feedback on the unit. A focus group discussion was undertaken with students (n = 10) and semi-structured interviews with university tutors (n = 4) and clinical facilitators (n = 2). Data-sets were analysed descriptively and thematically. To alleviate bias and potential conflict of interest associated with the researchers teaching the unit, data were collected at the completion of semester and analysed in conjunction with an independent researcher external to the department.

Interview and focus group data were audio-taped then transcribed verbatim by one author. Text data for each cohort were entered into a table and de-identified prior to coding. A manual thematic analysis was undertaken by each author independently, first by means of open-coding and secondly, axial coding (Neuman, 2011). Statements pertinent to the research aims, enhancing person-centred care, preparedness for placement and ways the unit facilitated these or could be strengthened, were extracted and allocated into categories. To promote trustworthiness and credibility (Tong et al., 2007), the categories generated were discussed prior to integrating them into consensually agreed themes.

4. Results

4.1. Student perspective

The response rate for the online survey was 32% (n = 153). Over 92% of students who completed the survey considered the workload appropriate, that the unit motivated them to achieve the learning outcomes and that the resources and experiences facilitated these outcomes (Table 1). Evidence that the unit design enhanced student satisfaction were demonstrated by the statistically significant differences in overall student satisfaction with the unit before (79%) and after implementing the flipped model (91%).

Focus group and open-ended survey data reveal further evidence that students were satisfied with the unit and highly valued its person-centred holistic content, format and delivery. The ten students who participated in the focus group represented a mix of ages (range 18–50s) and entry pathways, including direct school leavers, those with previous experience in health care and from other backgrounds. Key themes reflecting students' perceptions of the strengths of the unit were that it provided: a person-centred holistic focus, a learning environment where it was safe to make and learn from mistakes, opportunities to practice and develop skills and proficiency, apply the clinical reasoning cycle, learn from peers and develop skills in communication and teamwork (Table 2).

Elements of the unit that students' considered most useful were: the quality of the online content, expertise of the lecturer and tutors, including their availability, interactive tutorials, the unit outline, online quizzes, readings, assessment tasks and placement. Students also valued practical skills time in the simulation lab prior to placement, hands-on practice with simulated patients and access to labs and lab worksheets. One student stated [the unit] was, “a well taught and constructed unit.” The adequacy with which this unit prepared students for their first clinical placement was captured in the words of another student who reported, “The content and learning experiences taught in this unit really prepared us for PEP (Professional Experience Placement). So much so, that the qualified RNs could not believe we were first year students …”

Students in the focus group agreed unanimously that the unit content, lectures, readings and simulated laboratory sessions enabled them to consider thinking about the whole person. Resources and readings provided online pre-class were considered to be complementary, prepared them well for simulated learning activities and facilitated integrated learning across units. As one participant stated:

... as far as the lectures go, they were really informative and the readings gave the information that we needed. There was a lot of information, but they complemented each other.

The unit enabled students to gain insight into different nursing environments by providing a learning environment where students could become aware that nursing involves more than acute care. One student stated, “... it gave me the ability, specifically when we did the community space, to look outside the box.” Another student reported, “... we tried every avenue of nursing not just nursing at the bedside.”

Students also agreed unanimously that unit content, lectures, readings and weekly practice in simulated laboratories supported and enhanced their preparation for placement. The words of students capture the benefits of the unit in promoting professional understanding and preparing them for practice. In the words of one student, “I can honestly say the practical learning we covered in the lab tutorials proved to be exactly what was required of us in placement.” Another student reported, “the content and learning experiences taught in this unit really prepared us for the placement.” A third student claimed, “I was able to advocate while I was on prac. That is something that I learnt in the classroom which I found very beneficial.”

The most frequent suggestions proposed by students on the survey for improving the unit were to allow more time for practising in simulated tutorials, smaller tutorial classes and fewer, more specific readings. Similar ideas featured in the focus group discussion, for example, “... more lab time to practice skills,” and, “... more direction and focus on reading.” Some students requested more e-learning resources, for example, “... a few more websites — for visual learners — with technology ...”

4.2. Tutor perspective

Tutors were largely positive about the unit and valued its person-centred care focus, content and structure. They reported that the varied pre-class resources and simulation activities encouraged student engagement and considered the combination...
of online content, interactive lectures and weekly simulated laboratory sessions reinforced to students the need to consider the whole person.

“...I wanted to spend more time on [skills] repetition and so on, but in terms of looking at all aspects of patient care. I think I saw the fruits of that in seeing the students in PEP [placement] ... seeing the positive responses we got back from facilitators ... I think the penny dropped for me that [person-centred care] was what they needed to think about and the unit was good for that.”

The lesson plans and pre-class learning activities were valued as supporting the person-centred approach. One tutor noted that competing learning priorities [in other units] sometimes detracted from student preparation and engagement. Tutors reported that the person-centred simulated activities prepared students well for the professional role because they stimulated students’ curiosity, enhanced communication and teamwork and promoted patient safety and role socialisation. Tutors observed students demonstrating person-centred care during their placement, noting in particular, their commitment to patient advocacy.

“The proof was in the pudding. In PEP [placement] I thought they were sensational. Ultimately, this unit was geared for preparing them for that PEP and that was the litmus test I guess. They were awesome. You could see the content that you engaged them within the unit was coming out, because when I visited the placements, it was amazing. You would walk into the ward and see every one of the students engaging with the nurses or asking questions or kneeling down by the patient and helping them. And I was like wow! It wasn’t a set-up and I was really proud of them ... and it really came off the back of their preparation’’

Clinical facilitators gave tutors positive feedback about students’ preparedness for placement and valued their professionalism and enthusiasm for person-centred care, “… I think what the clinicians really responded to was their professionalism, their person-centred behaviour.”

Overall, the simulation laboratories were perceived by tutors to be well set-up to represent acute and community-based care. Tutors appreciated that the unit allowed for different learning styles and gave students opportunities to consider nursing in different contexts. However, some students needed encouragement to engage in non-acute areas, for example, “some of them were not that keen ... they all seemed to radiate to the acute care mannequins.” Two tutors expressed concern about the limited size of simulation laboratories on two campuses and claimed the group size (around 25) detracted from learning. They suggested “smaller lab groups would be better.”

Tutors suggested that person-centred care should feature more prominently in the curriculum as being “fundamental to nursing.” They considered that person-centred care could be further enhanced by providing more time in simulation labs and reconfiguring the unit to do fewer activities more effectively. There was consensus amongst tutors that students should come to simulation tutorials well-prepared. To increase the likelihood that students engage with pre-class e-learning materials, tutors suggested readings could be selected more discriminately to moderate student workload. The tutors indicated that if all students came to

<table>
<thead>
<tr>
<th>Theme the unit provided:</th>
<th>Examples from focus group discussion</th>
</tr>
</thead>
<tbody>
<tr>
<td>A person-centred holistic approach to nursing care</td>
<td>I thought we were taught a complete holistic approach, so we could approach a patient with person-centred care ...</td>
</tr>
<tr>
<td>Broadened students’ understanding of the professional role</td>
<td>Things aren’t just coming from the patient, the situation, they are also coming from the other professionals around you. You can actually see the clinical reasoning cycle at work.</td>
</tr>
<tr>
<td>Preparedness for placement</td>
<td>I think being able to work in groups and pairs the way we did, we were able to bounce ideas off each other really well ... and knowing that everyone has different skills ... and working together on that. You are sort of teaching each other. I think it is a really good way of doing it because in the clinical setting that’s how things work. If you don’t know you ask someone else.</td>
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Wilcoxin sign-rank p < 0.05.
tutorials well-prepared they could engage more effectively in clinical reasoning and problem-solving activities.

4.3. Clinical facilitator perspective

For the clinical facilitators, “real learning happens on placement.” From the facilitators’ perspective, the unit content and simulated activities prepared students well for their first professional experience. Communication and professional relationships were considered fundamental to being a good nurse and central to providing person-centred care. For these facilitators, good communication, person-centredness and holism were the key foci of first-year placement. In the words of one facilitator, “I think you need to communicate and that is just base level. That’s my opinion, that’s your starting point.” Facilitators reported that students communicated well verbally, non-verbally and with the multidisciplinary team. They perceived that the unit content and activities had engendered a strong sense of person-centeredness that promoted holistic care. One clinical facilitator cited examples of students demonstrating “almost instinctive caring behaviours” and another, “considering people as a whole person, not just a patient.” When asked to exemplify how students demonstrated holism in practice, facilitators identified their ability to undertake holistic assessments, communicate effectively and advocate in a holistic sense.

Facilitators commented that students learn by example through observing nurses and this exposes them to good and bad role models. One clinical facilitator expressed concern that, “observation encourages role socialisation” and that “sometimes students see undesirable practices.” Facilitators considered the simulated learning activities embedded within the unit prepared students well for placement but acknowledged that the workplace can be daunting for students, especially communication and intimate care.

Comments by facilitators indicated that they valued person-centred care and believed patients want to be cared for by nurses who apply this approach. Facilitators stressed the need for students to learn how to deliver person-centred care and appreciated that students had been taught this prior to placement. Placement was considered a good opportunity for students to consolidate theory and translate classroom learning into practice. The value facilitators placed on person-centred care is exemplified in the phrases, “You have to look at the whole person …” and “person-centred skills are needed in every nursing setting.” At this foundation level, holistic care was deemed more important than manual skills. In the words of one facilitator:

For me, in year 1, I didn’t care if it took them 10 times to take a manual BP … that is a skill … It is important to have those technical skills and we do need them, and if that doesn’t develop, then that is a problem; to understand why you are performing those skills and to interpret them – that is all important. But if you have all of those and you cannot look at your whole patient in the bed … That was my focus; to try to get that grounding of how important it is to get that relationship with the patient – look at them holistically …

Collectively, the results from the formal unit evaluation and student focus group data provide solid evidence that students were satisfied overall with the flipped and blended design of the unit. Quotes from students, tutors and clinical facilitators provided tangible evidence that what the students learned in the classroom translated to the practice setting.

Feedback from students, tutors and clinical facilitators demonstrates that adopting this integrated flipped classroom approach broadened students’ understanding of nursing roles beyond the acute hospital setting and made a valuable contribution to preparing them for their first professional placement.

5. Discussion

Nursing students have traditionally been prepared to practice in acute hospital settings, however worldwide policy shifts to person-centred and integrated care, combined with the complexity of health care and staff shortages, necessitate that they are equipped to work in a range of health care settings (AIHW, 2014; ACSQHC, 2011; WHO, 2015). The aims of this study were to evaluate an integrated teaching intervention from pre-class preparation through to interactive simulated tutorials, designed to enhance student satisfaction, the concept of person-centred care, broaden first-year undergraduate nursing students’ understanding of the professional nursing role and to prepare them for their first placement. The results indicate that the reconceptualised and reconfigured flipped classroom unit increased student satisfaction and achieved these goals. All participants, students, tutors and clinical facilitators alike, agreed that the unit encouraged students to consider the whole person and that students were able to demonstrate holism and person-centred care in practice. The examples of care cited by participants align with two elements of the person-centred framework proposed by McCormack and McCance (2006): the care environment and person-centred processes.

Using course-work scenarios and simulated techniques to enhance person-centred care in the laboratory setting was effective in promoting conceptual understanding and, as others have found, facilitated translation of understanding into clinical settings (Eick et al., 2012). Facilitators and students noted that opportunities to observe Registered Nurses in the practice setting reinforced students’ ability to consider people holistically. (Donaldson and Carter, 2005, p.353) identified that good role models have “tremendous influence on the clinical learning environment and on the development of students’ competence and confidence.” However, the ability of clinical staff to provide a positive clinical learning environment to students where they can observe high-quality professional role models is contingent on the level of staffing and resources available (Milton-Wildey et al., 2014).

Similar to studies of team-based learning (Morris, 2016), students considered the unit structure provided a learning environment conducive to developing communication skills and teamwork. Although students reported feeling anxious about placement, they felt the unit enhanced preparation for the practice environment. Clinical facilitators perceived communication to be daunting for some students. These are important findings given that transitioning to practice and professional communication are known to be major sources of placement-related anxiety for students (Gore et al., 2011; Richardson et al., 2015). Anxiety is known to detract from the placement experience and jeopardise clinical learning outcomes and course progression (Cooper et al., 2015; Eick et al., 2012; McKenna et al., 2010).

Students and tutors appreciated that the unit enabled students to practice skills in different nursing environments. Simulation space, its design and construction, have been identified as important features of contemporary nursing education curricula that can influence students’ preparedness for practice (Gore and Thomson, 2016; Green and Bull, 2014). Whereas tutorial sizes are often standardised to suit institutional needs, this study indicates that learning outcomes could be enhanced by adopting a student-centred approach and reducing the number of students per tutorial group in keeping with the dimensions of the laboratory space available.

Adequately preparing nursing students for placement has implications for promoting learning outcomes and influencing decisions to stay in the course or go (Johnson et al., 2012; Leducq et al.,
The relationships student nurses develop with the nursing community have a profound effect on their placement experience and influence the formation of their professional identity (Courtney-Pratt et al., 2011; Cooper et al., 2015; Walker et al., 2014). In this study, the integrated teaching intervention adopted to prepare nursing students for their first placement enabled students to establish successful professional relationships and facilitated a positive placement experience. Within this study, tutors and facilitators valued person-centred care and students felt validated by patients and preceptors when they applied person-centred care in practice.

Recommendations to enhance the unit included increasing time in labs, adopting a more focused approach and expectations regarding pre-class preparation and reducing the number of simulated lab activities to progress higher-order learning. Simulation, team and problem-based learning have become dominant modalities in nursing education to promote clinical reasoning and higher-order learning (Bethihavas et al., 2016; Lapkin et al., 2010). In this study, some students and tutors felt engagement in simulated tutorial activities would be enhanced if there was an explicit expectation that students complete directed learning activities prior to tutorials. Similar to those promoting the blending of technology with team-based learning (Morris, 2016; River et al., 2016), some proponents of flipped classrooms advocate for pre-class learning to be assessed (Bethihavas et al., 2016).

The comments of students and tutors suggest this flipped classroom approach was amenable to both groups. Though not previously reported in the literature, flipping the classroom enabled us to dedicate class time to promoting person-centred learning, shaping understanding of the professional role, and to preparing students well for their first clinical practicum. By dedicating face-to-face teaching time to promoting higher-order learning, the flipped classroom can enhance the learning outcomes achieved by team-based and simulated learning.

The findings provide further evidence of the readiness of millennial students for technology-mediated learning (Kittle and Ormrod, 2009; River et al., 2016; Towle and Breda, 2014). As suggested by students in this study, it is timely to offer more e-learning pre-class to prepare students to engage interactively in tutorials. To be effective, flipped learning is contingent on students’ preparedness and accountability for their learning (Bethihavas et al., 2016; Bristol, 2014). Empowering students to take ownership and responsibility for their learning, a precept on which the flipped classroom is based (Bethihavas et al., 2016), provides a further step in preparing them for lifelong learning.

### 5.1. Limitations

This was a small study from one university. Although recruitment and follow-up were difficult due to reliance on sessional tutors and clinical facilitators and the need to undertake the research post-semester when stakeholders were largely inaccessible, there were some very positive outcomes that demonstrate the potential of this integrated flipped classroom approach which could be repeated at other universities. Though the scale and specifics of this study prevent the findings being generalisable, they have been mapped to the curriculum, informed curricula change and may be useful to others seeking to combine an integrated flipped classroom approach. The survey data provided comparative and contextual background that situates and complements the limited qualitative data. Though survey data were self-reported, the similarities between data-sets have helped reinforce the credibility and trustworthiness of findings (Neuman, 2011; Tong et al., 2007) and buffered the limitations arising from difficulties in confirming our interpretation of findings.

### 6. Conclusions

This study provides evidence from multiple perspectives that the flipped education model increased student satisfaction, promoted person-centred care, enhanced transition to the professional role and prepared students well for their first placement. Combining a flipped approach to teaching and learning that incorporated person-centred and team-based simulation activities, enhanced students’ learning experience. Utilising strategically selected readings, e-learning tools, interactive lectures and custom-designed team-based simulated scenarios increased students’ awareness of the complexity of contemporary health care. This study contributes insights into how an integrated approach can be applied in nursing education to achieve higher-order learning and facilitate knowledge translation in practice. Further study is required to examine whether learning is sustained and developed over the course of the program and translates into direct nursing care. The study justifies further research into the potential for the integrated or blended flipped classroom model to facilitate higher-order learning outcomes and enhance students’ professional understanding.

### Conflict of interest statement

There were no conflicts of interest.

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### References


Jones, A., Bartlett Learning. Burlington MA.

Kittle and Ormrod, 2009; River et al., 2016; Towle and Breda, 2014.


