1-1-2022

How can we address the wicked problem of university student attrition? A BEd (early childhood) case study

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Student retention in education courses is a political imperative. This research examined the wicked problem of attrition in a Bachelor of Education (Early Childhood Studies) course, drawing on the experiences of three different groups of students studying early childhood. The participants from each study represented different student groups within the course, which included all female (n=20), all male (n=6) and all mid-year entry students (n=10). A qualitative methodology was employed to capture students' university experiences and their perceptions of events at university. The research generated a unique theoretical framework examining the intersection between student and event and its impact on student belonging. Over fifty-six hours of interview data were analysed and conceptualised using this theoretical framework, which resulted in three distinct categories. This paper reports on one category of the framework, that of 'Where the intersection of event and student did not meet needs', identifying factors beyond the university's remit. Findings indicate that supporting student belonging through events is not straight forward as the one event or experience can either support or not support student belonging, depending on student circumstances. Recommendations to increase student retention and belonging are made that emphasise focusing on factors within the university's control, such as sourcing mentors within the discipline and educating them in ways to better support peers. In addition, shortening the duration of courses without compromising course quality will support attracting students to the course as well as retaining them.

Introduction

Currently, Australia is facing a nationwide teacher shortage with federal, state and territory ministers citing the Covid-19 pandemic, workload, teacher status, declining enrolments in teacher education courses and limited career opportunities as reasons for the shortfall (Karp & Ore, 2022). Moreover, Australia's education ministers have drawn attention to the lower graduation rates (50%) for teachers than for other degrees (70%) (Evans, 2022). Early childhood teachers are at a critical low with John Cherry, a manager in a large childcare provider in Victoria, noting "We're in the middle of a workforce crisis in early learning at the moment; the number of vacancies for teachers and educators across Australia is double pre-pandemic levels" (Waters, Carey, Finn & Pascual Juanola, 2022).

In Western Australia's Edith Cowan University, early childhood is viewed as a specialist area of learning and development with a nationally accredited Bachelor of Education (Early Childhood Studies [ECS]) specialising in education and care for children birth to eight years of age. In Australia there is a notable national skills shortage for early childhood trained child care workers and a moderate skills shortage for early childhood (pre-primary) teachers (National Skills Commission, 2021). Hence, attracting and retaining students in the University's Bachelor of Education (ECS) aligns with a national priority.

There is a growing body of research investigating causes for attrition (for example, Ahn & Davis, 2020; Beer & Lawson, 2017) and interventions undertaken by universities (Murphy et al., 2020; Soria & Stubblefield, 2015). Student retention, and conversely, student attrition is a complex phenomenon (Behr et al., 2020). As student belonging is cited as one of the chief factors in supporting retention in higher education, this focus was adopted to manage this complexity (for example, Araújo et al., 2014; Davis et al., 2019). Few studies have examined retention in early childhood studies (one exception being Kirk, 2018) and fewer still have investigated the multiple perspectives both shared and unique within different 'groups' of Bachelor of Education (ECS) students. 'Groups' is defined here as a diverse group sharing a common trait, for example, mid-year entry early childhood students, or male early childhood students. The purpose of this paper is to identify the experiences and perspectives of three such groups all studying early childhood at university: (1) female (n=20); (2) male (n = 6); and (3) mid-year entry (n = 10), particularly focusing on a category of experiences described in this research 'where the intersection of event and student did not meet needs'.

Literature review

Belonging

The need, or desire, to belong is a fundamental and powerful motivation (Baumeister & Leary, 1995; Nieuwoudt & Pedler, 2021). While this desire motivates students to form connections to develop security, it can be the very thing that heightens anxiety when entering a new social context, such as university. Maunder (2018) explains that this stress when beginning university motivates students to forge social connections so they can develop belonging to the new environment. It was found in Maunder's study that forming attachments with other students was the strongest predictor of adjustment to university, followed by a connection with the university.

There is a growing body of research identifying factors that impact on student retention (e.g., Ahn & Davis, 2020; Murphy et al., 2020). In particular, the research has identified student belonging as one of the chief factors in supporting retention in higher education. These studies examine belonging through various lenses such as belonging at times of transition (Araújo et al., 2014; Davis et al., 2019; Whannell & Whannell, 2015), social support (Lee & Goldstein, 2016), interventions to support belonging (Murphy et al., 2020; Soria & Stubblefield, 2015), belonging as academic and social engagement (Ahn & Davis, 2020) and first year experiences (Morrow & Ackerman, 2012). More recently, attentions have turned to student belonging during the Covid-19 pandemic (Tice et al., 2021).

Transition to university is a time of intense social change (Whannell & Whannell, 2015). Tinto (1999) recommended implementing protective factors to support student retention. These included setting high and clear expectations of students, improving the quality of academic and social support for students, improving the quality of feedback to students, providing opportunity for the academic and social inclusion of students within the university, and generally improving the quality of learning and teaching.

Araújo et al. (2014) argued that sustained low-cost transition activities foster a sense of belonging among first year students and is best approached as a process and not an event. Possibly for the same reason as process over event, Tinto (2006) stated the classroom was the one place, and perhaps the only place where students meet on a regular basis. He surmised if involvement did not happen there, it was unlikely to occur anywhere else. However, other studies such as Davis et al. (2019) have suggested that known effective interventions for supporting student belonging are those events that bring students together which includes both events, such as orientation, and processes, for example, mentoring and social groups. Conversely, poor event experiences heighten student isolation and increase the likelihood of attrition (Beer & Lawson, 2017).

Social support provides a buffer against stressful situations and is particularly "salient during times of intense social change" (Lee & Goldstein, 2016, p. 568). For young students, Lee and Goldstein (2016) found friendships were more effective in acting as a buffer against the challenges of stress than other sources such as romantic relationships and family. Indeed, in studies conducted in both regional (Sadowksi et al., 2018) and a major capital city (van Gijn-Grosvenor & Huisman, 2020) Australian universities reported increased peer connectedness as effective in increasing a sense of belonging and improving student attrition and success.

Social support can also take the form of social media, where the corrosion of social well-being for students with weaker in-person social networks was mitigated by positive online interactions (Cole et al., 2016; Peacock et al., 2020). While this latter study was not centred on online students, it does indicate social media interactions can be effective in buffering the effects of stress caused by isolation and loneliness. Hixenbaugh et al. (2006) also found e-mentoring (mentoring over email) resulted in an improved sense of social integration and satisfaction with the university.

Other buffers against stressful situations cited in the literature include belonging in places characterised by respect and where others felt accepted (van Gijn-Grosvenor & Huisman, 2020), understanding the different challenges faced by students as they transition into university (Whannell & Whannell, 2015), consistency across teaching design and delivery, and access to supports (Sadowksi et al., 2018). Finally, an improved marketing of courses so students know what to expect as well as offering a differentiated program that considers individual difference support students in settling into university (Whannell & Whannell, 2015).

Beer and Lawson (2017) explored the notion of attrition as a wicked problem. Through their analysis of student exit interviews from an Australian university, they found reasons for leaving were complex and inter-related, rendering linear approaches to attrition ineffective. Similarly, Kirk (2018) found that often it was two or more stressful experiences occurring together that created sensitive periods to attrition. For example, an illness at home combined with assessments due. In this study, the combinations of experiences were not necessarily predictive or linear, supporting the suggestion that responding to student attrition requires an agile and collaborative approach (Beer &

Lawson, 2017) and that at times attrition is out of the university's control (Harvey et al., 2017).

Belonging: A theoretical perspective

The theoretical framework underpinning this study has been constructed from three different, but related concepts: definitions of belonging (Halse, 2018), the individual's state of belonging observed at the points where students intersect with events (Probyn, 1996) and the notion of wicked problems (Rittel & Webber, 1973). The first concept acknowledges belonging as a complex phenomenon that can be examined and interpreted in multiple ways (Halse, 2018). Probyn's (1996) *Outside belongings* provides the second factor considered in this framework, as she positioned the observer at an optimal vantage point to observe how the complexity of belonging unfolds where an individual intersects with an event. Finally, this complexity and how it transpires at the intersection of individual and event is nested within the notion that attrition is a *wicked problem* (Beer & Lawson, 2017). Rittel and Webber (1973) first introduced the term wicked problem, and their explanations will be referred to throughout this paper. The following section elaborates on each of the three concepts.

Concept 1: Belonging as a complex phenomenon

Belonging is a broad concept that cannot be contained within one single definition. Halse (2018) highlighted within scholarly convention, both the verb and the noun are utilised depending on the context. That is, belonging is defined as "*to belong* (verb) or to possess or own something;" as well as "*belongingness* (noun), denoting that one belongs to and is a member of a particular social group, solidarity, collectivity or organisation" (p. 3). Adding to this complexity, Allen et al. (2021) highlighted the literature distinguishing belonging as both a trait and a state (e.g., Sedgwick & Rougeau, 2010; Walton & Cohen, 2011). While traits are static, they differentiate people depending on their individual perspectives. States tend to be influenced by external events and circumstance, and hence vary within people. Accordingly, an individual's sense of belonging can change several times in one day (Gillen-O'Neel, 2021).

Concept 2: Belonging generated from the intersection of where individual meets event

Probyn's (1996) interpretation of belonging captures the complexity of this concept and hence has been adopted as a theoretical frame to conceptualise and articulate this study's findings. Regarding belonging, Probyn suggested "individuals and groups are caught within wanting to belong, wanting to become, a process that is fuelled by getting rather than positing of identity as a stable state" (p. 19). From this perspective, the students' sense of belonging is constantly a verb, a doing word, an act that is always in the process of getting, rather than being in a state of belongingness. Moreover, this definition highlights a personal pursuit, further emphasising the variability of belonging within people (Gillen-O'Neel, 2021).

An individual's state of belonging can be observed at the points where students intersect with events, or experiences, generating new configurations of belonging (van Staveren, 1998). Van Staveren explained the outside vantage point enables the observer to explore all possible interconnections that occur at these intersections. In this current study it enables an examination of student belonging as the student intersects with multiple aspects of the university experience. This sense of dynamicity aligns with the assertion that institutional preventions to attrition should be "complex adaptive systems" due to the complex and non-linear nature of the problem of attrition (Beer & Lawson, 2017, p. 781).

Concept 3: Attrition as a wicked problem

Wicked problems are best defined when compared with 'tame' problems (Rittel & Webber, 1973). Tame problems can be solved; that is, the problem is definable and separable, and an objective solution can be obtained (Pronk, Pronk & Curtis, 2021), much like a mathematical equation (Rittel & Webber, 1973). Wicked problems, however, are difficult to define and have no definitive and objective answer (Bache et al., 2016). This is because they occur within interacting open societies with a growing concern for equity, and as such, Rittel and Webber (1973) cautioned against using standard, linear approaches to solving public policy problems that are derived from social complexity.

The complex and inter-related array of factors that were cited by students for withdrawing from a regional Australian University resulted in Beer and Lawson (2017) identifying attrition as a wicked problem. They concluded that because student attrition was a wicked problem, traditional linear ways of responding to student attrition are largely ineffective. Belonging is a complex issue and considered a wicked problem as circumstances supporting it are both multifaceted and unique to the individual (Bache et al., 2015).

Figure 1 provides a diagrammatic representation of how these three concepts work together as a unique theoretical framework. Figure 1 emphasises the complexity of belonging and retention at university by combining the three concepts of (1) Complexity of definition (Allen et al., 2021; Gillen-O'Neel, 2021; Halse, 2018); (2) Belonging generated where individual intersects with event (Probyn, 1996), and (3) Attrition (and retention) as a wicked problem (Rittel & Webber, 1973). While this figure demonstrates an effective outcome (belonging) at the intersection between individual and event, this is idealistic and not necessarily representative of the reality.

Method

Data were gathered using the University's Data Warehouse (2023) and interviews from three different groups of Bachelor of Education (Early Childhood Studies [ECS]) students. The University's Data Warehouse was searched for details on age of students enrolling into the Early Childhood, Primary, and Secondary disciplines, as well as their gender. The intention was to examine any similarities and differences between the disciplines. This information supported building a background on the Early Childhood cohort.
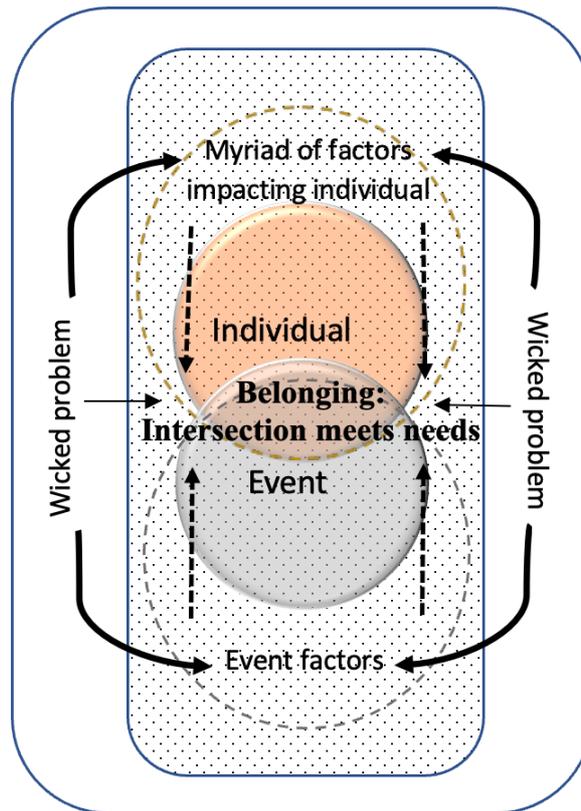
Figure 1: Theoretical framework

Figure1 emphasises the complexity of belonging and retention at university by combining the three concepts of 1) Complexity of definition (Allen et al., 2021; Gillen-O'Neel, 2021; Halse, 2018), 2) Belonging generated where individual intersects with event (Probyn, 1996), and 3) Attrition (and retention) as a wicked problem (Rittel & Webber, 1973).

Interview data were also collected from three Bachelor of Education (Early Childhood Studies [ECS]) course groups. These interviews were designed to examine student perceptions on factors that supported them in staying at university. The interviews were semi-structured which allowed deeper investigations into views on retention, in particular, their experiences and perceptions of events in the university experience. Participants were interviewed individually at a mutually convenient location on the university campus. Interview length ranged from half an hour to one and half hours. Each interview was audio-recorded and transcribed. The data were analysed and themes were identified to provide insights into the broader student experience in relation to belonging at university. Ethical approval was received from the university's human research ethics committee prior to the study's commencement.

Building on previous studies which identified that belonging appeared to be the most important factor in retention (Kirk, 2018), and another which focused on the influence of belonging and motivation for retention (Kirk, 2020), this study examined how the same individual university experience can elicit different student feelings of belonging, depending on the individual. Through drawing on the findings from three student groups, the article provides in-depth insight into what factors support or hinder student belonging surrounding university experiences.

As earlier indicated, university events designed to support belonging fall under the wicked problem of attrition. Wicked problems are individual and complex and require agile and responsive planning. Hence, the research questions informing this paper are:

- What are student perceptions of the effectiveness of university events and experiences supporting their belonging at university?
- How can events and experiences be adapted to be more agile and responsive to students' needs?

Participants

The study commenced with an invitation to all students in the Bachelor of Education (ECS) and twenty female students consented to participate. A follow-up invitation was distributed directly to male early childhood students, resulting in six consenting participants. A third group who commenced their studies mid-year were invited to participate resulting in 10 (all female) participants, bringing the total number of participants to 36.

Table 1: Participant summary (N=36)

Group 1: Females		Group 2: Males		Group 3: Mid-year entry (Females)	
No. students	Characteristics	No. students	Characteristics	No. students	Characteristics
20	• Students ranging from 1st year to 4th year of study. • All females • One rural • Three online students • Up to 40 hours of recorded interviews	6	• Students ranging from 1st year to 4th year of study. • All males • One student mid-year entry • No rural • All on campus • Up to 6 hours of recorded interviews	10	• Nine students in 1st year and one student 3rd year • All females • One rural • Two online students • All mid-year entry students • Up to 10 hours of recorded interviews
Totals:	• 36 students (30 female, six male), two rural students, 26 commencing at the beginning of the year, 10 students commencing mid-year • Up to 56 hours of recorded interviews				

Data analysis

Background on the Bachelor of Education (ECS) cohort was gained via records in the ECU Data Warehouse. To show a point of difference, cohort data were also gathered for the Primary and Secondary degrees. Percentages were collected for the years 2019 to 2022 to show any fluctuation of enrolment.

Qualitative data in this paper were analysed and themes identified. The key themes that emerged were orientation, class experiences, unit organisation/content, student background, university support, staff interactions with students and peer interactions – collectively these were referred to as *events*. These were then analysed again under whether individuals felt these events met student needs, whether they did not meet their needs, and if no intersection between event and student occurred.

Findings and discussion

ECU Data Warehouse

Age and gender have been identified by previous research as determinants contributing to attrition at university (Edwards & McMillan, 2015; Norton, Charastidtham & Mackey, 2018; Severeins & ten Dam, 2012). An examination of the data from the ECU Data Warehouse (2022), revealed that these two factors were more prevalent in the Bachelor of Education (ECS) discipline than in the Bachelor of Education Primary and Secondary disciplines (see Tables 2 and 3).

Table 2: Summary of students across education disciplines according to age

BEd discipline	Age category*	2019	2020	2021	2022
Early Childhood Studies	Mature age	39.4%	42.4%	39.5%	34.1%
	School leaver	23.4%	22.6%	28.2%	30.2%
	Youth age	37.2%	35.0%	32.3%	35.7%
Primary	Mature age	22.9%	25.3%	25.7%	19.8%
	School leaver	34.1%	35.4%	36.6%	40.4%
	Youth age	43.0%	39.3%	37.7%	39.8%
Secondary	Mature age	14.8%	15.4%	19.2%	20.0%
	School leaver	42.3%	36.4%	35.2%	44.2%
	Youth age	42.9%	48.2%	45.6%	35.8%

* Ages at first enrolment: Mature age 26 years or higher; School leaver 17-18 years; Youth age 19-25 years.

Table 2 demonstrates that the Bachelor of Education (ECS) discipline has over a third students who are mature age in any one year or an average of 38.8% mature age students across 2019 to 2022. Comparatively, Primary has an average of 23.4% mature age students and Secondary 17.4% over the same timeframe.

Being a mature age student does not necessarily result in attrition. However, the competing roles that mature age students commence with can at times impact on their continuing in the course (Edwards & McMillan, 2015; Stone & O'Shea, 2013). These students are more likely to manage a home, have family and work responsibilities, and experience a lack of time and money.

Table 3: Summary of students across education disciplines according to gender

Discipline	Gender	2019	2020	2021	2022
Bachelor of Education (Early Childhood Studies)	Female	99.5%	99.0%	97.3%	97.7%
	Indeterminate/intersex/ unspecified	0.00%	0.5%	0.0%	0.8%
	Male	0.5%	0.5%	2.7%	1.5%
Bachelor of Education (Primary)	Female	73.8%	74.8%	78.9%	75.6%
	Indeterminate/intersex/ unspecified	0.0%	0.0%	0.3%	0.0%
	Male	26.2%	25.2%	20.8%	24.4%
Bachelor of Education (Secondary)	Female	50.0%	51.5%	55.1%	58.8%
	Indeterminate/intersex/ unspecified	0.0%	0.5%	0.00%	0.4%
	Male	50.0%	48.0%	44.9%	40.8%

Teaching is known to be a female dominated profession. According to the Australian Bureau of Statistics (ABS) in 2019 there were 288,294 full-time equivalent teaching staff across Australian primary and secondary schools. Of this number 206,838 (71.7 percent) were females and 81,456 (28.3 percent) were male. As shown in Table 3, the Bachelor of Education (ECS) course had a considerably higher percentage of females (average over four years 98.4%), while Primary had a similar percentage of 75.8% (average over four years) and Secondary had a lower female representation with an average of 53.8% over the four years.

Severeins and ten Dam (2012) found that that more males withdrew from courses where females made up more than 75% of the students. The converse was also true where more than 75% of males constituting the course, the females were more likely to withdraw. Using this current study's theoretical framework to reflect on Severeins and ten Dam's finding, it is argued that this cannot be stated as certainty. Concept 1 (belonging as a complex phenomenon) reminds us that traits differ according to the individual perspective. Hence there are males who may not be concerned with being the only or one of their gender. For example, Michael noted, "It [being the only male] is not as awkward as people think it would be" (interview, 29/7/2018).

With Concept 1 in mind, it then can be seen that the sense of belonging generated from the intersection of where individual meets event (Concept 2) may occur for some students and may not for others. Hence, supporting belonging and retention is indeed a wicked problem (Concept 3).

Student voices

Belonging at university is pivotal to a student's retention (Murphy et al., 2020). However, due to individual ways of experiencing and feeling a sense of belonging, it remains a complex phenomenon. Hence, retention and attrition are considered a wicked problem. The data collected from all three groups supports this notion of complexity, and emphasises the necessity of an agile, collaborative (Beer & Lawson, 2017), and responsive approach to retention. Student responses based on where they intersect with the event were categorised into three distinct categories. These are: where the intersection met their needs and belonging was supported; where the intersection did not meet the student's needs, hence belonging was not supported; and finally, where the intersect between event and student did not occur (see Figure 1). This section will introduce the variances within each section, however, to focus the paper, only the 'Where the intersection of event and student did not meet needs' category will be discussed and analysed.

Where the intersection of event and student did not meet needs

Events are 'states' and will vary within people. While Gillen-O'Neel (2021) stated this explained the dynamicity of an individual's sense of belonging even over one day, it also suggests that when events are coupled with individual traits the results can be complex. Hence any response requires a degree of responsivity from the university to reach students in ways that support their needs and develop a sense of belonging. The events and experiences identified by the participants included orientation, class experiences, unit organisation, personal support, university support, staff interactions and student interactions. Of the three categories presented in the framework, 'where the intersection of event and student did not meet needs' provides the most scope for adaption to better meet needs, hence the discussion focuses on four experiences within this category, that is, class experiences, student background, university supports and student interactions (both with staff and peers).

Class experiences

Probyn (2006) discussed how in one season in Montreal, she and her neighbours would move their living room to the outdoor balcony. In this way, her living room extended to include those around her as they shared the commonality of the outdoors and for that moment, they experienced a sense of belonging for that time. This is similar to a classroom. For the time students are in that classroom they have an opportunity to connect and belong. In Tinto's (2006) writing, he referred to the classroom as one of the more important facets of the higher education experience. He explained that this may be the only place students have the opportunity to interact with each other and staff, and in this way the classroom had more impact on belonging than one-off events, such as orientation.

There were three key factors cited by students as inhibiting feelings of belonging in the classroom. The first was when they were frequently moved from their groups in tutorials, the second was the 80% participation requirement placed on the course and finally, when

lecturers or tutors ignored disruptive behaviour. Regarding the first point, adapting to university presents a time of intense social change (Whannell & Whannell, 2015) and having time to connect with other students (Tinto, 2006) provides a potential buffer to stress (Lee & Goldstein, 2016). Connecting with others is a process (Araújo et al., 2014) and it takes time. The participants reported they found this process was disrupted when the tutor frequently moved them from group to group within the tutorials. Moreover, the participants expressed they desired autonomy in choosing where they sat during sessions. While one participant, expressed that being moved on occasion did support her in getting to know other students, the consensus was, it was counter-intuitive if done too frequently.

Moreover, enabling autonomy regarding who students sat with was cited as integral to forming connections. For example, Joan recalled walking into the lecture and looking around for another mature age person to sit next to. She said of her experience,

> I'm feeling very old and everybody's very young and all, you know, but as the weeks have gone on I've sort of formed those sort of groups and sort of friendship groups and study groups, if that's what you want to call them, and it's got better and better. So, each week it's been much better.

Being able to choose where she sat, Joan satisfied her sense of autonomy and control over the situation supporting feelings of security and belonging, particularly on the first day. When the lecturer asked them to talk amongst each other, this provided a subtle, but effective way to break the ice and commence the possibility of forming attachments.

The second factor considered the 80% participation requirement placed on all units in the course. The impetus behind this requirement was to support successful unit completion; however, some participants felt this diminished their autonomy as an adult learner. Autonomy is important. Goodenow (1993) stated that students develop a sense of belonging when they felt supported and there was respect for their personal autonomy as well as for the student as an individual. It appeared from the interviews that it was more likely those students who felt they may not achieve 80% participation found this requirement an issue. For example, Beth (female group) commented,

> I usually try and come [to] every class, but there is going to be times where I'm not going to be able to, which might be over that 80 percent, because of my kids … It kind of is a bit stressful knowing that, what if something happens, and in the back of my mind, what happens if my kids are sick and I can't come to uni, or I can't get someone to look at it.

The final key classroom experience factor that inhibited feelings of belonging was when lecturers and tutors did not address disruptive behaviour in lectures and tutorials. Alice (female group) found this made her feel she did not belong in the tutorial as her intent to learn did not appear to be respected. Interestingly, her focus was on the tutor not reprimanding the disruptive students and not on the students themselves. One plausible explanation for Alice's focus on the tutor can be taken from a marketing perspective. Polkinghorne et al. (2017) explained that universities are a place where students choose to attend and invest their money, time, and opportunity. Quality teaching is likely to be part of their decision making on what units, courses, and universities they attend. In Alice's

situation, the quality was diminished through disruptions, and she was no longer getting her expected return on investment. However, to illustrate how one student's experience is not necessarily typical of another's, Jess (female group) was not bothered by her talkative peers, stating,

> I'm used to just lots of background noise so, if I'm desperate, I will pull my headphones out and just put them in and ignore everyone… I'm not afraid to speak up either, I'm happy to turn around and tell them to shut it.

It is important for universities to be aware of these inhibiting factors so that they can organise activities thoughtfully. For example, moving students in tutorials could occur for authentic reasons and not just for the sake of mixers. In addition, any requirement of participation can be presented as a supportive measure as opposed to a punitive one. Finally, tutors act quickly and respectfully in keeping all students on task in tutorials. It is important to keep in mind that as the theoretical framework suggests, there is no one size fits all solution.

Student background

Student background often occurs irrespective of what the university does. For example, the university cannot change the fact that some students are the first in their families to attend university, or that some students are in a minority. However, knowing some information about students and enabling this information to support university staff understanding their belonging needs is important. The three themes to emerge strongly in this aspect was being mature aged, male or the first in the family to attend university.

Mature aged students face a raft of uncertainties. All of them commented that they had not studied for years, inferring they were starting at a disadvantage to their younger peers. Some, such as Joan (female group) mentioned earlier found it important to be with other mature aged students. Hence choosing where she sat on her first day was very important for her sense of belonging and possibly for her retention at university.

In some ways, Joan's experience provides deeper insights into the males' experiences of being in a minority. A few of them commented on being the only male, however, they also mentioned they expected that. Even with this expectation, at times the realisation of being different made them feel isolated, be it just temporarily. Interestingly, the same comment received by two of the males Barry and Michael (male group) was received completely differently. Specifically, they were both informed how wonderful it was to have a male in the early childhood course. Barry received this comment as supportive, and even into his final year he recalled how supported he felt from that moment in his first year. Michael, however, felt a flood of immense pressure and that his lecturers had placed an enormous expectation on him to stay. This highlights Concept 2 from this study's theoretical framework, where the nuance of individual traits and explains how one event or experience can look and feel very different to two different people (Gillen-O'Neel, 2021).

Students who were the first in their family to attend university also felt some sense of disadvantage on their commencement at university. Soria and Stebleton (2012) noted first generation students tended to have lower academic engagement than their non-first-generation peers. This could be explained by the hidden disadvantages working behind the scenes such as having to reassure their families they have made the right choice. Indeed, Stephens et al. (2012) found the mostly working-class backgrounds interdependent norms constituted a mismatch with middle-class independent norms prevalent in universities. Basically, these students were not raised into university work and life, and some feel the lack of support systems emanating from their family backgrounds. For example, Rebecca (mid-year entry group) commented how her mother tried to edit her work, but added "she only went to Year 10, but she tries".

University support

Mature aged students (aged 25 and over) are twice as likely to withdraw from university than students aged 19 or under (Edwards & McMillan, 2015). While university supports have been put in place to cater to students with family obligations such as flexible delivery models, this is the very reason why some students dropout. Evee (mid-year entry group) opted for part-time and online study due to work and family but admitted the longer length of time to complete the course added an increased sense of burden. She did comment that being able to access the content in her own time was supportive and had developed a sound work ethic around study which included accessing all online supports.

Online supports offered by the university included the academic skills centre, Peer Assisted Study Session (PASS), and Studiosity. Evee found this highly supportive and while claiming to be not overly computer competent, was able to navigate through these. Other online students such as Karen (mid-year group) stated there were limited university supports provided online and, in this regard, found the university unsupportive. This example demonstrated two different approaches to the one university event (online supports). Where Evee demonstrated proactive behaviours, Karen's appeared more aligned to learned helplessness. Learned helplessness is defined as an individual's feelings of inability to influence a situation (Ghasemi, 2022) and has been identified as being positively linked to student dropout (Bäulke et al., 2021). Indeed, extended periods of not sourcing necessary online supports are likely to have negative outcomes for Karen as indicated by her response.

Student interactions

Student interactions with staff and peers is a strong indicator of retention and is important in increasing a sense of belonging and improving student success (Tormey, 2021; van Gijn-Grosvenor & Huisman, 2020). Students beginning the course midway throughout the year, however, have had less opportunity to form important connections and face a set of unique challenges (Peska, 2011). Sliuzas and Brady (2015) found that the isolation felt by mid-year students was not pre-empted by the students, and consequently was an unexpected stressor in their transition to university. Adding to this stress was when tutors assumed these students had formed peer attachments.

Lucy (mid-year entry group) recalled the time when she asked her tutor what she had missed out on over the last fortnight when she was unwell. Her tutor asked her to get the notes from one of her friends. The issue was, Lucy had none. She did not disclose to the interviewer why she did not inform her tutor of this, but she did explain how this heightened her sense of isolation. Sliuzas and Brady (2015) cautioned against presumptions, particularly with this cohort of students. Tutors should not presume friendships, or that the students know of support groups such as study groups (Jane and Rebecca, mid-year entry group) or prior knowledge (Jane, mid-year entry group).

James (male group) also discussed isolation, but in terms of being the only male. While for the most part he said he was fine, every now and again he thought it beneficial to talk to another male. The isolation experienced by James even if just periodically, may explain why many males dropout. James stated he would persevere in the course as he was highly motivated to become an early childhood teacher (Kirk, 2020).

Feeling the need to connect with someone who was aware of what they were going through was not just isolated to wanting to connect with another minority group. Most students expressed the desire to connect with a student who had been through their course and knew the stressors associated with beginning at university, or assessments or just navigating the university system. Rebecca (mid-year entry group) and Annie (female group) particularly noted their desire for a mentor. However, their needs were not met as Rebecca found her mentor at orientation was not knowledgeable, and Annie struggled to find one in her discipline or a time that was convenient to meet. Regardless of the cause, Lim and Vighnarajah (2018) asserted student isolation leads to a negative relationship with the university learning experience.

There are logical steps universities can take to support student interactions with peers and staff. Suggestions include, not making assumptions of prior knowledge or peer friendships. In addition, the university can source mentors within the discipline and educate them, so they are equipped to support peers. Moreover, universities can seek and appoint mentors who represent minority groups to reach out to the minority groups in the course. While these suggestions may be of value, this study's theoretical framework reminds us of the complexity of this issue. The reasons mentioned by Rebecca, Annie and James are their accounts of how the intersection of them and the university event did not support their belonging. Casey (female group) had a different perspective which was, "If you don't want to belong, you won't, if you want belong, you will." Therein, retention is a wicked problem, and every student is essentially unique (Rittel & Webber, 1973). Moreover, as wicked problems do not have an enumerable or exhaustively describable set of potential solutions (Rittel & Webber, 1973), issues of retention must be responsive to the individual students and in many cases may be a "one-shot-operation" (Rittel & Webber, 1973, p. 163).

Limitations

There were limitations to this study. First, all data were collected from one institution and one discipline. Second, each iteration was conducted in different years, and hence changes in university supports could not be isolated or attributed to increased or decreased student retention.

Conclusion

The aim of this study was to examine three different groups of ECS students' perspectives on how university events and experiences supported their needs and promoted their sense of belonging. It was found that supporting student belonging through events does not necessarily bring about the intent, as while one event or experience may meet student needs, the same event or experience has the potential to not meet student needs. In addition, there are students who do not intersect with the university event or do not have the desired university experiences, due to reasons such as work, distance, reluctance to independently explore forums, and poor organisation.

The recommendation from these studies is for universities to concentrate on those factors they can control and improve to include more students in the 'intersection meets needs' category. There are actions the university can do that broadly support student belonging. For example, stronger socialising of events, educating mentors before orientations, providing non-threatening exercises to familiarise students with each other, and introducing small assessments before census dates.

There are also actions the university can take to support belonging of certain groups of students, such as, not assuming prior knowledge or peer groups, highlighting support programs such as study groups at the beginning of each semester and providing the possibility of gender specific mentors in programs. In addition, shortening the duration of courses without compromising course quality will support attracting students to the course as well as retaining them. While these suggestions promote the potential for the intersection between event, experience, and student to support student belonging, this paper supports Harvey et al. (2017) in that some reasons for attrition are beyond the university's control.

References

Ahn, M. Y. & Davis, H. H. (2020). Four domains of students' sense of belonging to university. *Studies in Higher Education*, 45(3), 622-634. https://doi.org/10.1080/03075079.2018.1564902

Allen, K., Kern, M. L., Rozek, C. S., McInerney, D. M. & Slavich, G. M. (2021). Belonging: A review of conceptual issues, an integrative framework, and directions for future research. *Australian Journal of Psychology*, 73(1), 87-102, https://doi.org/10.1080/00049530.2021.1883409

Araujo, N., Carlin, D., Clarke, B., Morieson, L., Lukas, K., & Wilson, R. (2014). Belonging in the first year: A creative discipline cohort case study. *The International Journal of the First Year in Higher Education*, 5(2), 21-31. https://doi.org/10.5204/intjfyhe.v5i2.240

Australian Bureau of Statistics (2020). Students near 4 million, female teachers outnumber males. *ABS*, 6 February. https://www.abs.gov.au/articles/students-near-4-million-female-teachers-outnumber-males

Bache, I., Reardon, L. & Anand, P. (2016). Wellbeing as a wicked problem: Navigating arguments for the role of government. *Journal of Happiness Studies*, 17, 893-912. https://doi.org/10.1007/s10902-015-9623-y

Bäulke, L., Grunschel, C. & Dresel, M. (2021). Student dropout at university: A phase-orientated view on quitting studies and changing majors. *European Journal of Psychology of Education,* online first. https://doi.org/10.1007/s10212-021-00557-x

Baumeister, R. F. & Leary, M. R. (1995). The need to belong: Desire for interpersonal attachments as a fundamental human motivation. *Psychological Bulletin*, 117(3), 497-529. https://doi.org/10.1037/0033-2909.117.3.497

Beer, C. & Lawson, C. (2017). The problem of student attrition in higher education: An alternative perspective. *Journal of Further and Higher Education*, 41(6), 773-784. https://doi.org/10.1080/0309877X.2016.1177171

Behr, A., Giese, M., Teguim Kamdjou, H. D. & Theune, K. (2020). Dropping out of university: A literature review. *Review of Education*, 8(2), 614-652. https://doi.org/10.1002/rev3.3202

Davis, G. M., Hanzsek-Brill, M. B., Petzold, M. C. & Robinson, D. H. (2019). Students' sense of belonging: The development of a predictive retention model. *Journal of the Scholarship of Teaching and Learning*, 19(1), 117-127. https://doi.org/10.14434/josotl.v19i1.26787

Edwards, D. & McMillan, J. (2015). *Completing university in a growing sector: Is equity an issue?* Australian Council for Educational Research. https://research.acer.edu.au/higher_education/43/

Evans, J. (2022). Education ministers to sign off on national workforce strategy before year's end. *ABC News*, 12 August. https://www.abc.net.au/news/2022-08-12/education-ministers-meet-over-teacher-pay-shortages-burnout/101326140

Ghasemi, F. (2022). L2 Motivational self system in practice: Alleviating students' learned helplessness through a vision-based program. *School Mental Health,* 14, 179-188. https://doi.org/10.1007/s12310-021-09464-4

Gillen-O'Neel, C. (2021). Sense of belonging and student engagement: A daily study of first- and continuing-generation college students. *Research in Higher Education*, 62, 45-71. https://doi.org/10.1007/s11162-019-09570-y

Goodenow, C. (1993). Classroom belonging among early adolescent students: Relationships to motivation and achievement. *The Journal of Early Adolescence*, 13(1), 21-43. https://doi.org/10.1177/0272431693013001002

Halse, C. (2018). Theories and theorising of belonging. In C. Halse (Ed.), *Interrogating belonging for young people in schools*, 1-28. Springer. https://link.springer.com/book/10.1007/978-3-319-75217-4

Harvey, A., Szalkowicz, G. & Luckman, M. (2017). *The re-recruitment of students who have withdrawn from Australian higher education.* Report for the Australian Government

Department of Education and Training. Melbourne: Centre for Higher Education Equity and Diversity Research, La Trobe University. https://doi.org/10.26181/60efee7340124

Hixenbaugh, P., Dewart, H., Drees, D. & Williams, D. (2006). Peer e-mentoring: Enhancement of the first year experience. *Psychology Learning & Teaching*, 5(1), 8-14. https://doi.org/10.2304/plat.2005.5.1.8

Karp, P. & Ore, A. (2022). Australian education ministers agree to draft national plan to combat teacher shortages. *The Guardian*, 12 August. https://www.theguardian.com/australia-news/2022/aug/12/australian-education-ministers-agree-to-draft-national-plan-to-combat-teacher-shortages

Kirk, G. (2018). Retention in a Bachelor of Education (Early Childhood Studies) course: Students say why they stay and others leave. *Higher Education Research and Development*, 37(4), 773-787. https://doi.org/10.1080/07294360.2018.1455645

Kirk, G. (2020). Gender differences in experiences and motivation in a Bachelor of Education (Early Childhood Studies) course: Can these explain higher male attrition rates? *The Australian Educational Researcher*, 47, 873-892. https://doi.org/10.1007/s13384-019-00374-8

Lee, C. Y. S. & Goldstein, S. E. (2016). Loneliness, stress, and social support in young adulthood: Does the source of support matter? *Journal of Youth and Adolescence*, 45, 568-580. https://doi.org/10.1007/s10964-015-0395-9

Lim, S. Y. J. & Vighnarajah (2018). Influence of student isolation on students' university learning experiences: Perspectives of academic, social and psychological development. SHS Web of Conferences, 53, article 05005. https://doi.org/10.1051/shsconf/20185305005

Maunder, R.E. (2018). Students' peer relationships and their contribution to university adjustment: The need to belong in the university community. *Journal of Further and Higher Education*, 42(6), 756-768. https://doi.org/10.1080/0309877X.2017.1311996

Morrow, J. A. & Ackermann, M. E. (2012). Intention to persist and retention of first-year students: The importance of motivation and sense of belonging. *College Student Journal*, 46(2), 483-491.

Murphy, M. C., Gopalan, M., Carter, E. R., Emerson, K. T. U., Bottoms, B. L. & Walton, G. M. (2020). A customized belonging intervention improves retention of socially disadvantaged students at a broad-access university. *Science Advances*, 6(29). https://doi.org/10.1126/sciadv.aba4677

National Skills Commission (2021). *Skills priority list*. https://www.nationalskillscommission.gov.au/publications/2021-skills-priority-list

Norton, A., Cherastidtham, I. & Mackey, W. (2018). Dropping out: The benefits and costs of trying university. Grattan Institute. https://grattan.edu.au/wp-content/uploads/2018/04/904-dropping-out-the-benefits-and-costs-of-trying-university.pdf

Peska, S.F. (2011). One size does not fit all: Tailoring orientation services to mid-year transfer students. *The Journal of College Orientation and Transition*, 18(2), 33-44. https://pubs.lib.umn.edu/index.php/jcotr/article/view/2750/2158

Polkinghorne, M., Roushan, G. & Taylor, J. (2017). Considering the marketing of higher education: The role of student learning gain as a potential indicator of teaching quality. *Journal of Marketing for Higher Education*, 27(2), 213-232. https://doi.org/10.1080/08841241.2017.1380741

Pronk, D., Pronk, B. & Curtis, T. (2012). *The resilient shield: SAS resilience techniques to master your mindset and overcome adversity*. Macmillan Australia. https://www.panmacmillan.com.au/9781760983499/

Probyn, E. (1996). *Outside belongings*. Routledge. https://www.routledge.com/Outside-Belongings/Probyn/p/book/9780415915847

Rittel, H. W. J. & Webber, M. M. (1973). Dilemmas in a general theory of planning. *Policy Sciences*, 4(2), 155-169. https://doi.org/10.1007/BF01405730

Sadowksi, C., Stewart, M. & Pediaditis, M. (2018). Pathway to success: Using students' insights and perspectives to improve retention and success for university students from low socioeconomic (LSE) backgrounds. *International Journal of Inclusive Education*, 22(2), 158-175. https://doi.org/10.1080/13603116.2017.1362048

Sedgwick, M. G. & Rougeau, J. (2010). Points of tension: A qualitative descriptive study of significant events that influence undergraduate nursing students' sense of belonging. *Rural and Remote Health*, 10, article 1569. https://www.rrh.org.au/journal/article/1569

Severeins, S. & ten Dam, G. (2012). Leaving college: A gender comparison in male and female-dominated programs. *Research in Higher Education*, 53, 453-470. https://doi.org/10.1007/s11162-011-9237-0

Sliuzas, R. & Brady, K. (2015). A mid-year orientation program: Addressing the needs of mid-year entry students. *The International Journal of the First Year in Higher Education*, 6(1), 61-71. https://doi.org/10.5204/intjfyhe.v6i1.263

Soria, K. M. & Stebleton, M. J. (2012). First-generation students' academic engagement and retention. *Teaching in Higher Education*, 17(6), 673-685. https://doi.org/10.1080/13562517.2012.666735

Soria, K. M. & Stubblefield, R. (2015). Building strengths awareness and hope in students' transition to higher education. *College Student Affairs Journal*, 33(1), 47-65. https://doi.org/10.1353/csj.2015.0007

Stephens, N. M., Fryberg, S. A., Markus, H. R., Johnson, C. S. & Covarrubias, R. (2012). Unseen disadvantage: How American universities' focus on independence undermines the academic performance of first-generation college students. *Journal of Personality and Social Psychology*, 102(6), 1178-1197. https://psycnet.apa.org/doi/10.1037/a0027143

Stone, C. & O'Shea, S. E. (2013). Time, money, leisure and guilt - the gendered challenges of higher education for mature-age students. *Australian Journal of Adult Learning*, 53(1), 95-116. http://ro.uow.edu.au/sspapers/194

Tice, D., Baumeister, R., Crawford, J., Allen, K. & Percy, A. (2021). Student belonging in higher education: Lessons for professors from the COVID-19 pandemic. *Journal of University Teaching & Learning Practice*, 18(4). https://ro.uow.edu.au/jutlp/vol18/iss4/2

Tinto, V. (1999). Taking student retention seriously: Rethinking the first year of college. *NACADA Journal*, 19(2), 5-9. https://doi.org/10.12930/0271-9517-19.2.5

Tinto, V. (2006). Research and practice of student retention: What next? *Journal of College Student Retention*, 8(1), 1-19. https://doi.org/10.2190/4YNU-4TMB-22DJ-AN4W

Tormey, R. (2021). Rethinking student-teacher relationships in higher education: A multidimensional approach. *Higher Education*, 82, 993-1011. https://doi.org/10.1007/s10734-021-00711-w

Van Gijn-Grosvenor, E. L. & Huisman, P. (2020). A sense of belonging among Australian university students. *Higher Education Research & Development*, 39(2), 376-389. https://doi.org/10.1080/07294360.2019.1666256

Van Staveren, M. (1998). Book reviews: Elspeth Probyn, Outside Belongings. London/New York: Routledge, 1996. *European Journal of Cultural Studies*, 1(2), 281-285. https://doi.org/10.1177/136754949800100208

Walton, G. W. & Cohen, G. L. (2011). A brief social-belonging intervention improves academic and health outcomes of minority students. *Science*, 331(6023), 1447-1451. https://doi.org/10.1126/science.1198364

Waters, C., Carey, A., Finn, M. & Pascual Juanola, M. (2022). Staff shortages threaten Andrews' $9bn preschool overhaul. *The Age*, 16 June. https://www.theage.com.au/politics/victoria/staff-shortages-threaten-andrews-9bn-preschool-overhaul-20220616-p5au68.html

Whannell, R. & Whannell, P. (2015). Identity theory as a theoretical framework to understand attrition for university students in transition. *Student Success*, 6(2), 43-52. https://doi.org/10.5204/ssj.v6i2.286

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