



Supporting engagement and retention of online and blended-learning students: A qualitative study from an Australian University

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Abstract

Enrolment numbers in online higher education courses have continued to increase over the last decade. The challenges brought about by the COVID-19 pandemic have further accelerated the growth in online and blended course offerings. The development of institutional support services, however, does not reflect this growth. Many students are not equipped with the skills or given adequate support to engage and succeed in their courses, leading to student disengagement and attrition. This study investigated the perceptions of students in online and blended subjects, regarding both the academic and institutional support they were provided. The research team collected interview data from 41 online and blended-learning students and then analysed these data using an iterative thematic analysis approach. This article introduces the key findings with two models: one presenting support strategies at multiple levels within this university; the other presenting three key elements of subject-level teacher support, which were identified by the interviewees as the most significant, effective, and relevant support mechanism in this context. The findings will inform higher education institutions who aim to engage and support online and blended students better, through an improved understanding of how support is perceived by this student cohort. This study was conducted at one Australian university; however, the findings are relevant to higher education institutions in other countries that strive to bring about positive experiences and enhance retention rates for online and blended students.

Keywords Online and blended learning · Teacher–student interaction · Higher education · Engagement · Retention · Support

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Introduction

The majority of Australian universities have fully online course offerings. In 2018, there were 447,434 students studying online and blended courses at Australian public universities, with a 37.1% increase in enrolment numbers in these courses in the past six years (Department of Education, Skills and Employment, 2019). In 2016, a third of students in Australian higher education had a substantial proportion of their studies delivered through online or blended learning (Norton et al., 2018b). Since early 2020, the coronavirus (COVID-19) outbreak has seen greater use of online and blended course offerings even amongst the more traditional universities (e.g. Rapanta et al., 2020).

However, this rapid growth in enrolment numbers is accompanied by mounting challenges for Australian universities. Some of the most significant challenges include observed higher student attrition rates and disengagement among online and blended-learning cohorts, as well as learner dissatisfaction caused by these issues (Norton et al., 2018a). Research conducted prior to the COVID-19 pandemic reveals student and staff perceptions that online students are being seen as a lower priority and receiving less emphasis than on-campus students (Stone, 2019).

In order to address these well-recognised challenges, Australian universities have developed and implemented support strategies at different levels, including institutional, school, program, and subject levels. It is commonly agreed that effective student support systems require a “strategic whole-of-institution approach” (Stone, 2019, p. 5). This approach involves awareness and recognition at different operational levels of the diversity, strengths, and needs of online student cohorts. The study discussed in this paper sits within the broad area of student support, but focusses on the more specific area of subject-level support provided by lecturers and tutors. While it is recognised that support services provided at other levels, such as institution-wide services, play an important role in supporting students, research constantly emphasises the impact of subject-level support provided by teachers on student engagement and success (Muir et al., 2019; Yen et al., 2018). In particular, active and strong teacher presence is identified as crucial in maintaining online student engagement (Muir et al., 2019; Stone, 2019).

Focussing on the specific area of subject-level teacher support, this article reports part of the findings from a study of a larger scope, which identified a multi-level model of retention and support for students in online and blended courses. This article provides a brief introduction to each of the levels presented in this model, including Central/institutional support, School-level support, Subject-level teacher support, Subject-level peer support, and External support from family, friends and work colleagues. This article then focusses on one of the levels within the model: Subject-level teacher support. This level of support was identified as the most significant level in supporting student engagement and retention at this regional Australian university. The data were analysed to answer the following research questions:

- What are the perceptions of online and blended students regarding the relevance of the different levels of support available at this university?

- Which level of support do these students perceive as the most significant, effective, and/or relevant to their engagement and retention? Why?

Literature review

Student engagement and retention

Student engagement, retention, and attrition are interwoven issues, with retention and attrition sometimes being described as the problem, and engagement as a potential way to address that problem. Each of these concepts is complex. Scholars have used various terms in their definitions to reflect their particular perspectives. For instance, terminologies such as ‘connection’, ‘involvement’, ‘interaction’, and ‘integration’ can be observed in descriptions of the term *engagement*. Axelson and Flick (2010, p. 1), for example, define student engagement as “... how involved or interested students appear to be in their learning and how connected they are to their classes, their institutions, and each other”. From this definition, one can identify elements of the behavioural, social and cognitive involvement of learners, representing some of the most commonly recognised types of engagement in research (Kelly et al., 2022). Acknowledging the heterogenous nature of student engagement, Axelson and Flick (2010) and Kahu (2013) point out that, in addition to the more observable behaviour, it is vital that the less observable cognitive and emotional realms are also taken into consideration. This is similarly reflected in research which examined student engagement from other aspects associated with the learning process, including emotional (Bensimon, 2009) and cultural engagement (Hess et al., 2007).

Evolved from earlier attempts at defining student engagement, recent studies have produced more comprehensive conceptual frameworks, incorporating multiple elements, examining relationships between these elements, and developing indicators to measure them. Some of these frameworks were developed specifically for online learning contexts. For instance, one that has been widely adopted is the Community of Inquiry framework by Garrison et al. (2000), which proposes that engagement is promoted through the development of three distinct types of presence: cognitive, social and teaching presence. In another study, Redmond et al. (2018) identified three commonly mentioned areas in the relevant literature: behavioural, emotional, and cognitive engagement. They developed a conceptual framework by adding collaborative and emotional engagement to the existing three domains and producing a set of indicators for each of these five domains (Redmond et al., 2018).

Similar to student engagement, retention and attrition are influenced by a multitude of factors. Systematic reviews of factors contributing to student retention confirm this complexity (e.g. Bowles & Brindle, 2017). Bowles and Brindle (2017) categorised the causes contributing to student retention into three types: situational (an individual student’s personal life circumstances); dispositional (the individual’s characteristics); and institutional (factors controlled by the institution).

Supporting online student engagement and retention

Recent research adds considerable insights into factors influencing the engagement and retention of online student cohorts. Some of the research used the identified key equity groups in Australian higher education as a starting point for the discussion (DEET, 1990). For instance, Stone (2019) points out there is a larger proportion of students from equity categories in online courses as compared to on-campus offerings. This leads to the high level of complexity in the needs of online students. For instance, extensive research has been undertaken on online students in one or more of the equity groups, including students in rural and remote areas and students with a disability (Stone, 2019). There is clear evidence that students in these cohorts are more likely to consider dropout or achieve poor academic results (Li & Carrol, 2020). Adding to the body of knowledge, research has examined the need of students who are the first-in-family to attend higher education, those students who are older and female (Stone, 2017; Stone & O'Shea, 2019), mature-age students in and from regional and remote areas (Crawford, 2021), and those who enter university through alternative pathways (Pitman et al., 2016).

A commonly voiced theme from recent research is the requirement to recognise the increasing diversity, strengths, and needs of online students, and the development of support systems that reflect this recognition. Evaluation of, and evidence from, current initiatives reveal that not all support strategies that are provided are effective in meeting students' needs, especially those that were originally developed for on-campus students but are not tailored for online student cohorts (Kember & Ellis, 2022). There is, however, a consensus within the research literature about the effectiveness and importance of subject-level teacher support (Muir et al., 2019; Stone, 2019; Yen et al., 2018). While subject-level teacher support has long been recognised as a crucial factor to student engagement and success, students' need for this level of support appears to have intensified during the COVID-19 pandemic (Dodd et al., 2021; Raaper et al., 2022).

Theoretical framework of this study

There have been a number of theories informing the theoretical framework of this study, including both earlier models and more contemporary ones. The earlier models that shaped the research design include Moore's (1973, 1989) Theory of Engagement and Tinto's (1975, 1993) Model of Attrition. Moore's theory identifies three elements that play distinct roles in the online learning process: teacher, learner, and the media/technology that enables communication between the first two. This theory shaped this study with its emphasis on the effectiveness of communication among the three elements, and that the challenges brought by the physical distance can be mediated by effective communication. Tinto's (1975) early model, on the other hand, posits that retention is enhanced through students' social and academic integration into the learning environment. Both types of integration are important in enabling students to integrate successfully into their study and the environment (Tinto, 1975).

One recognised limitation of this model is that, as it was based on research with on-campus students taught face to face, the question remains as to how social and academic integration can be achieved with students in online and blended courses (Kember & Ellis, 2022). This identified gap shaped the earlier stage of this research.

A more recent theory used to guide this research, in particular the data analysis stage, is Garrison et al. (2000) Community of Inquiry framework. This framework identifies three distinct types of presence that impact student engagement: cognitive, social, and teaching presence. This framework has a specific focus on the online environment. The teaching presence element identifies facets of effective teacher involvement that are conducive to online students' learning (Garrison et al., 2000). The Community of Inquiry framework was considered particularly relevant to this research, given that teacher support and teacher presence emerged as the most important source of support identified by the online and blended-learning students in this study.

Method

Participants

This study involved a total of 41 students at one Australian regional university. This university is characterised by a large proportion of students studying in online and blended courses. The 41 students in this project were invited from five subjects and two school-level student support programmes from three disciplines. This article gives emphasis to the support provided within the individual subjects, while providing a brief summary of all the support levels. The five subjects involved in this study were delivered through three slightly different modes: flipped blended, blended and pure online. Subject 1 is a flipped blended subject, with online activities along with required on-campus face-to-face attendance for practical sessions. Subjects 2, 3, and 4 are blended subjects which gave students two options: to do all activities online, or to do a combination of online and face-to-face activities. Subject 5 is a purely online subject with all activities conducted online and no options for face-to-face study. All the five subjects had at least one online component. As such, all the student participants in this study were able to reflect on their experiences with the online learning

Table 1 Description of the five subjects

Subject/discipline	Delivery methods	Year group/level	Focus
Subject 1 Health Sciences	Flipped blended	1st Year undergraduate	Anatomy and physiology
Subject 2 Education	Blended	1st Year postgraduate	Mathematics pedagogy
Subject 3 Humanities	Blended	1st Year undergraduate	Chinese language
Subject 4 Education	Blended	2nd Year undergraduate	Classroom management
Subject 5 Education	Fully online	1st Year undergraduate	Academic literacies

mode. The focusses of the five subjects, their disciplines, year groups and levels, and delivery methods are outlined in Table 1.

Data collection and analysis

Semi-structured interviews were conducted with the students, some face to face but with most of them via telephone or online. The interviews ranged from 30 to 60 min. They were audio recorded with the participants' permission and were later transcribed for analysis. The interview transcripts were analysed using an iterative thematic analysis approach (Braun & Clarke, 2006).

Initial coding of the interview data identified text material relating to the multiple associated challenges for online learning student success, and the sources of support identified by participants. As the transcripts were reread and examined, these codes were refined to focus on the levels of student support. These were grouped into broad categories of support: central university services, support at the level of degree course, support provided by the subject lecturer and tutor, support from student peers and the informal support provided by family, friends and work colleagues. Overarching themes were developed regarding the locus of effective support for online and blended-learning students. Support of student engagement provided by the subject lecturer emerged as a critical factor for success in online learning, and the elements of this level of support were examined in depth.

Results and findings

This section firstly introduces the current support model including five levels of support identified at the investigated university. Differences between the support structure for pure-online and blended-learning students are discussed. The focus then shifts to the course/subject-level teacher support, which emerged as the most significant source of support among all levels. Quotes from student interviews are used to illustrate and substantiate this level of student support.

Current support model at the case university

Similar to many other Australian universities, the case university has made major changes in the past few years to its operating model to admit a much more diverse student body. Modes of teaching and learning have, therefore, become more flexible within a variety of courses. However, the student interviews in this study suggest that the way support is envisaged has not seen a corresponding change. The interviews identified five levels of support, ranging from the most systematic university central/institutional-level support to the most personal and external support from family, friends, and work colleagues. The support models for the different cohorts are illustrated in Fig. 1.

The students who participated in this study seemed to inhabit an online digital environment. Accordingly, for any form/type of support to be effective, it needs to

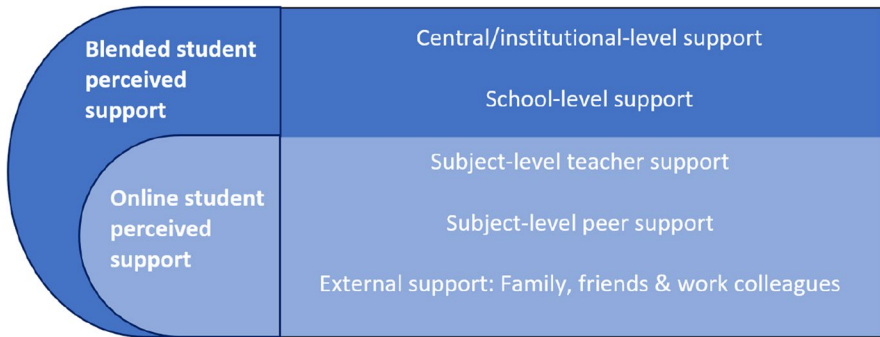


Fig. 1 Perceived support by blended students and purely online students

be perceived as an integral part of this environment. At this university, the central/institutional-level support and school-level support were not perceived as part of this environment, despite the intention that some of these services were designed to help students in different learning modes. Within this university's support system, the subject-level teacher support was the most significant factor influencing the engagement and retention of both the online and blended-learning cohorts. Peer support within the subject and external support from family, friends and work colleagues were also identified as influential in these students' experiences.

Differences were observed between the support systems for the online cohort and the blended-learning cohort, in that blended-learning students had a support structure similar to the on-campus students. Blended learning environments provide an opportunity for students to engage with staff and peers in a face-to-face context as well as online. This typically occurs in a flipped learning design in which core content may be delivered online, with face-to-face sessions providing opportunities for active learning. These sessions may be in the form of tutorials, practicums, workshops, or work-integrated learning sessions, and enable students to discuss and apply knowledge while developing key skills. Support during these active learning sessions is crucial to student success and is dependent on communication and relationship building between students and their peers, and between students and teaching staff.

These findings indicate that students in a blended-learning environment receive multi-faceted forms of support, compared to students who study purely online. Experiences from this student group also confirm that translating multi-faceted support into the online environment is not always successful, due to the asynchronous nature of the environment and the online interactions occurring largely at the subject level, rather than that of the school or university. As a result of these findings, subject-level teacher support was further examined and explored.

Subject-level teacher support for student engagement and retention

Subject-level teacher support is identified as the key form of support for both the pure online and the blended learners in this study, as can be seen in Fig. 1. The

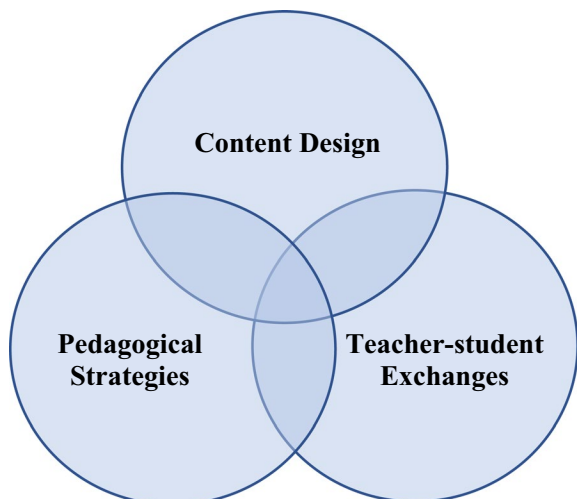
students' learning experience is significantly shaped by the quality of support at this level. There are three main aspects of teacher support at this level which are inter-related and overlap, as illustrated in Fig. 2. Each of these aspects is discussed below, with quotations from interviews as well as examples from the individual subjects.

Content design

The first aspect within the subject-level teacher support is content design. There were both commonalities and differences in the content design of the five individual subjects. One of the commonalities is that all the five subjects are delivered and organised through the university's central learning management system (LMS). Most of the content is presented through this LMS. Some functionalities commonly used by the different subjects are: lecture recordings (e.g. narrated PowerPoint presentation), links to online readings (e.g. prescribed texts, online articles, etc.), discussion boards, and links to online resources (e.g. government websites, policies, YouTube videos, etc.). Although all the subjects were based in the same LMS, the teachers were innovative in the way they designed their own subjects' learning activities in the system. Embedded in the wide variety of forms of the material and the various media used for delivery, was a shared objective to achieve an interactive content design, to foster student engagement and retention.

Although the aspect of content design is more often linked to the academic integration of students, this study observed a potential for lecturers to promote student social integration through their course design. In the subjects involved in this study, this was achieved through building connections and interpersonal relationships with the students. Strategies used to achieve this purpose included: incorporating video footage of the subject coordinator in weekly narrated PowerPoint presentations, developing short weekly overview videos, and using a second person's voice

Fig. 2 The three key elements of subject-level teacher support in online and blended learning



in recorded sessions and written materials. These strategies are explained below and supported with interview quotes.

Video footage was utilised in the weekly narrated PowerPoint presentations in some of the subjects. This simple addition had the effect of creating a connection between the teacher and the students:

Lecturer did videos where you could actually see her face, which was really nice. I think that's only the second unit (subject) – I've done six units (subject) – and that's only the second unit (subject) where the lecturer has actually put their face on the screen when they've been speaking. (Subject 2, Kayla)

A similar approach was taken in Subject 5. All of the content in this subject was designed to ensure that the language used was in second person and written in a teacher's voice. It was important that as the students read the material, they felt that they were being talked to by the teacher. This approach was particularly important for the weekly video overview. The videos for this subject were recorded in a 'fire-side chat' genre, where the subject coordinator and the lead tutor sat together and discussed the work coming up for that week. The positive impact of this was clearly evident in student feedback:

Each week, the two lecturers did a video of them talking and explaining the content, and I really liked that. No other subject that I've ever done has done that, and I thought that was really, really good, especially for the online people. I mean, to just see them talking, and you felt like you were face-to-face talking with them, as silly as that sounds, but yes, it was really good. (Subject 5, Diane)

Supporting student social integration in online contexts is often a challenging task. In this study, however, there was evidence that strategies can be put in place to develop and foster social integration alongside academic integration through online processes. It is also important to note that there were differences in the level of demands for these strategies by students from the blended and the purely online modes. The students in the blended mode had opportunities to interact with teaching staff in active learning workshops and practical/tutorial sessions held on-campus as well as online, whereas online students would rely more on the asynchronous modes such as pre-recorded lectures and discussion boards, and occasional synchronous discussion via Skype or Webinars, to access learning content. Therefore, the strategies discussed above are of more importance to students in the purely online mode.

Pedagogical strategies

The second aspect is the pedagogical strategies the lecturers used to teach and engage students. These encompassed all the activities built into the subject's LMS site, including online discussions, quizzes and formal pieces of assessments. One common feature shared between the five subjects is how technologies were used to maximise opportunities for interaction. In this study, pedagogical strategies were used to support both students' social and academic integration. Amongst these

strategies, online discussion forums were an important activity-type element used in the subjects. They provided the main forum for students to contribute feedback about the learning materials and activities they engaged in each week.

Discussion boards In Subject 1, discussion boards were used for students to work through the different modules, answering guided questions related to the content that they were studying. They could also ask questions regarding key assessment tasks.

I found that if I really needed to ask any questions or if I wanted to find out if anyone else was having trouble with the same things I was, it was really nice to get in touch with everyone. So it's nice to have a forum where everyone can talk to each other without necessarily knowing each other. Just the fact that we have the same goals in common and that we need to finish and get rid of it, the course sort of thing. (Subject 1, Karen)

In Subject 5, while there were only a few compulsory discussion board activities, the online students were encouraged to use the discussion boards to connect with others and discuss tasks and assessment. It is interesting that interactions between the students and teachers in the discussion boards were often seen as more valuable than student–student interactions. Some students chose to engage only in conversations with others about assignment purposes, rather than for social purposes.

I wasn't one to spark up conversations with other people just for the sake of it. I had far more important things to do, assignments, than talking to other people about their thoughts. (Subject 5, Diane)

While students may miss social interaction in the online space, this is made more challenging by the need to be focussed and time efficient, due to their study workloads and assessments. It is possible, however that some of the social aspects of learning can be met by the lecturer acting as a 'host' in the online space. Through this role, the lecturer can act as a friendly voice to connect student posts and address all learners in the response. This friendly voice can help create and foster a sense of belonging among students, even when they are primarily seeking information to complete their work.

It is worth mentioning that one unanticipated finding emerged was not all students see the value in discussion posts. The student mentioned below, for instance, expressed concern that the discussion posts may not be true reflections of people's thinking.

Sometimes I think they're not people's real opinions, they're what they want people to think they think. I think there's all a falseness that goes on in discussion boards or what the lecturer wants to hear. There's a lot of conformity around. (Subject 3, Olivia)

Other activity forms Apart from discussion boards, in Subject 2 many of the weekly activities focussed on students actually solving mathematics problems and sharing their solution strategies. In addition, students were encouraged to try out activities at home or with school students if they had access to them. Sometimes the activi-

ties would be accompanied by a short video demonstrating what was involved or of students completing a similar activity. The provision of activities aimed at increasing students' own confidence in dealing with mathematics problems and providing them with practical activities and resources that could be used in the classroom. A student gave the following feedback:

It was really great that the lecturer always tended to give us a weekly activity on top of the discussion board because it was more entertaining [and] it gave you a goal to work towards. With the maths, there was a maths problem each week ... and if we were confused by what was going on and we may have answered incorrectly, she was like "Come and learn this" and explained things to us appropriately. (Subject 2, Patricia)

Again, differences were observed in student experiences of the blended and pure-online cohorts. For instance, in Subject 1, blended students were learning together in active learning workshops in a lecture theatre, and in practical/tutorial sessions in laboratories, on a weekly basis. These sessions were key support to student learning, enabling students to engage actively with staff in real time. This active learning was linked to their online learning and, following face-to-face classes, students were encouraged to frequently engage with the online discussion boards, email and other platforms in order to stay connected with teaching staff and each other. These multiple options contributed to students' positive learning experiences:

I can know other students, so [in] the practical sessions, and also in the actual learning workshop. ... I feel the connections between classmates and the lecturers and the tutors closer than the study I took in China before. (Subject 1, Lauren)

Teacher–student exchanges

The third aspect of this support model was the teacher–student exchanges which occurred in discussion forums, emails, and Skype, Zoom and phone calls. There were also webinars and conferences via video conference software embedded in the LMS. In addition, in the face-to-face context of blended learning, workshops and other on-campus activities also took place and were identified as positive influences on learning. It is also important to note that considerable overlaps were identified with the two previously mentioned aspects. Teacher presence was a significant point that appeared to be relevant to all three aspects of the support model (see Fig. 2). Some key themes that emerged in relation to teacher–student exchanges include teacher immediacy and approachability, clear expectations and feedback, and pastoral support.

Immediacy and approachability In Subject 2, interaction and communication occurred through the discussion board forum, through regular news announcements and emails. A dominant theme from the interviews was the availability of the lecturer and their willingness to engage with students. In Subject 1, students were encouraged to use discussion boards but many preferred to email the lecturer and tutors to ask

questions regarding subject content or assessment tasks. The teaching staff, in turn, were prompt in replying to students' queries to provide individualised student support through any platform utilised by the students.

Whenever I emailed Lecturer, she always answered my emails within half an hour, and whenever I have anything going on in my mind, if I had any questions or any hardship, I always just ask her. (Subject 1, Karen)

Communication and feedback Clear communication, based on mutual respect, can lead to constructive discussions and deeper thinking. In particular, students in this study appreciated clear communication in relation to expectations and feedback.

Giving good feedback, but also going "Ah, but have you considered this?" And then you're thinking that bit more, which I think was really good. It wasn't just you made a post and that was it, actually you were challenged that little bit further which I like. (Subject 4, Tiffany)

Pastoral support Students also recognised that the size of the class enabled stronger social and academic interactions. For instance, in Subjects 1 and 3, the blended-learning students could easily interact with staff during face-to-face sessions as teaching spaces and class sizes facilitated this. Although structured content was delivered in these classes, students were also encouraged to talk to teaching staff regarding any aspects of the subject and their transition to university, as first year students. Some students perceived their learning environment as a supportive learning and teaching environment providing pastoral care.

You felt that, as a student, that you were wanted in that class, you weren't just a number, which makes a big difference. ...just to know that someone cares, for no reason, just because they care, ...if you care for each other then that's powerful and means a lot to me. (Subject 3, Olivia)

I feel like she knew me. She knew me as person, not the, all of her students, she's just specific to address to me. And I feel good. That I feel like she pays attention, she cares about me. (Subject 5, Crystal)

Discussion

Re-envisioning support in a contemporary model of higher education

In higher education worldwide, online offerings have continued to grow and enable students to study off-campus. It is the provision of online learning which has made possible the diversification of the student body. It is not surprising to see that research has identified convenience, flexibility of programming, and compatibility with other student commitments as the top reasons for choosing online courses (Noel-Levitz, 2011). Research has also found a higher preference for online learning among students from regional areas and those with employment or carer

responsibilities (Kember & Ellis, 2022). This wider diversity in student background also means higher demands and need for support. Operating with a contemporary model of higher education, which is characterised by a high-level adoption of online learning, the regional university reported in this article needs an effective support system for online students that is at least comparable to the one provided to the on-campus cohort. This need, however, is not currently being met. This conclusion is consistent with an observation of the Productivity Commission's report (Productivity Commission, 2019).

The growing risk of students dropping out of university requires attention. On average, the additional students need greater academic support to succeed. While universities had strong incentives to expand student numbers, the incentives for remedial support are weak. (p. 2)

The interview data analysis in this study revealed overlapping, but clearly different, support models for the online and on-campus student cohorts at the studied university. Blended learning students appear to have access to the support available to both the online and on-campus cohorts. This student cohort's perception of support, therefore, appears to be more positive compared to those studying purely online. Within the five-layered support system presented in Fig. 1, the first two levels of support—central/institutional-level and school-level support—were not taken up or utilised by the purely online students. These findings are consistent with existing literature which identifies that support services should be proactive, transparent and student-friendly (LaPadula, 2003; Rotar, 2022). To achieve this, firstly, students need to be clearly informed of the availability and relevance of the support services, and secondly, they need to be given easy access to these services. Students' perceptions should be included when evaluating learner experiences, including their experiences with support services (Rajabalee & Santally, 2021).

At the university involved in this study, there appeared to be a lack of communication and transparency regarding the support services available. Many of the online students interviewed were not aware of the online alternative for the central/institutional-level support, and therefore, did not consider this level of support to be feasible or necessary. The school-level support, on the other hand, aimed to provide targeted support to identified at-risk students, most of whom were studying purely online. The interviews in this study confirm that the purely online students were often time poor, due to multiple commitments and obligations. This is supported by other research which indicates the online cohort has an increasing number of part-time, mature-age, and first-in-family students ((Stone & O'Shea, 2019)), who are known to have higher disengagement and attrition rates (Norton et al., 2018b). The need for online students to balance their study with external factors and commitments is well recognised by existing research (Rotar, 2022). With their busy lives and multiple commitments, some students saw the extra email or phone contact from their mentors as another task or burden, rather than as the relevant support that was intended.

This study identifies a need for the university/institutional-level support to be more effectively tailored to suit the needs of the online cohorts and to become part of their study and learning environment. Previous successful examples of

institutional-wide support systems indicate a more targeted approach. This targeted approach involves firstly identifying student needs and, secondly, providing targeted support to meet these needs. For instance, Stone and O'Shea (2019) identified that older, first-in-family learners usually have limited access to a significant other within their households or community who can provide them with support. These authors go on to suggest that creating an active online community can help reduce this barrier and foster a sense of belonging (Stone & O'Shea, 2019). In addition to identifying the needs, effective mechanisms should be in place to reach out to the students with targeted support. This support should demonstrate relevance to students' studies and strong links to their learning environment. For instance, embedding links to central support services in individual subjects' LMS spaces and supporting students with assessment tasks may demonstrate effectiveness.

Recognising the need for a more effective support system at the institutional, college, and school levels, in 2020 this university implemented a new initiative: the Student Advice and Mentorship (SAM) model, aimed at providing a more consistent approach to supporting students at these higher levels (University of Tasmania, 2022). It is hoped that this initiative will lead to more positive student experiences and lower attrition rates, within the on-campus, blended, and online cohorts.

Optimising teacher support for student engagement and retention

While the higher levels of support are important, this study reveals that the most powerful source of support remains with the teacher and other teaching staff in the individual subject. This finding is supported by the literature, which also indicates embedding strategies in the course design is the most effective way to engage and retain students (Muir et al., 2019; Redmond et al., 2018). The data analysis reveals a model within the subject-level teacher support, with three key elements: content design, pedagogical strategies, and teacher–student exchanges. The division into the three sub-sections is not distinct and clear-cut. There are apparent and considerable overlaps and interactions between the three elements. This further indicates that the online learning environment needs to be interpreted as broad and multi-faceted. Richer learning environments that provide more sources of support are more successful in promoting the academic and social engagement of students.

Each of the individual subjects involved in this study provided evidence in all three elements, demonstrated through the student participants' interview responses. There is evidence that teachers can help maintain student engagement with both social and academic support, which can be provided in all three identified areas: content design, pedagogical strategies, and teacher–student exchanges. In the area of content design, teachers' role in providing academic support outweighed social support, whereas in teacher–student exchanges, social and academic support appeared to be equally important.

The concerns revealed by student Olivia in Subject 3, that what students post on the discussion board may not be a true reflection of their opinions, raise an interesting issue which may add to the literature. Garrison et al. (2000), in their Community of Inquiry framework, emphasise the importance of one's social presence in online

learning. This refers to the learner's ability to project their personal characteristics into the online community and present themselves to other members as a real person (Garrison et al., 2000). A high level of social presence of learners is considered a direct indicator that the learning experience has been successful (Garrison et al., 2000). In this study's findings, it appears that students may observe the social presence of other students on the discussion board, which does not reflect the true opinion or identity of those with whom they interact. This can be discouraging for both those who have posted and for the readers of their posts. This finding reveals the need for teachers' guidance and encouragement for students to express their true opinions. Students being able to honestly share and reflect on their thinking and provide feedback to other students, is essential for meaningful learning to occur in online discussion boards. This finding is consistent with the Community of Inquiry framework, which emphasises the importance of learners' social presence (Garrison et al., 2000).

The data analysis highlighted the importance of embedding activities in the course design to maximise opportunities for interactions, both between the teachers and students, and among students themselves. The findings support the notion that the lecturer has a key role in reducing distance, and thereby enhancing learner engagement (Moore, 1973; Rotar, 2022). It is also logical to conclude that the content designs as described in the subjects in this study were effective in supporting students' social and academic integration (Tinto, 1975, 1993), and thereby may help support retention, although a formal correlation between the two elements could not be established through the interviews.

It is interesting to note that, apart from academic and social support, there emerged an element of pastoral care as part of the subject-level teacher support. This was more clearly observed in the aspect of teacher–student exchanges than the other two aspects. In particular, where strategies were put in place for individual and personalised support, the data suggested there were more positive student experiences and enhanced student engagement. The interview participants used wording such as being “valued”, “respected” and “cared”, when these support strategies were used. The important role of teachers in providing pastoral care was also identified in the parallel research conducted at another university in the larger scope study (Kember & Ellis, 2022). The positive impact of such “small acts” from teaching staff on student experiences has also been identified in other recent research (e.g. Crawford, 2021). Therefore, this study calls for the inclusion of strategies to support students through pastoral care at the subject level, for enhanced student engagement and retention.

Conclusion

This paper reports the findings of a qualitative study conducted at a regional Australian university. The key findings that emerged from the interview data indicate different support structures for purely online and blended-learning students, and a lack of adequate support for purely online students at the institutional/central level

and the school level. Subject-level teacher support appeared to be the most significant type of support for both student cohorts.

This study has limitations due to its relatively small scope. The findings were generated from interviews with 41 students at one regional Australian university. As such, they may not fully represent the experiences of online and blended students in other contexts, for instance, those studying at metropolitan Australian universities or those in countries outside of Australia. However, it is considered that the findings of this research may have wider implications for other universities, in or outside of Australia, who endeavour to offer effective support to their online students equivalent to that given to on-campus and blended students. These insights are likely to become more important as curriculum is increasingly transitioned to a permanent online platform.

One key finding of this study was the three-element model for subject-level teacher support, based on content design, pedagogical strategies and teacher–student exchanges. This model adds new insights to the knowledge of student engagement, particularly in the online context. The study has also identified teachers' role in providing pastoral care, adding to the existing models in student retention theories. It is also important to note that these suggestions are made in recognition of the important role individual learners play in engagement in their own courses. As highlighted by existing research, students' individual characteristics and life circumstances remain crucial factors in student engagement and retention, as well as success (Stone, 2017).

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Declarations

Conflict of interest The authors declare that they have no conflict of interest.

Ethics statement This study was undertaken with the approval of the Tasmania Social Sciences Human Research Ethics Committee (H0018105).

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