



Unit Warm-up: Jump start into tertiary studies

Elizabeth Emmanuel^{a,*}, Jenelle Benson^{b,c}, Marilyn Chaseling^c,
Julie-Ann Paredes^{b,c}

^a Gold Coast Campus, Southern Cross University, Locked Mail Bag4, Coolangatta, Qld, 4225, Australia

^b Lismore Campus, Military Rd., East Lismore, NSW, 2480, Australia

^c Southern Cross University, Australia

ARTICLE INFO

Keywords:

Unit warm-up
Nursing
Tertiary
Education
Transition
Preparedness
First-year
Subject

ABSTRACT

Background: A high level of preparedness for engagement is essential for a smooth transition into tertiary studies. Regardless, many first-year nursing students appear underprepared, a situation likely exacerbated by today's increasingly diverse student population. Students' preparedness to begin tertiary education can be hampered by factors such as environmental changes, technical issues and paid work demands. For first year students, this period is frequently marked by apprehension and a sense of unpreparedness.

Objectives: To report the difference in first-year nursing students' pre- and post-subject preparedness and understanding after participating in a Unit Warm-Up.

Design: A quantitative survey.

Settings: An online pre- and post-survey prior to the commencement of a subject.

Participants: First-year, first-semester nursing students.

Methods: Students could choose to participate in a "Unit Warm-Up" strategy before commencing a subject. Those who participated were invited to complete the pre- and post-survey created with the Qualtrics survey software. Survey questions focused on students' subject preparedness, level of anxiety about the subject's content, level of motivation and understanding of the subject's learning outcomes. Data was collected over a four-year period.

Results: The findings revealed that participating in the Unit Warm-Up from 2019 to 2021 had a significant impact on students' preparedness and understanding of the subject's learning outcomes. In 2022, no significant changes were observed, which could have been influenced by extreme flooding in the regions. Anxiety levels among students decreased from 2019 to 2021, but not in 2022. Motivation remained consistent over time. When compared to overall pass rate and student satisfaction trends, such a Unit Warm-Up strategy may have a positive impact.

Conclusion: A Unit-Warm-Up strategy has merit as a jump start into tertiary studies. Nevertheless, external factors such as the Covid pandemic and environmental disasters can disrupt students' anxiety and readiness for participating in a subject.

1. Introduction

The level of preparedness for engagement is critical to a smooth transition into tertiary studies. For this reason, many tertiary

* Corresponding author.

E-mail addresses: elizabeth.emmanuel@scu.edu.au (E. Emmanuel), Jenelle.Benson@SCU.edu.au (J. Benson).

<https://doi.org/10.1016/j.heliyon.2023.e18113>

Received 20 November 2022; Received in revised form 1 July 2023; Accepted 7 July 2023

Available online 7 July 2023

2405-8440/© 2023 Published by Elsevier Ltd.

This is an open access article under the CC BY-NC-ND license

(<http://creativecommons.org/licenses/by-nc-nd/4.0/>).

institutions offer preparatory programmes to help beginning students to transition, and equip them with fundamental skills they need to succeed [1]. These initiatives are often referred to as enablers, kickstarters, or getting-ready programmes. Regardless of such programmes, many first-year students appear unprepared, which is likely exacerbated by today's increasingly diverse student population [2,3], for example, reported that 50% of university students in the United States are now over the age of 24, referring to this as the "new majority" which is comparable to rates in Australia (43%), and New Zealand (50%). Furthermore, the Organisation for Economic Cooperation and Development has observed an increase in the number of women enrolling in tertiary education in member countries [4]. Many more students are now first-in-family to attend university, and research has shown that they are less likely to perform as well as their second- or third-generation counterparts [5]. With this shifting demographic, it is more important than ever to better prepare students for tertiary studies in order to support and improve their experience and performance. Therefore, the purpose of this study is to investigate an innovative strategy known as "Unit-Warm-Up" to determine its influence on student preparedness for tertiary studies.

2. Background

Student preparedness for tertiary studies can be hampered by unanticipated environmental factors such as global pandemics, floods and bushfires. These can trigger emergency responses at the national, state and community level. In an Australian study, Lorenza and Carter [6] reported on the transition to emergency online teaching as a result of the COVID-19 outbreak and its negative impacts. These impacts included decreased student engagement and motivation, decreased teacher presence, and increased anxiety and stress. Martin [7] found that negative issues were more prevalent among students from regional areas, from low socio-economic backgrounds, and those experiencing technological problems. In addition to the challenges and uncertainties of the COVID-19 pandemic, many Australian students have had to contend with a series of devastating environmental issues including bushfires, droughts, cyclones, and floods, as well as widespread job losses, social disconnection, isolation, and health concerns [8].

Preparation is becoming increasingly important as tertiary education becomes more widely available and the student population becomes more diverse. Unpreparedness, in contrast, can reduce a student's chances of successfully transitioning into and completing tertiary studies. In addition, Salamonson et al. [9] reported that many mature-aged nursing students were engaged heavily in paid work and thus had little time for study which contributed to their low first-year grade-point average. An Australian study found power differentials between internationals and domestic students, with the international students struggling to prove themselves and earn respect among their peers [10]. In Australia, the Tertiary Education Quality and Standards Agency [11] has specified early identification of international students for extra support to eliminate academic, literacy and language barriers to improve entry, progression, and completion of study programmes. Students seeking professional, communication, academic or literacy support were typically mature-age, female, non-native or international [12]. Frequent support consultations were found to have a significant impact on grade point averages. Thus, students who accessed support were more likely to pass their subject, remain enrolled, and complete their studies.

With an increasingly diverse student population entering tertiary education, more innovative strategies for easing the transition into first year are required, especially for apprehensive and underprepared students. Several such innovations, including "Get Ready" [13] and "Kickstart" [14], have found that transition strategies improve student success and retention. These programmes however, typically concentrate on the first full year of a student's experience.

2.1. Context of the study

This study was conducted at a regional Australian university with three campus sites spread across two states. The study's pre-subject strategy was attached to *Essentials of Nursing and Care*, one of four first-year first-semester subjects in the 24-subject Bachelor of Nursing programme. Students enrol in this subject internally and participate in weekly face-to-face classes and workshops, as well as an online Blackboard site.

When COVID-19 reshaped the world beginning in 2020, government mandated social distancing restrictions meant that students were forced to engage in this normally on-campus subject in different ways. In March 2020, at the commencement of the academic year, two campuses switched to online learning, while the third switched to online in Week 4. In 2021, the first two weeks of the academic year were face-to-face for all campuses, but this was soon followed by a mix of face-to-face and online learning due to flooding in localities near two campuses. The 2022 academic year began with face-to-face attendance on two campuses. In the first week of the academic year, a natural disaster struck northern New South Wales and southern Queensland, Australia, causing the largest flood in recorded history in northern New South Wales. Consequently, many students and staff from one campus were displaced, lost their homes and all or most of their belongings, and were unable to attend classes. Those students who could, studied online for six weeks, then reverted to face-to-face attendance for the rest of the semester.

Students enrolled in *Essentials of Nursing and Care* from 2019 to 2022 had the option to participate in a "Unit Warm-Up"—a preview of subject activities—before beginning their studies. The Unit Warm-Up included the following elements: a brief introduction by the subject coordinator; a breakdown of the key material to be covered; information on what was involved in self-directed learning and face-to-face classes; details of the basic clinical skills to be covered in laboratory workshops; student tips, and a short video from a previous student's experience that included reflections on what was involved regarding learning expectations in the subject. Students who participated in the Unit Warm-Up were invited to complete a survey both before and after the Unit Warm-Up (Table 1).

Even though this Unit Warm-Up strategy has been utilised in multiple subjects at this university for more than five years, there appears to be a dearth of student-focused research of the strategy's effectiveness. This study, therefore, aimed to answer the research

question, “Do students report a difference in their pre- and post-subject preparedness and understanding after participating in a Unit Warm-Up?”

3. Methods

This study employed a quantitative survey design which was approved by the university’s ethics committee under the reference ECN16-275. Students were asked to complete a pre-survey (to collect baseline data), then a Unit Warm-Up intervention, and finally a post-survey (to assess impact) [15].

In both surveys, which were created on the Qualtrics survey software, students were asked to identify their campus and subject of study. In accordance with the university’s ethics approval, no other demographic data was collected so as to ensure participant anonymity. The pre-survey included six questions, four of which were on a scale of 0 to 100. These four questions asked students to rate their subject preparedness, their level of anxiety about the subject’s content, their level of motivation for studying the subject, and their understanding of the subject’s learning outcomes. The remaining two questions were open-ended questions and are not included in this study. The post-survey included eight questions with a scale of 0 to 100. The first four scaled questions were the same four questions that students answered prior to participating in the Unit Warm-Up, while the remaining four scaled questions addressed information on the subject’s Blackboard site, and ways to improve the Unit Warm-Up. Two additional questions were opened-ended and are not part of this study. In 2018, a small group of students piloted the survey tool to determine if their answers matched the intent of each question. As a result, some questions were slightly modified.

3.1. Procedure

Students were given access to the subject’s online Blackboard site two weeks before the semester began. They had the opportunity to complete the non-mandatory Unit Warm-Up as well as its associated pre- and post-surveys over the next two weeks.

3.2. Participants

University enrolment data about the subject revealed that students were predominantly female, a mix of school leavers and mature age, first-in-family, mostly working part-time, and from a variety of social and cultural backgrounds. This data was not collected during the survey as it was available from university enrolment data for the subject. In the first year of the surveys in 2019, enrolments were

Table 1
Unit Warm-Up design.

Order of sections	Online resource	Unit Warm-up Sections image used	Added layers
1 Introduction and Welcome from Subject Coordinator	None	Subject Code: and Image of a nurse	<ul style="list-style-type: none"> – Looking for assessment information? – Do you need a textbook? – How is the unit delivered? – Link to Unit outline – Link to prescribed text
2 UA introducing aspects about the unit	Interactive: Video in Lab Workshop setting	Ward scene with patient and nurse	Have You: <ul style="list-style-type: none"> – completed your pre-clinical placement requirements? – read the student nurse uniform policy? – ordered your uniform – Registered into the laboratory workshops?
3 Student Tips	Interactive: Video of student talking about the Unit Warm-Up and completion of the subject	Student in lab workshop	Have You: <ul style="list-style-type: none"> – completed the Laboratory Safety Test (compulsory)? – considered accessing the range of online learning? – considered accessing the range of online learning resources?
4 Important subject facts	Interactive video	Laboratory test tube	Steps you need to follow: <ul style="list-style-type: none"> – Develop a time management plan – Have completed lab safety module – Obtained full uniform – Familiarised your class and workshop schedule – Be on time – Prepare by reading the required learning resources?
5 What next	Return to subjects Blackboard website	Stethoscope	<ul style="list-style-type: none"> – go to subject website for weekly content, announcements, and other important information

484, increasing to 576 in 2022. The response rate in 2019 was 31% ($n = 152$), in 2020 was 41% ($n = 195$), in 2021 was 52% ($n = 369$), and in 2022 was 36% ($n = 206$). Participation in the Unit Warm-Up was voluntary.

3.3. Data analysis

The data from the Qualtrics platform was analysed through statistical analysis software and descriptive statistics were used to determine if there were any significant changes in student preparedness and anxiety between the pre- and post-survey. The data was analysed using a Welch's t -test because the population size of the pre- and post-groups was not the same. The findings used a Cronbach alpha of 0.05 to determine the significance of the findings, and an absolute t value equal to or greater than 1.96 was identified as significant. A Cohen d value was also calculated to determine the effect size on the population. The d -values are small ($d < 0.4$), medium ($d = 0.4$ – 0.65) and, large ($d = 0.65$ – 1.0) [16].

Prior to beginning data analysis, a null hypothesis and an alternative hypothesis needed to be developed to interpret the findings and determine if there was any significance in the data. The null hypothesis for this study is that there is no significant difference in students' subject preparedness and understanding from before and after the Unit Warm-Up interaction (H_0 : Pre = Post), whereas the alternative hypothesis is that there is a significant positive difference in students' subject preparedness and understanding before and after the Unit Warm-Up interaction (H_1 : Pre \neq Post).

4. Results

Four questions were analysed for feelings of preparedness: students' reported feelings of preparedness (Q1); anxiety about studying the subject (Q2); motivation for studying the subject (Q3); and comprehension of the subject learning outcomes (Q4). The combined p values for the first (Q1) and last (Q4) questions across all four years ($p = 2.44e-20$ and $p = 1.47e-13$) were less than the α of 0.05. Both d values indicated that the Unit Warm-Up had a moderate to large effect ($d = 0.49$ and $d = 0.65$), indicating that it would have a moderate to large effect on similar populations at the study university and other universities in terms of enhancing preparedness and comprehension of learning outcomes. The differences from pre- and post-Unit Warm-Up ratings indicated that the intervention had a significant impact on students' preparedness and understanding of the subject's learning outcomes.

The greater the absolute t value from 1.96 within the t -test results, the greater the difference between the groups' response to each pre- and post-survey question. For Questions 1 and 4 (see Table 2), the t -test results showed a significant difference across the three years (2019–2021). The only year that did not show any significant change from before and after participating in the Unit Warm-Up was 2022. There was no significant change for p or d values, or within the t -test results. This could have been influenced by the extreme flooding event that occurred in the locality surrounding one of the campuses just as this subject was scheduled to be delivered in 2022. The t -test for Questions 1 to 4 shows the difference between the two means over four years indicating significant differences.

For Question 1, there was an increase in preparedness for all four years, but the level of change in 2022 was below the level required for it to be considered significant (Fig. 1). Changes in anxiety levels were reduced in all years except 2022, which coincided with the flooding event in Northern New South Wales which caused extensive community upheaval and loss of homes.

Although there was a reduction of anxiety after participating in the Unit Warm-Up, the level of change in 2022 did not fall within the required level of significance (Fig. 2).

Question 3 dealt with the motivation to study the subject, which had little effect for most years. The 2021 anomaly may have been caused by students returning to face-to-face on-campus classes in that year after being in lockdown for most of 2020. The lack of a positive change in 2022 may be attributed to the Northern Rivers floods and the instability it caused in many students' lives (Fig. 3).

Question 4 related to students' understanding of the subject learning outcomes and how they would be assessed in the subject. Both these aspects of the subject were explained in the Unit Warm-Up. For Question 4, all four years showed a positive change, with 2019 to 2021 having a significant positive change (Fig. 4).

Fig. 5 shows a four-year positive trend in pass rates (grey dashed line) since the implementation of the Unit Warm-Up in 2019. The

Table 2
Statistical analysis for questions 1 and 4 for each year.

Q1	2019	2020	2021	2022
t -test	5.2154	5.3232	8.9043	0.619
d value	0.84	0.75	0.91	0.1
p value	1.78E-06	5.46E-07	2.68E-16	0.5378
Q4	2019	2020	2021	2022
t -test	4.3831	3.0419	7.8856	1.0876
d value	0.85	0.43	0.71	0.18
p value	5.26E-05	0.002947	7.74E-14	0.2802

Note. As a practical application, the d values are used to determine the effect a specific segment of the study has on a population (Lakens, 2013). The results are less generalisable as the effect size decreases. Only Questions 1 and 4 had large d values, indicating a large effect area within a population. Questions 1 to 4 had very small p values compared to the set p value, indicating very significant positive findings.

The p value is the level of marginal significance within a statistical hypothesis test that represents the probability of the given event occurring and is set at $\alpha = 0.05$ for this study. Any p value that is less than 0.05 rejects the null hypothesis, while a p value greater than 0.05 accepts the null hypothesis. The greater the distance on either side of the p value, the greater the significance of the findings.

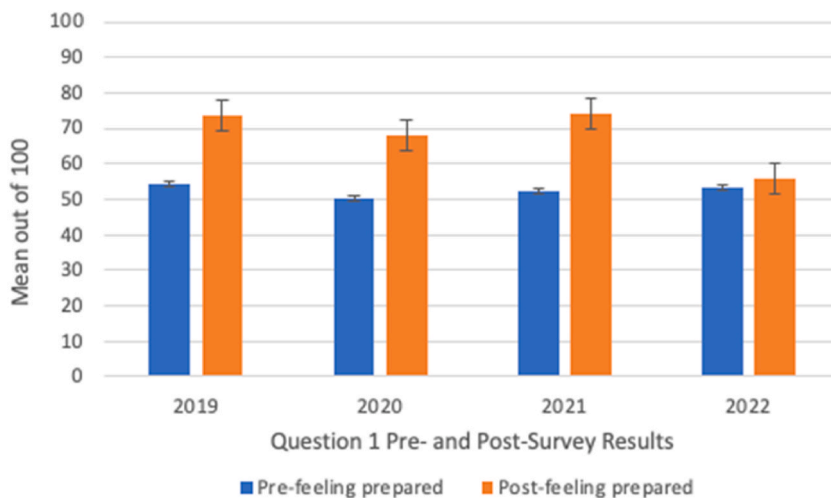


Fig. 1. Mean score question 1 pre- and post-survey changes in students' preparedness.

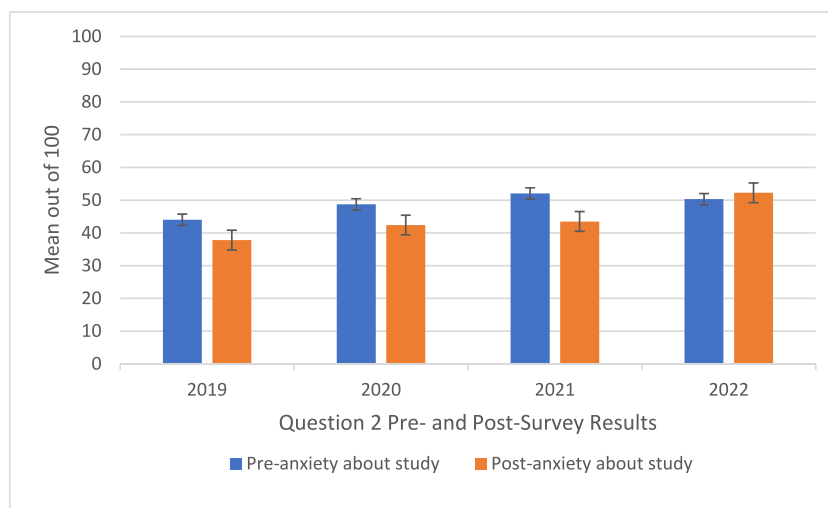


Fig. 2. Mean score question 2 pre- and post-survey changes in anxiety about studying the subject.

dip in 2022 could be attributed to the impact of the Northern Rivers floods, as there was a lower pass rate in 2022 on that campus than on the other two campuses.

Fig. 6 showed a positive trend in students' satisfaction from 2018 (the year prior to the Unit Warm-Up) to 2022. The only dip occurred in 2020 coinciding with the start of the first learning-from-home period on two of the three university campuses due to COVID-19 restrictions (Fig. 6). (Students on the third campus began the 2020 academic year face-to-face before also switching to online learning).

5. Discussion

Nursing is a rewarding profession with a service focus and job security [17]. Despite this, many nursing students feel unprepared because they lack knowledge about tertiary education and nursing [18]. Moreover, many students who make up the growing “new majority”—those over the age of 24 [3]—are less prepared than school leavers because they lack recent formal education, are more likely to be females with childcare responsibilities, or are the first-in-families to enrol in university. As a result, they frequently receive less support than their peers who come from families where someone has previously attended university [5]. Consequently, a Unit-Warm-Up was implemented in the current study.

This incorporation of a Unit Warm-Up in the subject Essentials of Nursing and Care proved an effective strategy for preparing first-year nursing students for the subject. Pre- and post-survey data collected over a four-year period during the implementation of this strategy revealed improvements in feeling prepared, decreased anxiety (except in 2022), increased motivation (with the highest level

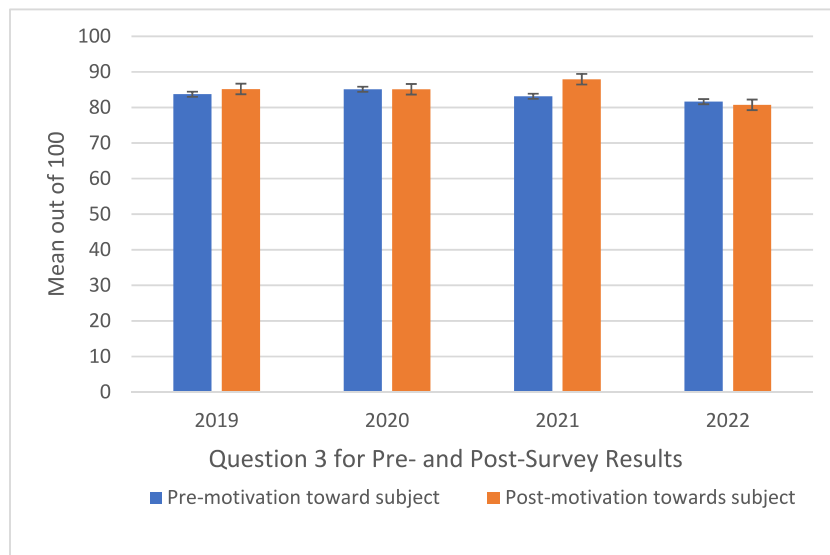


Fig. 3. Mean score question 3 pre- and post-survey changes in motivation for studying the subject.

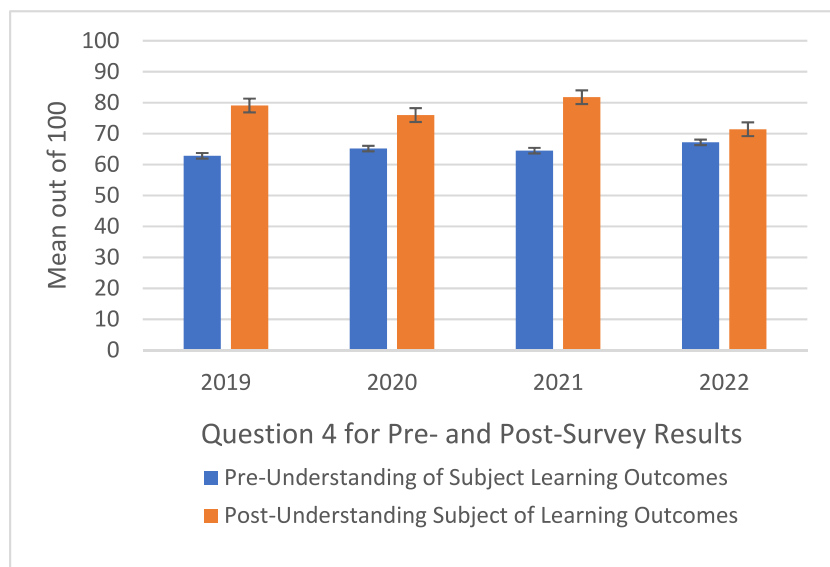


Fig. 4. Mean score question 4 pre- and post-survey comprehension of subject learning outcomes.

of motivation in 2021 but a decline in 2022), and a better understanding of the learning outcomes for the subject of study. The variation in responses to questions in 2021 was most likely related to students' return to face-to-face on-campus classes after COVID-19 restrictions were lifted. Nonetheless, the impact of a widespread disaster in 2022 with unprecedented flooding in the locality surrounding one of the campuses, which resulted in a return to online learning for these students, appeared to make students more anxious and less motivated to learn. Feelings of anxiety on returning to face-to-face learning aligns with previous research findings that external influences can have a negative impact on students' motivation, engagement, and anxiety levels, particularly in rural Australia [6–8].

During the four years of Unit Warm-Up implementation, additional analysis revealed intriguing results. When “feelings of preparation” and “subject learning outcomes” were examined across all four years, the average results for each of these had p values that were less than 0.05 ($p = 2.44\text{E-}20$ and $p = 1.47\text{E-}13$, respectively). Additionally, they both had d values ($d = 0.65$ and $d = 0.49$) that indicated a moderate to large effect on students (see Table 2). This demonstrated that after participating in the Unit Warm-Up, students' readiness for and comprehension of the subject learning outcomes changed significantly between the pre- and post-ratings. In terms of the Unit Warm-Up, the year 2022 was the only one in which there was no discernible difference between the pre- and post-test results. Catastrophic flooding in the city and surrounding area of one of the campuses just before this subject began could have had an

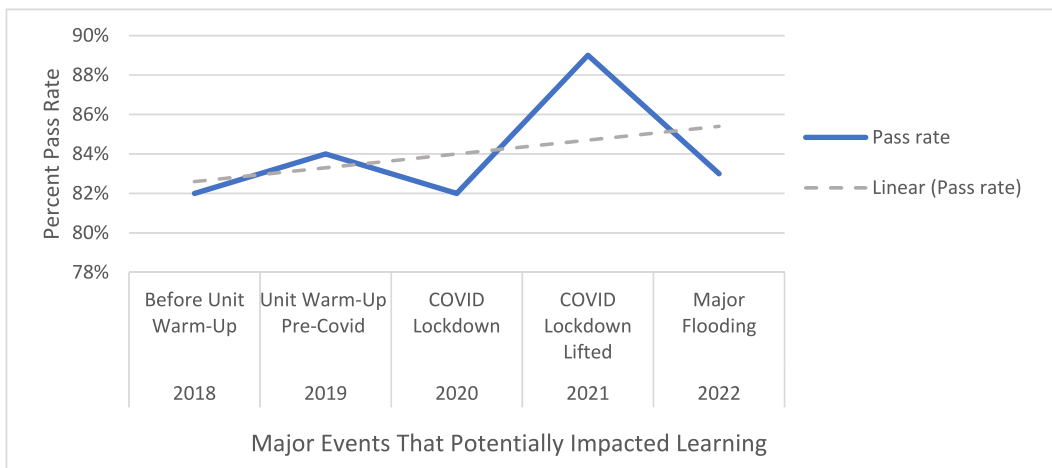


Fig. 5. Subject pass rate before and after the introduction of the unit warm-up.

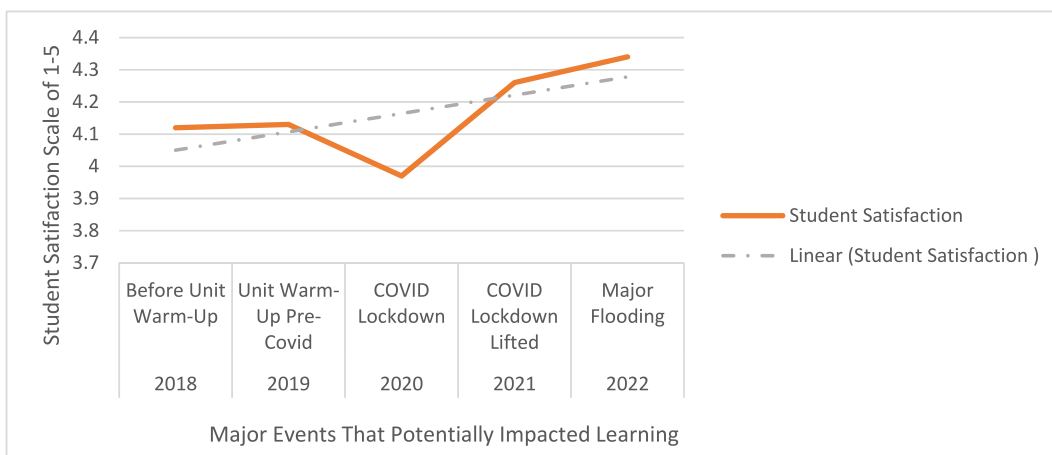


Fig. 6. Student overall satisfaction trends before and after introduction of the unit warm-up.

impact. The *t*-test for questions relating to these two areas—"feelings of preparation" and "subject learning outcomes"—revealed the difference between the two means as well as the years with a significant difference. Other successful initiatives that have included a programme of content and activities, such as "Get Ready" [13], and "Kickstart," have also emphasised the importance of students being prepared prior to participating in a subject [14].

Although this study found significant relationships between the four sets of questions and the Unit Warm-Up strategy, other factors may also have been at work. These may have influenced students to take their studies seriously and get off to a good start, for example choosing to participate in the Unit Warm-Up. During this study's time period, the COVID-19 epidemic occurred, and teaching shifted to an online format with a greater emphasis on students taking responsibility for their own learning. Students from low socioeconomic backgrounds, and those who live in rural locations with limited access to technology, were particularly affected [7,19]. Furthermore, bushfires, floods, the loss of homes, employment, electricity, and transportation all affected these same Australian rural communities [20]. These difficulties may have motivated students to enhance their ability to secure a stable future through a nursing degree.

Mikovits' [21] concept analysis of preparedness can be applied to students' exposure to their first subject prior to the start of their first academic year. Being prepared through the Unit Warm-Up strategy had the potential to provide students with a readiness and awareness, which potentially increased motivation towards their study. From a teaching standpoint, the Warm-Up programme highlighted the importance of preparation by incorporating an introduction and pre-exposure to the topics, practical skills, and experiences that will be taught.

This study, like every study, had strengths and limitations [22]. One of the key strengths was the nearly 1000 responses received in the pre-survey. In addition, the study's ability to capture the lived experiences of the student cohort before, during and after the pandemic and floods provided valuable insights. However, a potential limitation was the varying response rates for the post-survey, which ranged from 25.6 to 31.4%, and might have been biased in favour of those who felt more prepared and motivated. Moreover, the survey questions focussed only on four key issues. Additional questions may have yielded different results. Furthermore, more

respondents were female, which may have introduced bias. As the sample is not gender-balanced, this can skew the results. Data may only apply to university nursing students. More research is needed to determine if the data represents all students or just nursing students.

While the Unit Warm-Up strategy—the first of its kind at this university—began as a quality assurance exercise in a few first-year, first-semester subjects, it has now been implemented more widely. Its goal was to pre-expose students, in a time-efficient way, to the main components of a subject before students started studying it. A Unit Warm-Up has the potential to make students feel welcomed into a subject by cultivating a positive impression of the subject, the faculty, and the educational process [23]. Providing the opportunity for preparedness afforded students the chance to lessen their mental uncertainty and potential feelings of apprehension [24] that most beginning students feel prior to commencing their study. With the increasing diversity of university students entering university through non-traditional pathways or directly from the work force [3], it is now more important than ever for students to be well-prepared. Strategies, such as a Unit Warm-Up, give students the chance to reframe their thinking, while encouraging them to be capable university students who can overcome obstacles and achieve academic success [23].

It is important to consider how a Unit Warm-Up strategy might benefit all first-year nursing students, and also students in subsequent semesters. Nursing educators are familiar with the concept of preparedness—defined as “drawing from prior knowledge and experience to maintain situational awareness while being resilient and confident in responding” p. 20 [21]—yet the lead-up to university commencement is rarely a focus. Consequently, many beginning students continue to feel unprepared and overburdened by difficulties, such as engaging with unfamiliar tertiary assessment requirements, while balancing study and work commitments [25].

6. Conclusion

This study has quantitatively addressed the question of whether students in a nursing degree report a difference in their pre- and post-subject preparedness and understanding after participating in a Unit Warm-Up. The study determined a positive difference in that first-year students felt more prepared, had less anxiety, greater motivation, and a better understanding of the learning outcomes for the subject of study. The improvement was significant across the study timeframe except in 2022 when the region experienced extreme flooding. Anxiety levels decreased significantly for each year. In 2022, however, there was no significant change. Motivation remained high over the first two years, and rose significantly in the third year, presumably as a result of returning on campus for face-to-face classes. In the fourth year, seemingly due to the results of extreme flooding and its disruptive impact, motivation levels decreased.

These conclusions provide valuable reflections on the relative merits of a Unit-Warm-Up strategy as a jump start into tertiary studies. In addition, the study highlights how external factors such as the COVID-19 pandemic and environmental disasters can critically disrupt approaches to education, and what changes can emerge in the future that can address disruptions for students, and therefore minimise negative impact. Further research is needed to explore students' qualitative experiences which would provide more insight into preparedness for tertiary education. This study focused on nursing students, however, further research across other faculties parallel to nursing would also shed light on first year student experiences at large, and how a Unit-Warm Up strategy can contribute to a smooth transition into tertiary studies.

Production notes

Author contribution statement

Elizabeth Emmanuel: Conceived and designed the experiments; Performed the experiments; Wrote the paper.

Jenelle Benson: Performed the experiments; Analyzed and interpreted the data; Wrote the paper.

Marilyn Chaseling; Julie-Ann Paredes: Contributed reagents, materials, analysis tools or data; Wrote the paper.

Data availability statement

Data included in article/supp. material/referenced in article.

Additional information

No additional information is available for this paper.

Declaration of competing interest

The authors declare that they have no known competing financial interests or personal relationships that could have appeared to influence the work reported in this paper.

References

- [1] T. James, The juxtaposition of STEPS to the undergraduate arena: the lived experience of transitioning into undergraduate study, 56(2). 250-267, Aust. J. Adult Learn. 56 (2) (2016) 250–267.
- [2] J. Benson, et al., Your success is our goal: an intervention for failing students, J. Univ. Teach. Learn. Pract. 19 (2) (2022) 147–163.

- [3] L. Rowan, The new majority of higher education. HERDSA Connect. Higher Education Research and Development Society of Australasia, 42(1), 2020, p. 16.
- [4] OECD, To what level have adults studied?, in: Education at a Glance, 2021 OECD Indicators, 2021.
- [5] S. O'Shea, First-in-family learners and higher education: negotiating the 'silences' of university transition and participation, HERDSA Rev. High. Edu. 3 (2016) 5–23.
- [6] L. Lorenza, D. Carter, Emergency online teaching during COVID-19: a case study of Australian tertiary students in teacher education and creative arts (2021). . I, 2, 1–8, Int. J. Edu. Res. Open 2 (2021) 1–8.
- [7] L. Martin, Foundations for Good Practice: the Student Experience of Online Learning in Australian Higher Education during the COVID-19 Pandemic, Tertiary Education Quality and Standards Agency, Melbourne, 2020, p. 25.
- [8] J. Shakespeare-Finch, et al., COVID-19: an Australian perspective, J. Loss Trauma 25 (8) (2020) 662–672.
- [9] Y. Salamonsen, et al., The type and amount of paid work while studying influence academic performance of first year nursing students: an inception cohort study, Nurse Educ. Today 84 (2020), 104213.
- [10] S. Randall, T. Crawford, J. River, Us and them: the experience of international nursing students engaged in team based learning: a qualitative descriptive study, Nurse Educ. Today 92 (September) (2020).
- [11] TEQSA, in: T.E.Q.a. S. Agency (Ed.), Characteristics of Australian Higher Education Providers and Their Relation to First-Year Student Attrition, 2017.
- [12] P.J. Glew, et al., Relationships between academic literacy support, student retention and academic performance, Nurse Educ. Pract. 39 (2019) 61–66.
- [13] A. Larsen, D. Horvath, C. Bridge, 'Get ready': improving the transition experience of a diverse first year cohort through building student agency, Stud. Succ. 10 (2019).
- [14] Y. Breyer, et al., Student Engagement for Student Success: Pre-commencement Strategies via KickStart, 2017, pp. 23–35.
- [15] P. Leavy, Research Design: Quantitative, Qualitative, Mixed Methods, Art-Based, and Community-Based Participatory Research Approaches, The Guildford Press, 2017.
- [16] D. Lakens, Calculating and reporting effect sizes to facilitate cumulative science: a practical primer for t-tests and ANOVAs, Front. Psychol. 4 (2013) 863.
- [17] M.E. Miers, C.E. Rickaby, K.C. Pollard, Career choices in health care: is nursing a special case? A content analysis of survey data, Int. J. Nurs. Stud. 44 (7) (2007) 1196–1209.
- [18] B. Rasmussen, A. Hutchinson, G. Lowe, K. Wynter, B. Redley, S. Holton, E. Manias, N. Phillips, J. McDonall, L. McTier, D. Kerr, The impact of COVID-19 on psychosocial well-being and learning for Australian nursing and midwifery undergraduate students: a cross-sectional survey, Nurse Educ. Pract. 58 (2022).
- [19] M. Chaseling, J.-A. Paredes, W.E. Boyd, Schooling in a time of disruption: the impact of COVID-19 from the perspective of five New South Wales (Australia) secondary principals, Edu. North 27 (2) (2020) 152–174.
- [20] J.-A. Paredes, M. Chaseling, W. Boyd, Online learning in a time of COVID disruption? The experiences of principals from New South Wales rural and disadvantaged primary schools, Edu. North 27 (2) (2020) 175–195.
- [21] J. Mikovits, A concept analysis of preparedness: application to LGBTQ considerations for nursing, J. Nurs. Manag. 29 (1) (2020) 16–23.
- [22] P. Leedy, J. Ormrod, Practical Research: Planning and Design, eleventh ed., Pearson, 2015.
- [23] C. Dweck, Mindset: Changing the Way You Think to Fulfil Your Potential, updated ed., Robinson, 2017.
- [24] J.N. Raub, Knowledge, fear of the unknown, opinion, and the pandemic, Am. J. Health Syst. Pharm. 79 (5) (2021) 400–401.
- [25] A. Christiansen, et al., "Juggling many balls": Working and studying among first-year nursing students, J. Clin. Nurs. 28 (21–22) (2019) 4035–4043.