Research Article

Nursing Student Engagement with Their Learning: A Mixed Methods Study

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Abstract: Student engagement in educational activities is essential for achieving desired learning outcomes. Despite this, little is known about the engagement patterns of nursing students from diverse or disadvantaged backgrounds. A mixed method study was conducted to explore engagement patterns within and outside the classroom but not during clinical placements. Students were asked what engagement means to them and what influences their engagement. Students were also asked how many hours they engaged in each of their undergraduate subjects and the reasons for this. The study was conducted at an Australian education provider. All students (n = 240) enrolled in the Bachelor of Nursing course were invited to participate. Lecture attendance was high at the start of the semester, fluctuated weekly and declined as the semester progressed. Students averaged between 3.5 and 4.4 hours of engagement per subject per week. They defined engagement as actually coming to class and a commitment to learning. Students were engaged by new, interesting content and disengaged by repetitive or complex content and poor tutoring. Most students want to engage but are distracted by intrinsic and extrinsic factors. Research should explore how to best assess students without the concurrent academic workload interfering with their studies.

Keywords: Nursing; Student; Engagement; Diverse; Background

1. Introduction

Student engagement in educational activities is essential for achieving desired learning outcomes. Engagement represents the time and effort students devote to activities that are empirically linked to specific learning outcomes plus what institutions do to induce students to participate in these activities [1,2]. Engagement therefore includes time spent in the classroom as well as private study [3]. Research has found that students gain more from their studies when they actively devote time and energy to learning such as interacting with teachers and peers and applying learning to concrete situations [2,4].

Educational activities such as these help foster 'deep learning'. This refers to engagement in approaches to learning that represent integration, synthesis and reflection and includes high levels of academic challenge and reflective thinking [5]. In contrast, 'surface learning' belongs in an artificial world where faithfully reproducing fragments of torpid knowledge to please teachers and pass examinations has replaced understanding [6]. Some of the challenges faced by universities with student engagement include: varying attendance at non-compulsory classes such as lectures; larger class sizes resulting in students feeling alienated; students' lack of understanding of course content which prohibits their class participation; and part-time employment and its impact on academic performance [3,7-9].

Nurse educators share the view that undergraduate students are often only willing to engage with scholarly content if they can see application to clinical practice, and that this is only achieved if educators deliver content in a meaningful and engaging way [10]. Nurse educators therefore have a unique challenge in delivering a contemporary, relevant curriculum which readily prepares graduates for the many challenges of clinical practice, whilst also ensuring that students appreciate the importance of what is being delivered and are willing to engage in a way which fosters deep learning.

Importantly, the educational benefits of student engagement and deep learning are not isolated to one cultural group, with research suggesting that students from different backgrounds all gain from educational engagement [11]. A further challenge to nurse educators therefore is helping students from diverse or disadvantaged backgrounds who may face unique challenges or have differing educational needs than traditional student cohorts. Research for example has found that nursing students who are native English speakers perform better academically than those who speak English as a second language [12].

Since the Bradley review of higher education in Australia, there has been increasing access to higher education for students from diverse backgrounds [13,14]. This unique student cohort includes: indigenous students; those with a disability; those with a native language other than English; those from low socioeconomic backgrounds; and those who are the first in their family to enter higher education. However, degree completion rates for these students are lower than those of mainstream students [15]. Students from non-English speaking backgrounds or who have a disability have been found to have lower levels of satisfaction with their academic experience [14]. These students are also more likely to consider leaving their course, mainly due to financial and health reasons [14]. Table 1 defines the diversity of university student cohorts.

Student engagement is not a new concept and has its origins in theoretical work from the last century. In the early '80s, Astin [16] proposed a theory of student involvement, defined as the amount of physical and psychological energy a student devotes to the academic experience. The theory focuses on the behavioural mechanisms or processes that facilitate student development. Astin's theory proposes that the more a student is involved, the more they will learn [16].

Research by Pace [4] on thousands of undergraduate students in North America supplemented Astin's theory of involvement. Pace found that quality of effort was far more important in student achievement than other factors, such as where the student studied. The amount of time spent on educational activities, 'time-on-task', has also been recognised as an important part of the learning process and has been labelled one of the seven principles of good practice in undergraduate education [17,18].

The work of Kuh and others [1,2,19] has given contemporary focus to university and college student engagement. Their research examined numerous aspects of engagement such as the influences of student and institutional characteristics, the effects of student engagement on grades and persistence, and the relationship among educational expenditure, engagement and students' learning outcomes.

In exploring the lived experiences of 13 British university students from disadvantaged backgrounds, Thiele et al [20] found identity-related factors influenced educational engagement in positive and negative ways. For example, all participants described problems with class attendance which was related to family, mental health and social problems. Some mentioned that being the first in their family to attend university was a strong motivator to academic success, but also a disadvantage as there was little academic guidance at home. In examining international and domestic undergraduate students in North America, Lee et al [21] found that those who spoke English as a primary language reported more educational engagement than those who did not. Given the above findings, it is not surprising that Lim [22] found that students from disadvantaged backgrounds are less likely than others to complete their tertiary studies.

Table 1. Key terms/concepts

Diverse students	This reflects the much greater range of people now enrolling in university courses. The traditional university student who has moved straight from secondary school and now devotes all his/her time to studying fulltime is becoming far less the norm. Students today may study fulltime while working part time or study part time while working full time. There is a large and increasing cohort of mature-age students who study by distance. There is also a substantial portion who are foreign students [13].
Foreign student	A non-Australian citizen who is enrolled as a student at an Australian university
Disadvantaged students	This includes students from a socio-economic background which makes it difficult for them to enrol in a university course, usually because of the need to participate in full time employment. It may include students with a physical or cognitive disability which creates challenges in completing tertiary studies. It includes students who are full or part time carers for dependent family members such as parents with children. It also includes students whose primary language is not English.

Despite extensive research on university student engagement, less is known about the engagement patterns of undergraduate nursing students from diverse backgrounds, such as those from foreign countries, those who speak English as a second language or those who are socio-economically disadvantaged. The importance of all nursing students engaging with their studies in order to be competent cannot be understated as patient safety may be compromised if a nurse cannot provide clinically competent care [23]. Inadequate or poor quality care has been linked to adverse outcomes [24,25]. By better understanding the engagement patterns of nursing students from diverse backgrounds, the ways in which nursing curricula are delivered may be enhanced in order to help these students successfully achieve desired learning outcomes. Specifically, the current study hoped to: foster changes to the way curriculum content is delivered to encourage engagement of nursing students from diverse backgrounds; improve the educational experience of these students; and better prepare these diverse nursing students for their graduate clinical year.

1.1. Aim

Using a mixed method design, this study was guided by the overarching question: what is the nature of the educational engagement of bachelor of nursing students who come from diverse backgrounds? The focus was on engagement patterns within and outside the classroom not during clinical placements. To answer the research question, three supporting questions were explored:
1. How do these nursing students define engagement with their studies?
2. How much do these nursing students engage with their studies during the semester?
3. What factors influence these nursing students' engagement?

2. Materials and Methods

2.1. Ethics

Approval was obtained from a local ethics review committee; the study was deemed negligible risk. Completing the survey or volunteering to be interviewed were taken as indications of consent. No identifiable data were collected in the survey. Informants' names were removed from interview transcripts and replaced with a code to ensure anonymity. All participants were informed that the decision to participate or not would not affect their course enrolment in any way.

2.2. Setting

The study was conducted at an Australian provider of vocational and higher education courses ('mixed sector'). The institution delivers over 600 courses to nearly 50,000 students. Whilst there are many Australian providers of vocational and higher education courses, the institution is unique within the mixed sector as it is one of only two national providers of vocational and higher education courses which include a Bachelor of Nursing (BN) degree. Furthermore, the mixed sector attracts unique and diverse student cohorts. This includes: students from socially disadvantaged backgrounds; students who did not meet the entry requirements at a tertiary institution; and many students who are the first in their family to enrol in a bachelor level course.

2.3. Recruitment

There were 240 students enrolled in the BN degree at the time of the study; 50 students in first year, 70 in second year and 120 in third year. The majority of the students were female and entered the course directly from high school (i.e. completion of secondary studies). Approximately 65% of the students in the course were domestic (i.e. Australian residents); the remainder were from foreign countries. All students in the BN degree were invited to participate via email. The email informed students that the study was not part of the nursing curriculum and that participation was voluntary. The email summarised the research project and participant requirements. Students were asked to contact the primary researcher via email if they wanted to be interviewed for the study.

2.4. Design

The study was conducted in two concurrent stages: quantitative data collection via a paper-based survey and head counts at the end of each class, and qualitative interviews with a convenience sample of informants. A mixed method design was used as tertiary student engagement was perceived to be a complex phenomenon with many influential factors which would therefore not be easily explored via a single research method. Combining research designs broadens the understanding of the phenomenon, creates more confidence in a study's conclusions, and greater opportunity for verification and discovery than a single method alone [26-28]. Using more than one method allows the research to tell the full story of an area of inquiry and look for unexpected findings and/or potential contradictions [27].

2.5. Quantitative phase

The quantitative stage explored student engagement during the semester. At the completion of each lecture, tutorial or lab, the lecturer or tutor performed a head count to determine student attendance. Every fortnight during the semester, students were provided a paper-based questionnaire to indicate how many hours they had engaged with each of the four units of study in the previous week and the reasons for this. Data were collected anonymously and analysed descriptively.

The data collection tool was pilot tested among six experienced nurse academics and 30 undergraduate nursing students. Feedback was sought on the wording and formatting

of the tool. Changes made to the tool based on pilot testing were shortening the length of the tool and adding collection of demographic data.

Paper-based surveys were distributed in tutorials to students who expressed a desire to participate. Once completed, the surveys were collected by the tutor and returned to the research team. To help ensure an ongoing response from students during the semester, results from the first two rounds of data collection were emailed to all students mid-semester. No additional attempt was made to obtain data from non-respondents.

2.6. Qualitative phase

The qualitative stage explored what engagement means to undergraduate nursing students from diverse backgrounds. Semi-structured interviews were conducted with a convenience sample of first, second and third year students and guided by two key questions: what does engagement with your studies mean to you and what engages (or disengages) you. Interviews were audio recorded and lasted up to an hour. The resulting audio files were professionally transcribed.

Thematic analysis of the transcripts involving line by line analysis was performed to identify emergent themes. A six step analysis process was followed [29]. This involved: data familiarisation, generating initial codes, searching for themes, reviewing themes, defining and naming themes and reporting themes. Once final themes had been generated and agreed upon by the research team, member checks were conducted. This was a strategy for ensuring data quality [30]. An email summarising the themes was sent to all informants. Each informant was asked to read the summary and consider if the findings were an accurate reflection of their experiences [31]. Feedback from informants was very positive, with all agreeing with the emergent themes.

3. Results

3.1. Qualitative themes

Thirteen students volunteered to be interviewed. This included four first year students, four second year students and five third year students. Key themes are summarised in Table 2.

Table 2. Qualitative themes

How did students define engagement?
Being a student
• Attending class
• Being interested
• Actively participating
Commitment to learning
• Effort outside of class
• Focussing on a topic
• Recognising learning needs
What engages students?
• Being stimulated
• Desire to excel

- Good tutoring
- Enthusiasm
- Encouraging
- Connection

What disengages students?
- Repetitive or complex content
- Poor tutoring

3.2. How did students define engagement?

Two key themes emerged from the data about how students defined engagement.

3.2.1. Theme one: Being a student

The first theme was 'being a student'. Students across all three cohorts emphasised the importance of attending classes though not because some classes were compulsory. Students reported that engagement was much more than just physical presence in a classroom. Three sub-themes emerged from the data which supported this theme: attending class, being interested and actively participating.

3.2.1.1. Attending class

Students recognised the importance of coming to class as a type of engagement. For example, a first year student stated: "I had four and a half hours sleep, I still came. I looked like crap and I still managed to be here". A second year student reported a similar attendance pattern: "I attend all my lectures, tutes, everything, I try to have 100% attendance and I would then go home and look it up again".

3.2.1.2. Being interested

The second sub-theme which supported 'being a student' was being interested. Whilst students recognised the importance of attending class, they reported that engagement also meant being interested in the topic being covered. This was reflected by a second year student: "It means the level of interest that I have in what I'm doing, and therefore how much effort I put into learning more about that subject. If I'm interested I'll go to lectures and I'll attend all the tutes, I'll have 100% attendance, whereas for something I don't find interesting I might not go to lectures, I might just read it at home".

3.2.1.3. Actively participating

Students reported that whilst attendance was important for engagement, they had to do more than just be physically present. Actively participating in class was also perceived as essential, as reflected by a second year student: "It's about participation, it's about listening, it's about speaking, it's about doing. I'm quite a visual sort of person I think, and as much as I get a lot of information from reading, I learn more by participation".

3.2.2. Theme two: Commitment to learning

The second key theme regarding how students defined engagement was 'commitment to learning'. Students indicated that whilst some course requirements were compulsory, meeting those requirements didn't necessarily mean that learning would occur. During interviews students demonstrated a much greater commitment to their learning. This theme was supported by three sub-themes: effort outside of class, focussing on a topic and recognising learning needs.

3.2.2.1. Effort outside of class

Students reported that whilst attending class was important to engagement, they also needed to dedicate time to learning outside the classroom. This studious activity was reflected by a first year student: "I suppose further reading as well, it doesn't necessarily have to be prescribed reading, but I think academic engagement is, if there's a topic you're particularly interested in, continue to read up and not just the prescribed reading that you've been—so I suppose looking outside the box of what you just learnt".

3.2.2.2. Focussing on a topic

The importance of focussing their learning was a theme for many students. Students were aware that many topics required intense study and a lot of time to comprehend, even though they may have felt pressured and time poor. The challenges this creates was reflected by a second year student: "Although I hate that subject, really hate it, I actually got myself to watch all the videos…and I actually got myself focused in a way. I watched it like eight times, even though I used to just drift off. I would come back and I watched the video eight times to understand it, because if I don't do it the way he wants it, then I would fail the subject".

3.2.2.3. Recognising learning needs

The final sub-theme relating to commitment to learning was students recognising their learning needs. A comment from a third year student exemplifies this: "If I went in there (tutorials) without any knowledge, like we did the questions during it but then if I went in there and I had no idea what we were talking about then I'd spend that entire tutorial just trying to grasp the concept as opposed to broadening what I already know. And I feel like that would have been wasted time for me. So I like to do the work beforehand".

3.3. *What engages students?*

During the interviews students were also asked to describe what engages them. Three key themes emerged.

3.3.1. Theme one: Being stimulated

Students were engaged by new, interesting content. A second year student reflected this: "…when I read articles, I'll find some parts interesting, I'll engage into the article, but then if the beginning of the article is quite boring, I wouldn't engage into it. I would just like just browse through it and then never bother with it. So it has to be interesting for me".

Students were also stimulated by the clinical application of the content they were studying: As reported by a third year student: "If a teacher said to me 'you need to know this because there is going to be a time in your career when you are going to face this and you're not going to know it'. Yes, I'll read about it even if it's boring, I'll still read about it".

3.3.2. Theme two: Desire to excel

The desire to excel was another key factor influencing student engagement. This related not just to their studies but also their careers. A student in the final semester of the course stated: "Now we all know we're capable of passing, we've hit third year we know we can pass so the focus has shifted from simply just passing on to I want to get a distinction, I want to get a high distinction".

3.3.3. Theme three: Good tutoring

Students reported that they were engaged by good tutoring. This was supported three sub-themes: enthusiasm, encouraging and connection.

3.3.3.1. Enthusiasm

Students were engaged by an enthusiastic teacher even if they felt the topic being studied was boring. Students appreciated having a teacher who brought enthusiasm to the classroom. For example a first year student said: "It was a really boring subject, he made it as fun and interesting as possible as he could". A second year student commented on tutors' characteristics: "If a teacher that's enthusiastic and really passionate, like you can tell about what they're teaching and even though it's dry, still the way that they're teaching it still makes you engage and makes you interested in what they're talking about".

3.3.3.2. Encouraging

Students were also engaged by teachers who were encouraging and supportive and seemed to care about them as students. This is summarised by a first year student: "I think a big motivator is the attitude of the lecturers and if they are supportive of the student, and I think also, I know that there is one lecturer that will actually ask, "How's everything going in other subjects?", and actually comes across as being quite nurturing, wanting to know that we're going okay. I think that really helps to motivate".

3.3.3.3. Connection

Students reported they were more likely to be engaged if they felt a sense of connection with their teacher. For example a first year student stated: "I need to be able to engage well with the person who's teaching me". A third year student similarly said: "…because I like the teacher I get enthusiastic in class and I go home and I'm still happy to read it".

3.4. What disengages students?

Students were also asked to describe what disengages them. Two themes emerged.

3.4.1. Theme one: Repetitive or complex content

Students disengaged if the content or topic they were studying was repetitive or too complex for them to easily comprehend. This is indicated by a second year student: "It was a very complicated topic and it looked to me that the lecture was being given in a total different language, like Chinese or something, because there was some concepts that I didn't know, some others that I didn't understand so I disengaged and after a few weeks I found myself in the middle of nowhere, like I was totally lost".

3.4.2. Theme two: Poor tutoring

In contrast to good tutoring, students were disengaged by poor tutoring such as a teacher with an unprofessional attitude or who was disorganised or disinterested. This is reflected in a comment by a third year student: "If a teacher is negative I won't want to engage, I look at the teacher and go 'I don't particularly enjoy the way they teach and I don't enjoy the manner in which they talk to us', so if they're condescending or they act very rude.   If you get things wrong and then they're very rude about it then it makes me less likely to ask questions, less likely to expand myself because I'm scared or nervous of the repercussions of how they're going to act if I do seek help".

3.5. Quantitative phase

3.5.1. Attendance and reasons for engagement

A paper-based questionnaire was used to collect data on class attendance, the number of hours students spent engaging with each subject in the curriculum and the reasons for this. The response rate to the survey varied each fortnight (see Table 3).

Engagement fluctuated throughout the semester and differed between the three student cohorts.

Table 3. Survey response rate

	Week 1	Week 3	Week 5	Week 7	Week 9
1st year students	74% (n = 37)	84% (n = 42)	92% (n = 46)	80% (n = 40)	38% (n = 19)
2nd year students	88% (n = 62)	81% (n = 57)	76% (n = 53)	86% (n = 60)	86% (n = 60)
3rd year students	55% (n = 66)	53% (n = 64)	75% (n = 90)	59% (n = 71)	31% (n = 37)

3.5.2. Lecture attendance

Data on class attendance were recorded via head counts. Although this is only a crude measure it provides some insight into student engagement, particularly as many classes were not compulsory. Attendance at lectures varied across the 10 week semester (see Figures 1, 2 and 3). For all three student cohorts, lecture attendance was high at the start of the semester (e.g. >85%) and then declined as the semester progressed. Some weeks there were no live lectures either due to a planned visit to a clinical site or due to the lecture being replaced with another activity. First and second year lecture attendance followed a similar pattern: high early in the semester, reaching a trough mid semester and then increasing late in the semester. Third year lecture attendance was erratic and followed no pattern.
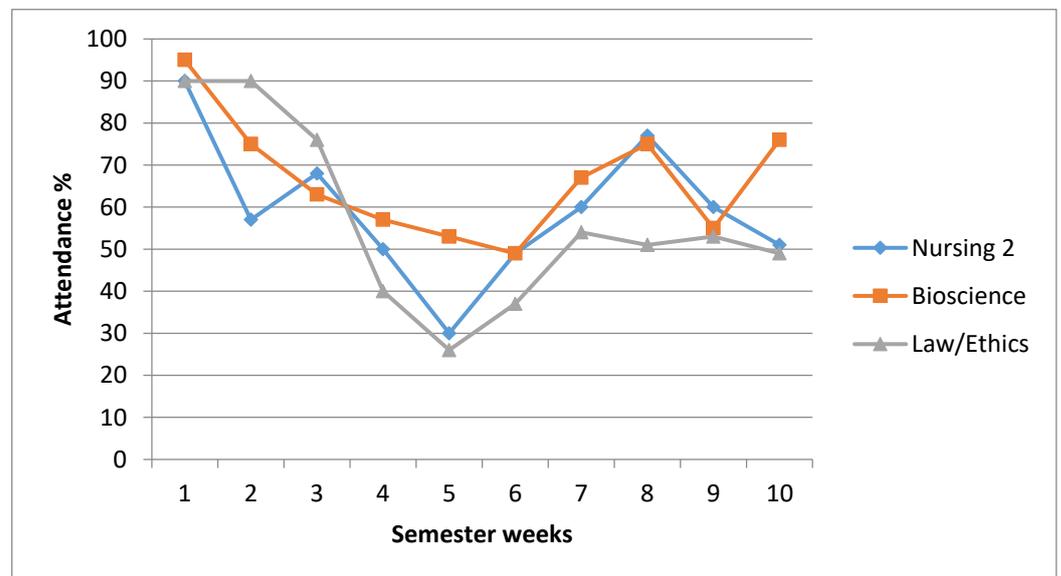
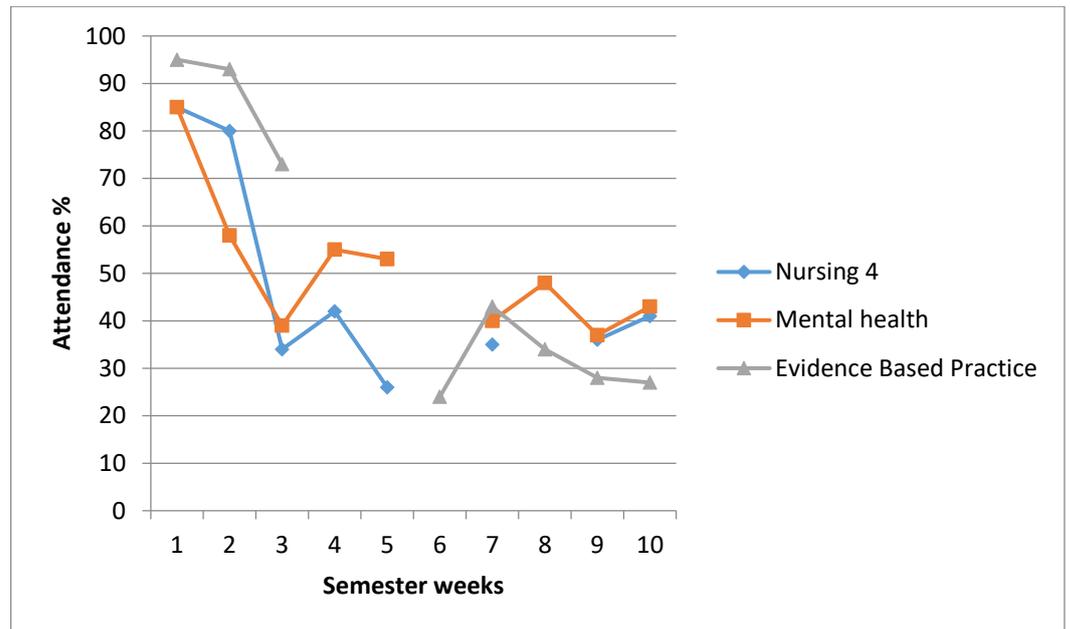**Figure 1.** First year student lecture attendance

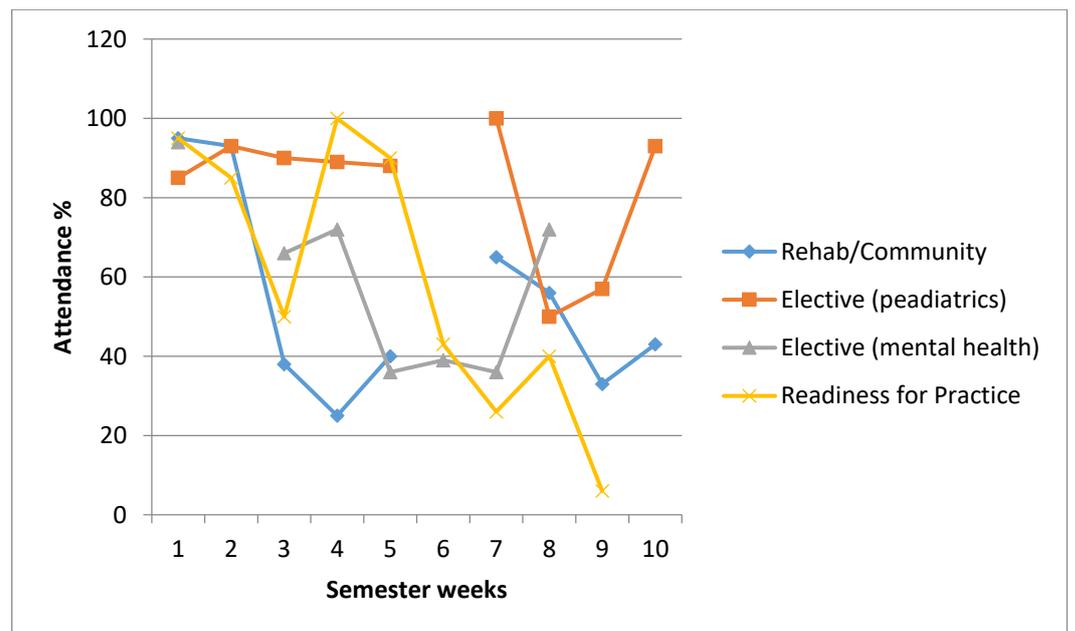**Figure 2.** Second year student lecture attendance

Figure 3. Third year student lecture attendance

3.5.3. Class attendance

Student attendance at tutorials and laboratories was also recorded (see Table 4). Even though it is a course requirement that students attend 100% of laboratories and 80% or more of tutorials, similar to lectures, attendance at these classes also varied.

Table 4. Class attendance

	Subject	Lectures	Tutotrials	Labs
1st year	Foundations of nursing care	60%	90%	
	Bioscience	66%	92%	98%
	Integrated Clinical Practice			95%
	Law & Ethics	57%	87%	
2nd year	Clinical nursing care	48%	79%	
	Mental health	51%	89%	
	Integrated Clinical Practice			88%
	Evidence-based practice (EBP)	52%	85%	
3rd year	Rehabilitation & Community care	54%		
	Mental health elective	59%	87%	97%
	Paediatric elective	83%	95%	98%
	Integrated Clinical Practice			98%
	Readiness for practice	59%	85%	

3.5.4. Engagement during the semester

Students were asked on a fortnightly basis to report how many hours they spent engaging with each of their four curriculum subjects in the previous week. This data was collected in the questionnaire (see Figures 4, 5 and 6). The data are summarised in Table 5.

Table 5. Average hours of engagement per subject per week

	Week 1	Week 3	Week 5	Week 7	Week 9	Average
1st year	3.4	4.3	6	3.7	4.9	4.4
2nd year	1.7	3.7	5.8	3.5	4.3	3.8
3rd year	2.8	4.3	3.6	3.8	3.1	3.5
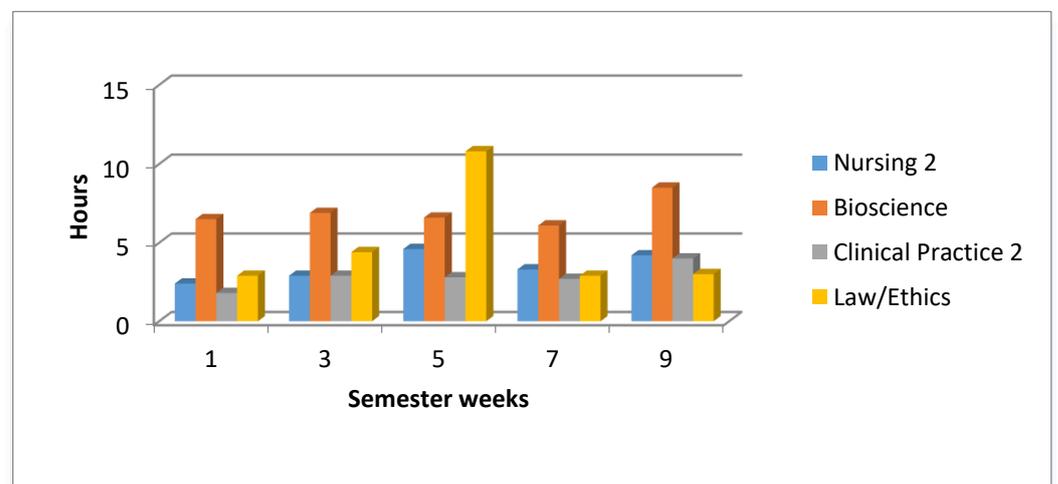
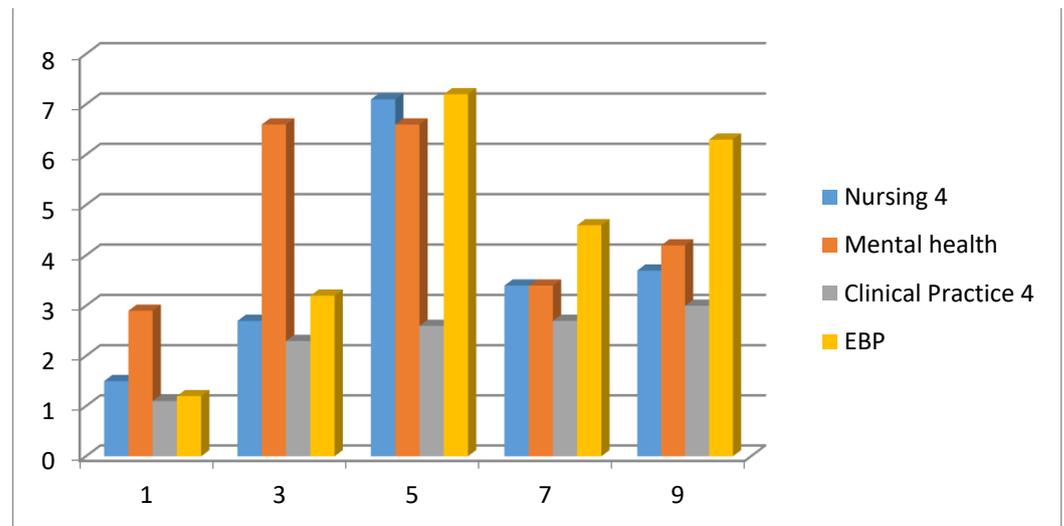**Figure 4.** First year student engagement (mean hours)

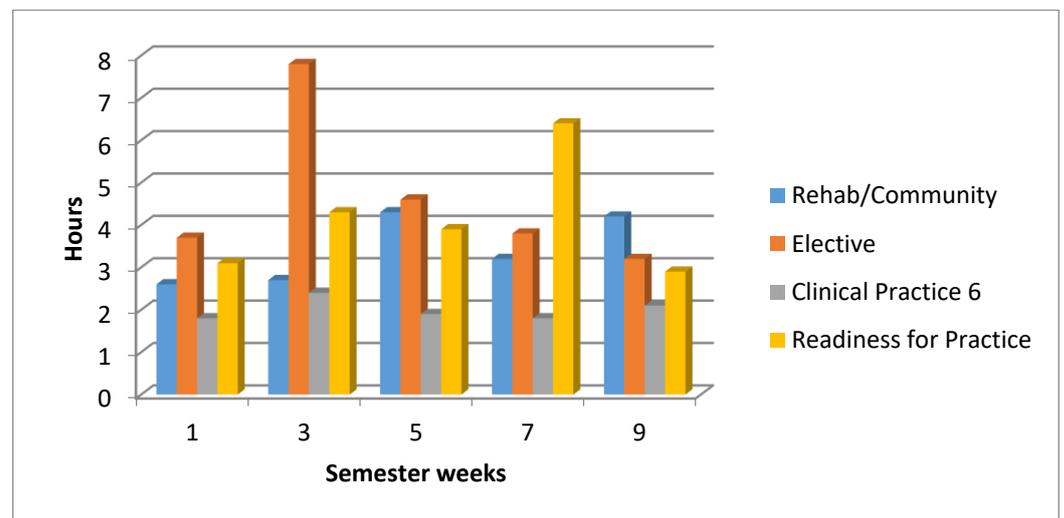**Figure 5.** Second year student engagement (mean hours)

Figure 6. Third year student engagement (mean hours)

3.5.5. What factors influence engagement?

Apart from the numbers of hours spent engaging with each subject, students were also asked in the questionnaire to report the reasons for the amount of time they engaged with each subject in their course. The dominant factor influencing student engagement across all three student cohorts was assessment (e.g. exams, essays). The second highest reported reason for the amount of engagement was how interesting (or not) students perceived a topic to be. This factor persisted across the entire semester. Other factors reported to influence engagement though to a lesser extent were family commitments and paid employment. Other possible factors, such as medical/health or sporting commitments, were not reported as key factors influencing student engagement.

4. Discussion

Despite extensive research on tertiary student engagement, little is known about the engagement patterns of nursing students from unique and diverse backgrounds. Student engagement is the best predictor of students' learning and development and more engaged students achieve better learning outcomes [32, 33]. For a nursing student this might translate to a safer, more competent graduate nurse. The importance of this cannot

be over stated as graduate health professionals' clinical skills are often inadequate and clinicians' knowledge and skill limitations contribute to poor patient outcomes [34,35].

The current study used quantitative and qualitative methods to explore three key questions on the engagement patterns of nursing students from diverse backgrounds. Mixed-method designs are useful for collecting data that will enhance the understanding of complex phenomena or when the phenomenon cannot be described in its entirety by a single method [36]. The design was chosen due to the complex nature of tertiary student engagement reflected in the literature. The mixed method design facilitated collection of data to answer the study's three key questions on engagement patterns of nursing students from diverse backgrounds. Though as it is only an exploratory study, more needs to be known about the factors influencing the engagement patterns of these students and importantly how to minimise the impact of these factors on nursing students' academic success.

The current study found that lecture attendance fluctuated on a weekly basis ranging from 10% to 100% of students. The average weekly attendance was 50% to 60% of students. Students reported that engagement includes attending class and actively participating but they were disengaged by repetitive or complex content. This could explain their lecture attendance but it could also be that lectures were less valued as an educational resource by the students.

In a study at a British medical school, student attendance at non-compulsory lectures tended to be higher at the start of their degree and then declined as the course progressed [37]. Astin's theory of involvement postulates that different students manifest different degrees of involvement, and the same student may manifest different degrees of involvement at different times [16]. For our students, the fluctuating attendance rate could be due to factors beyond their control and which create an academic disadvantage.

Of greater importance than lecture attendance is the impact a teaching method or resource has on students' academic performance. The link between lecture attendance and student performance is unclear but some argue that a link exists [38,39]. It has been suggested though that the link is weaker than may be assumed [40]. Research has demonstrated both a positive and negative association between lecture attendance and academic performance [41]. For example, a study involving 154 diploma nursing students in Scotland demonstrated a correlation between high absenteeism and poor academic achievement [42], a relationship which is probably expected.

Whilst most tutorials and skills laboratories in the curriculum were compulsory, attendance rates are not a sign of student engagement. Making classes compulsory might force students to attend but it does not force them to prepare for class, participate or to actually learn. Such a policy also fails to consider some of the real life challenges which students may have. Physical presence in a classroom also does not mean that a student is paying attention, synthesising new information or developing insights that will foster learning [43]. Students in our study reported they were engaged by new, interesting content, the desire to excel and good tutoring. The impact of compulsory classes was not mentioned by students during data collection.

Whilst only an exploratory study, our findings suggest that the educational engagement patterns of students from diverse backgrounds is significantly influenced by academic assessments and the desire to pass, probably no different to main stream students. However this also assumes that knowledge acquired from researching an assignment is different to the knowledge acquired when completing prescribed preparation activities. Of course it is not, but lack of student preparation for a weekly tutorial may be a source of frustration to teachers and make tutorials less educationally worthwhile. Students from disadvantaged backgrounds might feel they have more to lose if they do not pass their course or that they only have one opportunity to obtain a bachelor qualification. If foreign students are being funded by their family, this might well be the case. In the current study lecture attendance tended to decline and self-reported

engagement increased around the time assessment items were due. This relationship may be self-evident; students might choose to ignore non-compulsory course requirements to focus on tasks they deem essential e.g. passing an essay or exam.

Our findings also suggest that nursing students from diverse backgrounds are motivated by other issues such as the desire to be a competent clinician once registered as a nurse. This is an important issue and more needs to be known about the extent to which nursing students consider the impact their current study habits have on their long term future. In a qualitative study of the goal orientations of 31 students completing a pre-medical degree in North America, a third of students were primarily mastery orientated and only 13% were extrinsically orientated [45]. These findings may reflect the study's small sample but may also be because these students' goal of completing a medical degree was too long term for them to have different goals such as being clinically competent. It has also been claimed that students are motivated by external factors such as a better job and pay rather than the desire for knowledge [46]. Whilst this claim was not a research finding, it is supported in part by our study.

The perceived level of interest of a topic was the second influential factor on student engagement in the current study. Students reported that if a topic was boring they were less likely to engage. Other research similarly found perceived student interest to be a key motivator for attendance at classes [47]. Regardless of the discipline a significant challenge to any lecturer is making the curriculum content interesting. Students in our study reported they were more engaged if they could see the application to clinical practice of the topic they were studying. This has been a finding of others [10] and may be a clue for faculty to enhance student engagement: establish a link between theory and practice.

Paid employment was another factor influencing student engagement in our study. Research has shown that the number of Australian students engaging in paid employment during their studies is increasing [48]. A study in the United Kingdom similarly found that up to 83% of students engaged in paid employment at some time during their degree [49]. Whilst this may be due to necessity rather than choice, our findings demonstrate that paid employment affects student engagement though not to the extent we expected. This has also been demonstrated in other research [50]. It is not clear in the literature if tertiary students from diverse backgrounds need to participate in paid employment more than other students.

Whilst our study did not explore the relationship between engagement and academic performance, an Australian study of nursing student engagement found that the self-reported amount of time spent studying was not a predictor of performance [3]. This could be because students over estimate the amount of time spent studying or because the quality of private study is more important than the quantity. In our study, the average amount of private study students reported they performed each week was less than half of that which we recommend (e.g. 3hrs vs 8). However these hours varied considerably between the subject students were studying. For example, first year students spent considerably more time studying bioscience than law and ethics. This could reflect students' perceptions of the importance of a given topic, their general interest in it, or the perceived difficulty of the topic. However this unequal amount of time spent studying a given topic was more apparent among first year students than second and third year. This is an area for further research.

4.1. Limitations

The current study asked nursing students from diverse backgrounds to indicate how much time they spend engaging with their studies outside of timetabled classes. These classes were not the focus of our research as most classes in the curriculum were compulsory. However some students may have chosen to miss some compulsory classes to study at home or to perform activities deemed more important such as paid employment. Whilst we tracked class attendance, by itself, class attendance is not

necessarily a key indicator of student engagement or commitment, as some students may attend classes only because they are compulsory.

Students were asked to estimate the amount of time they spent engaging with their studies on a fortnightly basis. These self-reported data are reliant on memory. Furthermore, some students might read a textbook at home whilst simultaneously performing another activity such as watching television. The true amount of time students spent engaging might therefore be much less than actually reported or perceived.

Data on other factors which may have influenced student engagement were not collected. For example, we did not inquire about preferred learning styles and did not observe or measure teacher performance. Social desirability may also have influenced students' comments during data collection. We also did not record student attrition during their studies. Our findings may therefore only reflect the most enthusiastic students and not those who had already withdrawn from their course.

5. Conclusions

Student engagement is important for achieving desired learning outcomes. This study explored the nature of the academic engagement of nursing students from diverse backgrounds. The study was conducted in a unique educational setting. Findings suggest that these nursing students are motivated to learn but that intrinsic and extrinsic factors may inhibit the desire to do so. Future research needs to explore the best ways of engaging these students and limiting the impact of factors which may inhibit their learning.

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