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Tertiary students' housing priorities: Finding home away from home

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Abstract
Globally, 5 million students annually leave both high school and their homes for the first time in pursuit of a higher education, while some others may be transiting to a new country in search of an international education. If tertiary students are unable to access suitable accommodation, this could have several implications. First is the significant role of housing on one's health, wellbeing, and quality of life as this can be an additional cause for stress and worry. Second, there is ample evidence that attests to the fact that students with access to settled housing have better educational outcomes than those with less settled housing. This paper examines tertiary students' housing needs and preferences, towards providing them with suitable and stable accommodation during their study duration. A 26-item online questionnaire was administered to students enrolled at two regional universities in Australia. Participants were asked to choose their needs and preferences from eleven housing attributes, and rate them from 'most important' to 'least important' need. The results were analysed using SPSS. The results of the survey from both universities indicate that students' most important need was for affordable accommodation (i.e. the lowest cost for rent) and accommodation offering recreational facilities rated the least important. This study fills a gap in understanding student priorities in housing in regional universities and offers insight to individuals and institutions involved in or intending to develop student accommodation on how to properly target and satisfy this sector. The research findings has wider application to regional or urban-based universities in Australia and globally.

Keywords: Tertiary student, accommodation, housing, international students, Australia

Résumé
À l'échelle mondiale, 5 millions d'étudiants quittent chaque année l'école secondaire et leur domicile pour la première fois dans le but de poursuivre des études supérieures, tandis que d'autres pourraient se rendre dans un nouveau pays à la recherche d'une éducation internationale. Si les étudiants de l'enseignement supérieur ne sont pas en mesure d'accéder à un logement convenable, cela pourrait avoir plusieurs implications. Premièrement, le logement joue un rôle important pour sur la santé, le bien-être et la qualité de vie des étudiants. La difficulté de trouver et demeurer dans un logement adéquat peut être une cause supplémentaire de stress et d'inquiétude. Deuxièmement, de nombreuses études attestent du fait que les étudiants ayant accès à un logement stable ont de meilleurs résultats

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scolaires que ceux qui ont un logement moins bien établi. Cet article examine les besoins et les préférences des étudiants inscrits dans l'enseignement supérieur en matière de logement, afin de leur fournir un logement convenable et stable pendant la durée de leurs études. Un questionnaire en ligne de 26 questions a été administré aux étudiants inscrits dans deux universités régionales en Australie. Les participants ont été invités à choisir leurs besoins et préférences parmi onze attributs de logement, et de les évaluer sur la base du besoin « le plus important » au besoin « le moins important ». Les résultats ont été analysés en utilisant le logiciel SPSS. Les résultats du sondage des deux universités indiquent que le besoin le plus important des étudiants était un logement abordable (c.-à-d. le coût de location le plus bas) et un logement offrant des installations récréatives ont été classé comme étant « le moins important ». Cette étude comble une lacune dans la compréhension des priorités des étudiants en matière de logement dans les universités régionales et offre un aperçu aux individus et aux institutions impliqués, ou ayant l'intention de développer des logements étudiants, sur la façon de bien cibler et satisfaire ce secteur. Les résultats de la recherche ont une application plus large aux universités régionales ou urbaines en Australie et dans le monde.

Mots-clés: étudiants étranger inscrits dans l'enseignement supérieur, logements étudiants, Australie.

Introduction

Despite there being a wide range of research that characterizes the student housing literature (Araujo and Murray 2010; Charbonneau, Johnson, and Andrey 2006; Chekis-Gold 2012; Kwiatkowski 2013; Najib, Yusof, and Osman 2011; Obeng-Odoom 2012; Pickren 2012; Schudde 2011; Thomsen and Eikemo 2010), very little research has been carried out to investigate the housing needs and preferences of today's students (La Roche, Flanigan, and Copeland Jr. 2010; Nijënstein, Haans, Kemperman, and Borgers 2015). In fact, Khozaei, Hassan, Kodmany, and Aarab (2014, p. 719) emphasize that 'we still lack the knowledge in regard to the students' real needs and requirements… and further studies on student housing may direct more focus on student housing preferences'. As a direct response to the call for further research in this regard, this study therefore builds upon the work by Khozaei et al. (2014) within an Australian context and is pertinent because of transformations in Australia's higher education sector in recent years to a more diverse population (Couchman 2008; McInnis, James, and Hartley 2000). It has been suggested that students in Australia are far less mobile than their U.S. counterparts as they tend to study close to home and continue to live with their parents or a partner for the duration of their studies (Australian Bureau of Statistics 2013; Hobsons 2014). However, the makeup of the student population is shifting, particularly as the number of overseas students increases. The Australian higher education sector has undergone significant changes over the past six decades as enrolments by both domestic and overseas students increased from 30,000 in 1950 to 1.2 million in 2010 (Norton 2012).

Growth in the higher education sector implies a greater need for housing for students while they undertake their studies. However, only 5% of the over one million students in Australia's member universities access university-provided student accommodation (Universities Australia 2014). This figure is low compared to countries such as the United Kingdom (24%) and the United States (42%). One might argue from the foregoing that the United Kingdom and United States have a greater percentage of mobile students (that is, students whose permanent home address "is no longer within a reasonable daily commuting distance of campus" (McDonald et al. 2015, p. 20) and therefore are keener to provide them with a place to live; however, the evidence shows that this figure is rising in Australia. For example, of the 1,313,776 students in 2013, 361,861 (24%) are considered, "mobiles." These students require a place to live during the academic term.

Two contrasting Australian regional universities, the University of the Sunshine Coast (USC) in Queensland and the University of New England (UNE) in New South Wales, were selected to investigate students' housing needs. To clarify, housing needs or preferences are used interchangeably in this paper to capture a broader sense of how respondents view each of the eleven housing attributes. The rationale for looking at regional universities is related to the significant growth in student enrolments in regional universities - 18.5% between 2009 and 2013 (Regional Universities Network, 2016). It is argued that University Provided Housing (UPH) has not kept pace with the increase in regional student population suggesting the need to investigate issues surrounding student accommodation within a regional university context. Furthermore, compared to urban areas with better public transport options where students have better choice to live close to or far away from their campus, students in regional universities are constrained by less than adequate travel options. The selection of USC and UNE to carry out this study is also based on the contrasting nature of both universities in terms of their date of establishment, student numbers and student

population. The comparative case studies enable comment about generalizability to Australian regional universities as well as provides basis for comparison to regional universities in other countries. As such, the study has broader application to the challenge of accommodating students in other countries as well, given the role housing plays on students' educational outcomes, wellbeing and retention (Ike, Baldwin, and Lathouras 2016).

A case for student housing

Knowledge today is increasingly mobile in keeping with the digital age, and the nature and methods of teaching have also changed (Barr 2004). What has changed even more is that unlike in the past when higher education was the preserve of the elite, it is now becoming increasingly accessible to the masses. It is also not unusual for students to go to universities outside their region, home state, or even country, and these students require a place to live while they carry out their studies. Students need a place to live in during school term, and have different accommodation options to choose from; for example, they can choose to live at home with their parents, access the private rental market through shared housing, or live in university provided housing (UPH) on campus (Rowley and Constable 2014). Although there are advantages associated with living in any of these accommodation types, there are benefits linked with living in UPH for both students and the university. Students accessing accommodation via UPH achieve better educational outcomes and are more likely to graduate (Riker and Decoster 2008; Schudde 2011; Tinto 1996). Studies carried out in the United States found that first-year students living in university accommodation maintained higher cumulative grade point averages than first-year students not living in university accommodation in every semester from fall 2003 to 2007 (Gasser 2008). A meta-analysis of nine studies in the United States from 1966 through 1987 on the academic performance of students who lived in university accommodation found that they performed significantly better than students living in other forms of accommodation (Blimling 1999).

Other studies carried out in the United States show that 30 to 40 percent of college students drop out in their first year, accounting for almost 57% of the total number of withdrawals from a four-year degree program (Consolvo 2002; Tinto 1996). The view argued by a number of scholars on student retention is that students living in university accommodation are more likely to persist to graduation than those who live in private rentals or commute. A study by Pascarella and Terenzini (2005) carried out between 1989 and 2002 suggested that the engagement of residential students in campus activities may account for their 12% higher retention rate when compared with other students. These studies suggest that there are several factors that contribute to this higher retention rate, including the various forms of academic support provided in the residence by staff members who serve as community advisors and academic resource coordinators. These staff members are usually residents who serve as mentors, provide answers to academic questions, and assist students with academic-related issues (Li, Sheely, and Whalen 2005).

In addition, UPH increases a university's ranking potential and its attractiveness to prospective students and their families (Kwiatkowski 2013; Reynolds and Cain 2006) as it provides them with a greater sense of safety and security (Paltridge 2009). While the expected academic and related outcomes were the primary reason for choosing a particular institution, a study by Reynolds and Cain (2006) identified that a significant number of students noted they had rejected some institutions because facilities like student accommodation, which they considered important, were missing. However, a study in the United Kingdom by Price et al. (2003) presents a different picture. Across 16 factors influencing why students chose a particular university, availability of accommodation ranked 14th, with students indicating that their choice was based on the availability of the courses they wanted, the availability of computers, and the quality of the library. While this finding is inconsistent with the studies described previously, the authors discovered that this outcome was found in institutions with a higher proportion of mature students (Price et al. 2003). As such, as the student population becomes more heterogeneous and diverse, it is acceptable to reason that students' wants and preferences will also be more diverse. For example, what might be preferred by new high school graduates will vary from what is preferred by mature students with responsibilities for families and jobs.

Growth and diversity in the Australian higher education sector

In the 1950s and 1960s, universities served two main groups of students: World War II veterans who had just returned from war and the so-called "baby boomers" (Palmer, Broido, and Campbell 2008). From the mid-1970s, higher education became more central to Australian life, so much so that 'three out of every hundred working-age Australian had a higher education qualification' (Norton 2012, p. 6). Compared to 1950 when the total university enrolment in Australia was about 30,000, in 2010 there were over 1.2 million students comprising both domestic and

international students. The change in the higher education sector is prompted partly by changes in Australian Government policy, such as the 'Bradley Review' of Australian higher education in 2008. This led to the removal of the cap on the number of enrolment places available to domestic students and the implementation of a demand-driven funding system for universities (Bradley, Noonan, Nugent, and Scales 2008). Another factor has been the favourable migration policy resulting from the strategic review and implementation of the Knight report on the student visa program (Knight 2011), and the strategic marketing of Australia to international students by both universities and the government as a favourable destination. Aside from the growth in student population, a more critical change relates to the broad range of diversity that can be found in the student population. For example, the number of women who are now studying has increased and there is an 'increasingly broad cross-section of society and…continuous growth in working-class participation' (Hazel, Munro, and Rettig 2002, p. 210). Two of the factors responsible for this were improved access to education, and that the courses typically chosen by women (i.e., teaching and nursing) now require higher education qualifications (Norton and Cherastidtham 2014). Past figures show that the number of university students with a disability in Australia has doubled in the past 10 years, from 11,656 in 1995 to 27,661 in 2005, representing about 3% of the student population (Australian Disability Clearinghouse on Education and Training 2014). Today, this figure is estimated to have increased to 4% according to the Australian Bureau of Statistics. The statistics show consistent improvement in the participation rates of people with disabilities in higher education. Furthermore, there has been a large increase in the number of mature age students accessing higher education, as well as students from families in which a university education has not been the norm (referred to as "first in family") (Bexley, Daroesman, Arkoudis, and James 2013; Bradley et al. 2008; Krause, Hartley, James, and McInnis 2005). The review of the sector also resulted in the uncapping of the number of university places, supported by subsidised funding from the government for those student places (Dow 2013). The new funding system gave incentives for higher education providers to seek and enrol a wider range of students as well as to offer providers the flexibility to respond to market changes and student demand (Bradley et al. 2008). Given the above changes in the higher education sector, Bexley et al. (2013, p. 6) report that:

> The domestic student body in 2012 is far more heterogeneous than was the case in 2006… There has always been a degree of diversity present in the student cohort, yet the present study indicates that this diversity is increasing, such that it is difficult to describe what an 'average' student might be.

Given the increasing diversity found in the student population, stemming from the 'increasing cultural, age, and linguistic heterogeneity in higher education student backgrounds' (Couchman 2008, p. 81–82), it is a reasonable expectation that their needs will differ including those related to housing (Ike et al. 2016). More so, the cost of students' housing is not limited to the cost or price of the accommodation but is inclusive of all operational costs such as electricity and gas, related costs for transport, access to services and facilities (such as internet, gym) which form a significant part of most students' expenses (Rowley and Constable 2014). Given the growing housing affordability problem across Australia (O'Neill, Sliogeris, Crabtree, Phibbs, and Johnston 2008), it is an increasing concern that 'it is often difficult for students to find affordable housing within a reasonable distance of university campuses, in both inner cities and regional areas' (Universities Australia 2014). Many students are low-income earners, generally young, and only recently out of secondary education. In 2011, 71% of students studying full or part time in Australian universities or other tertiary institutions were aged 15–24 years (Department of Education and Training 2015). Hence, they are more likely to have difficulty in finding affordable housing. Students' inability to access affordable accommodation portends several implications. First is the significant role of housing on one's health, wellbeing, and quality of life (Johnson, Cole, and Merrill 2009; McDonald and Merlo 2002; O'Neill et al. 2008) supported by Hazel et al. (2002) who state that one's home can be a haven to deal with the daily stresses of life or conversely can be an additional cause for stress and worry. Second, a relationship exists between affordable housing and housing stress, and students' inability to access affordable accommodation can become a source of worry and result in trade-offs. These include working longer hours to meet accommodation costs, living in squalid or unsanitary conditions, decreasing or modifying food intake for extended periods to afford rent or even having to leave university (Burke, Pinkney, and Ewing 2002; O'Neill et al. 2008; Universities Australia 2014). These trade-off factors and the strategies students adopt to afford rent, have an impact on their educational success. Research attests to the fact that students with access to settled, safe and affordable housing tend to have better academic outcomes than those with less settled housing (Macintyre, 2003; Monash University 2014). In fact, Rowley and Constable (2014 p.3) suggest that,

> Many students are forced to work long hours to sustain their tenancies and the longer they work the less time they have to dedicate to their academic studies. A lack of a supply of appropriate and affordable accommodation leads to a potential disparity between the academic outcomes of students.

Universities are faced with the dilemma of dealing with reduced access to government funds and increasing demand for accountability in the use of public funds (Greenaway and Haynes 2003; La Roche et al. 2010). For instance, per student funding by the Australian government directed at teaching and learning through infrastructure and student support has decreased since 1994 (Noonan 2015). One result of governmental budget cuts is that universities prefer to direct their expenditure to research and teaching and related physical infrastructure such as new technology centres or upgraded laboratories (Liang, Lei, and Zhang 2011; Parameswaran and Bowers 2014). As such, there is need to explore options for increasing the supply of student housing, but it is first necessary to understand students' housing needs and preferences.

Students' housing needs and preferences

Given their heterogeneous backgrounds, it is inevitable that some students will be able to be selective and afford more costly accommodation. Likewise, other students may choose to live in housing of a low standard because of its affordability, although they prefer to improve an unsatisfactory housing situation (Thomsen and Eikemo 2010). Nevertheless, the housing need and preference of students is indicative of their individual circumstance. From their study, Khozaei et al. (2014 p.709) found that there were 'significant differences in the students' preferences based on their gender, nationality and study level'. Male students had higher preferences for personal space and privacy, undergraduate students preferred living in suite style residences and a significant difference existed among students' preferences for residing in a single shared room with a shared bathroom based on their nationality (Khozaei et al. 2014). These findings support our argument that students' circumstances influence their housing needs. For example, a mature age student in part time studies, working full time might prefer being in proximity to place of employment. In comparison, a student recently out of high school, in full time studies and without employment may prefer to live close to campus or at home. Further on, we also examine students' preferences based on Khozaei et al.'s (2014) three demographic attributes of gender, nationality and study level. A preference for specific housing attributes is principally associated with the benefits perceived by an individual to be most valuable to meet their needs and then their willingness to pay for these benefits. Zeng (2013) identified over 50 housing attributes (Table 1) capable of influencing an individual's housing choice.

Table 1: Intrinsic and extrinsic housing attributes

Intrinsic attributes	Extrinsic attributes		
	Exterior design and space	Environmental attributes	Location attributes
• housing types	• appearance of the house	• environmental pollution	• schools and nurseries
• housing age	• type of finishing	• danger focus	• health centre and hospital
• building materials	• quality of finishing	• air pollution	• shopping centres
• plot size of the house	• the presence of garden	• open space	• food courts
• living room	• the function of a garden	• greenery	• sports facilities
• dining room	• roof	• security	• library
• bedrooms	• external walls	• cultural characteristics	• social activities centres
• bathroom	• external floors	• street lighting	• church
• patio	• exterior space	• noise	• public transport
• balcony		• pollution	• refuse collection
• internal layout		• rain water drainage	• public phone
• area per person		• footpaths	• other community services
• air conditioning		• road and passages width	• downtown area
• patio		• layout of the street	• main street
• fencing • housing price		• geographic aspects	

Zeng (2013) categorised these attributes as either intrinsic or extrinsic housing features. Intrinsic housing attributes pertain to characteristics such as the room size, age of the housing, costs/price of rent etc., while extrinsic attributes include items such as locational advantage (i.e., nearness to shopping centres, work), roads, security and other environmental features. Since Zeng's study did not focus on students, for this study, eleven housing attributes were chosen by the authors from the above table following a pilot study carried out with students of USC to be the focus of this study. Based on the response from the pilot survey, the final questions were re-phrased to enhance comprehension by survey respondents / participants and adapted to reflect the characteristics considered capable of influencing the housing decisions made by a heterogeneous student population. Attribute selection was also informed by housing attributes used by other researchers. They include price or cost (Reed and Mills 2007); type of amenities provided (on-site parking, internet) (La Roche et al., 2010); design and size of the residence (Heaton, Fredrickson, Fuguitt, and Zuiches 1979); location (Karsten 2007) and proximity to town centre, workplace, or educational facilities (Wu 2010). Other studies used attributes such as convenience (distance to shops and facilities (Thamaraiselvi and Rajalakshmi 2008) and security (Wang and Li 2006). This resulted in the following attributes:

- Cost of rent/mortgage (inclusive of housing costs such as electricity, water, transport, bond fee)
- Proximity to campus
- Proximity to workplace
- Proximity to city centre
- Proximity to social activities (such as cinema)
- Availability of parking
- Internet provided
- Recreational Facilities (such as gym, swimming pool)
- Number of bedrooms in the house
- Privacy (number of occupants in accommodation, access to own bathroom)
- Physical characteristics of the accommodation (design, size of room, open space, aesthetics)

Methods

Two case studies of two regional Australian universities, University of the Sunshine Coast (USC) and University of New England (UNE) were used in this study. The rationale for looking at regional universities relates to the significant growth in student enrolments in regional universities by 18.5% between 2009 and 2013 (Regional Universities Network 2016) but compared to their metropolitan counterpart, regional universities provide fewer bed spaces for their student population (McDonald, Hay, Gecan, Jack, and Hallett 2015). Case study one, USC, is Australia's youngest university and in 2015, had a student population of about 11,000 with majority of the students studying on campus (99%) (University of the Sunshine Coast, 2016). USC is set within a municipality with a population of 289,389 dispersed among small coastal cities, villages and a rural area in fast-growing southeast Queensland (Sunshine Coast Council, 2016). Three independently owned and managed student accommodation (The Village, Unicentral and Varsity) adjacent to USC built around 1999, average about 330 residents each, with 4–5 persons to a unit in a complex of about 60 units. These three student facilities accommodate about 1,000 USC students (less than 6% based on 2017 student population) and are within 600 to 950 metres from the campus. No meal is provided in the accommodations. Each unit typically has single bedrooms with en-suite, and a kitchen rather than a dining hall. Furnishings include lounge suite or sofas, coffee table, dining table and chairs, electric cooktop and oven, microwave, fridge/freezer, washing machine and dryer or cloths-line, or both. Some of the services and facilities offered include internet, function and games room, vending machines, swimming pool, tennis and basketball court. UPH in city centres also tend to have kitchens rather than dining facilities, given the additional option of takeaway food in close proximity. In comparison, case study two, UNE, is Australia's oldest regional university with a student population of about 21,000 in 2015 and most of its students (76 per cent) study off-campus (distance or online) (University of New England 2016). UNE is in the inland city of Armidale with a population of 25,343 in country New South Wales (Armidale Regional Council 2016). UNE has seven residential colleges (Austin, Duval, Earle Page, Mary White, Robb, St Alberts and Wrights) located on-campus or close to the campus. These seven colleges provide about 1,685 bed spaces for the over 22,000 student population (8%). The colleges provide a variety of options for traditional catered accommodation, independent living, or a combination of both. Recreational facilities provided includes communal rooms such as music rooms, indoor heated pools, sporting fields and gym.

The choice of these universities as case studies is based on differences in terms of their date of establishment, student numbers, and the study types amongst the student population. This presents an opportunity for comparison with opposite ends of the spectrum of all the above factors but also generalisability to regional universities. The data for this study was derived from students enrolled during semester one, February to April 2015 in both universities. University Ethics approval was granted by the University of the Sunshine Coast, as well as permission from Student Central administration at each university to disseminate the survey. An online questionnaire was sent to all enrolled students' official email address (coordinated by Student Central) with a link to complete the survey. Reminder emails were also sent out on a fortnightly basis for the duration of the study by each of the university's Student Central Office. Participant recruitment for the online survey was also enhanced using flyers/leaflets posted at different locations on both campuses. The 26-item questionnaire covered questions on student demography, affordability and suitability of housing. Participants were asked to select from eleven housing attributes and rate them in comparison to each other on an 11-point scale from their 'most important' (1) to 'least important' (11) housing need. Following a close examination of ratings by students from both universities, the analysis also examined differences in students' housing need based on gender, study level and student type. The data were analysed using SPSS with Mann-Whitney test used to determine statistical differences in attribute rankings.

Results and discussion

Of the 8,150 students enrolled in the semester at USC, a total of 524 students (6%) responded to the online survey with one response considered invalid as no demographic information was provided. Majority of respondents were female (73 %), in full time study (87%), domestic students (83%), and in undergraduate studies (88%). At UNE, a total of 2,972 valid responses were received out of the enrolled student population of 17,621 (17%). The demographic profile of UNE respondents was similar to that at USC, i.e., mostly female (71%), in full time study (53%), domestic students (92%), and in undergraduate studies (72%), as illustrated in Table 2.

Table 2: Demographic characteristics of online survey respondents

Respondents Demography		Respondents	
		USC	UNE
Gender	Female	73%	71%
	Male	27%	29%
Study Type	Full Time	87%	53%
	Part Time	13%	47%
Student Type	Domestic	83%	92%
	International	17%	8%
Level of Study	Undergraduate	88%	72%
	Postgraduate	12%	28%
Age Group	Less than 18	8%	2%
	18-24	55%	35%
	25-35	21%	25%
	36 and above	16%	38%
Year of Study	1st year	42%	44%
	2nd year	27%	26%
	3rd year	21%	20%
	4th year	10%	10%

First, we present and discuss the ratings of housing attributes of both case studies and then discuss the differences in students' housing needs and preferences based on the three demographic variables discussed previously. Figures 1 and 2 show USC and UNE student rating of housing attributes, with 1 the highest ranking and 11 the lowest. We use

boxplots to illustrate the range of responses for each attribute. For example, amongst the eleven housing attributes, majority of the students at both universities rated cost of rent between 1 and 2, that is, of highest importance and provision of recreational facilities in an accommodation was rated between 9 and 11, that is, of lowest importance.

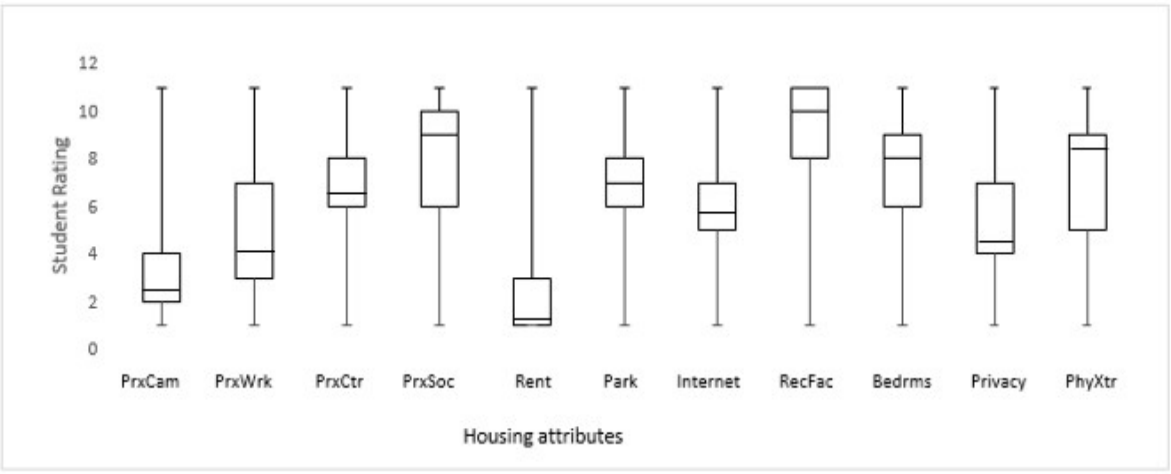

Figure 1: Case study one (USC) – Student rating of housing attributes from 'most important' (1) to 'least important' (11) housing need.

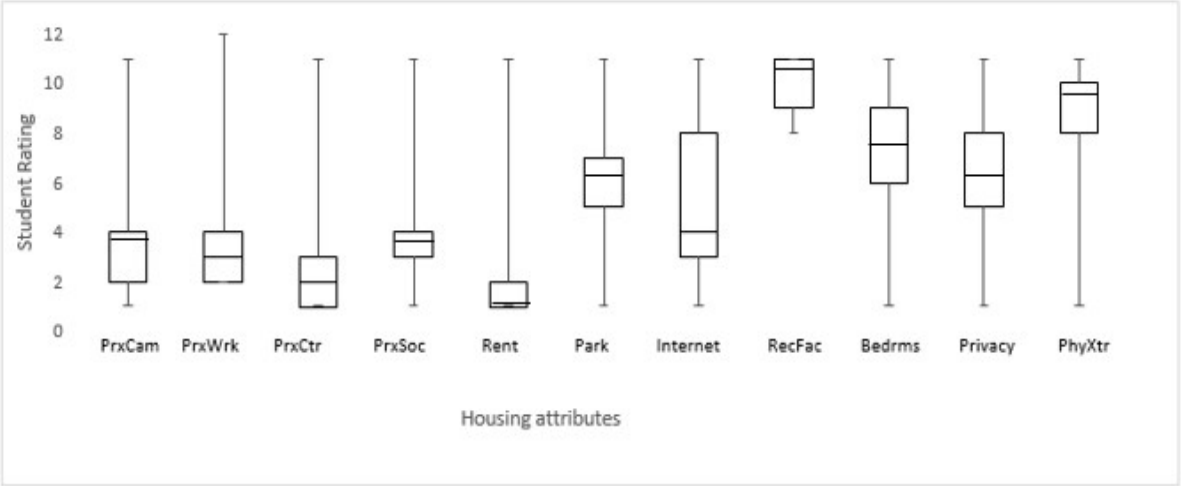

Figure 2: Case study two (UNE) – Student rating of housing attributes from 'most important' (1) to 'least important' (11) housing need.

LEGEND

PrxCam	*Proximity to campus*
PrxWrk	*Proximity to workplace*
PrxCtr	*Proximity to city centre*
PrxSoc	*Proximity to social activities (such as cinema)*
Rent	*Cost of rent/mortgage (inclusive of housing costs such as electricity, water, transport, bond fee)*
Park	*Availability of parking*
Internet	*Internet provided*
RecFac	*Recreational Facilities (such as gym, swimming pool)*
Bedrms	*Number of bedrooms in the house*
Privacy	*Privacy (number of occupants in accommodation, access to own bathroom)*
PhyXtr	*Physical characteristics of the accommodation (design, size of room , open space, aesthetics)*

Figure 1 and 2: Students' ratings

The overall results from both universities show that students' most significant housing need is for affordable accommodation, not surprising given the housing affordability problem in Australia. Students are not immune from the effects of the broader housing market and this study corroborates previous studies (Honeywood, 2014; Rowley and Constable 2014; Universities Australia, 2014) that found access to affordable housing is a challenge for most students. In fact, studies show that it is difficult for students to find affordable housing within a reasonable distance of university campuses, in both inner cities and regional areas and hence, most students struggle to afford rent without parental or government support (Rowley and Constable 2014). Although there were differences in the ratings of other attributes, the next most important factors at the two universities were: proximity to campus, proximity to workplace, privacy of accommodation and availability of internet services. This finding supports previous studies that show that students seek accommodation in proximity to their institution or work opportunities to reduce travel times and costs (Charbonneau et al., 2006; Rugg, Rhodes, and Jones 2002). While the study did not explicitly test for this, an explanation of why a high proportion of UNE students rate living close to work as a higher priority compared to USC students, might be that at UNE a high population of students study off-campus in part time studies and work full time. Thus, a higher preference for this attribute is understandable.

Conversely USC student respondents who are primarily in full time studies and are younger in age, rate proximity to campus as the second most important housing need, after cost of rent. Although living in proximity to campus may save students costs in transport and commuting time, it comes at a price; accommodation is often more expensive and priced above what many students can afford or are willing to pay (Rowley and Constable 2014). Also, given that the majority of USC respondents are aged 18–24, they might be more likely to live in shared housing (or in parents' home) due to the greater desire for privacy compared to the majority of UNE respondents who are aged 36 and above. Likewise, internet services were rated highly by a majority of UNE students but given less importance by USC students. This may be due to the need for greater access to online course work via the internet given the higher percentage of students in part time studies (47%) and studying off-campus (76%) at UNE, compared to USC's 13% and 1% respectively. Nevertheless, respondents from both universities rated equally quite low the availability of parking in accommodation. Housing attributes considered to be of low importance by respondents of both universities included: proximity to social activities; physical characteristics of the accommodation; the number of bedrooms in the accommodation and provision of recreational facilities in the accommodation. This is a salient point especially as design features such as large room sizes, open spaces, and the provision of gym and swimming pool facilities are common in most purpose-built student accommodation despite both universities having sport and recreation facilities available to students. While benefits associated with the provision of recreational facilities in student accommodation include promotion of social engagement and interaction amongst residents, these facilities also contribute to the high cost of rent due to capital cost and regular maintenance. This considerably impacts the affordability of accommodation especially for students who struggle to afford rent without parental or government support (Rowley and Constable 2014). Keeping this in mind, we suggest a mix of accommodation options should be available to students. Less emphasis could be placed on these nonessential attributes in the design of at least a portion of student accommodation complexes. In fact, a variety of mix in accommodation complexes might be useful so that users pay appropriately, given the different backgrounds of the student population (Ike et al. 2016). This ensures that students who may not wish to or cannot afford to access accommodation with recreational facilities are not undermined in their desire for quality and hygienic accommodation.

A Mann-Whitney U test was conducted to determine whether there was a difference in student housing preferences based on Gender (Male/Female); Level of Study (Undergraduate/Postgraduate); and Student type (Domestic/International). The findings revealed a statistically significant difference in students' preference for privacy based on gender ($z = -2.220$, $p = 0.026$) with male students (mean rank = 285) having a greater preference for privacy than female students (mean rank = 253). That is, USC students' ranking of privacy differed significantly; male students ranked privacy as more important than female students. At UNE, no statistically significant difference was found based on gender across the eleven housing attributes. The differences found in USC students' preference for privacy is similar to those found by Khozaei et al. (2014) that male students had a greater desire for privacy compared with female students. However, this is contrary to the finding by Demirbas and Demirkan (2000) that found no difference in students' preference for privacy among genders (also seen in the UNE result).

The result of Mann-Whitney U test for differences in student housing preferences based on their level of study showed no significant statistical differences for both universities. This indicates that both undergraduate and post-

graduate students have similar opinions regarding their accommodation, and students' level of study does not impact on their housing needs and preferences.

The result of Mann-Whitney U test conducted for differences in students' housing needs and preferences based on student type revealed a significant statistical difference for proximity to work (z = -7.736 p = 0.02) at UNE: domestic students (mean rank = 1584.4) had a greater preference for being close to work than international students (mean rank =1397.9).The results might be due to domestic students as being able to be engaged in full employment whereas international students are on a student visa and restricted to the number of hours they can work.

At USC, a significant statistical difference based on student type was found for housing costs (z =-3.012, p = 0.003), with international students (mean rank = 303) having a greater preference for lower cost housing compared with domestic students (mean rank =252). One explanation for this difference could be due to the higher tuition fees paid by international students leaving fewer funds available to spend on living expenses such as food, rent, health costs etc. They do not have an option available to some domestic students such as commuting from home to save on the cost of rent. There was also significant statistical difference for availability of parking at USC (z =-4.335, p = 0.000) with international students (mean rank = 322) showing a greater preference for this attribute compared to domestic students (mean rank = 249). This is contrary to the finding by McDonald et al. (2015) that states that most international students in Australia live in university accommodation which is usually located on campus or in close proximity to campus so they can minimise expenditure on car purchase with the associated costs (including parking) for the duration of their study. In the case of these regional universities however it may be that accommodation further from campus might be cheaper and public transport is not as efficient as denser urban areas, and hence, they require a car.

The result of Mann-Whitney U test conducted for differences in students' housing needs and preferences based on student type at USC also revealed a significant statistical difference for the number of bedrooms (z =-2.522,p = 0.012) with international students (mean rank = 297) having a greater preference for houses with more rooms, compared to their domestic counterparts (mean rank = 254). This finding links to our earlier discussion that international students seek accommodation with a greater number of bedrooms to reduce costs due to sharing. Furthermore, sharing with someone of similar ethnic or cultural background may benefit by providing an avenue for socio-cultural expression such as conversation in local languages, cooking familiar meals or sharing aligned interests (Obeng-Odoom 2012).

In summary, this study demonstrates that students' choice or preference for one housing attribute over another depends on associated expected benefits and further supports our view that the needs and preferences of a heterogeneous student population varies, especially given the wide range of students' background (culture, age, religion, gender, social and economic status). Some limitations of this study include gender bias given the fact that the majority of the respondents are female and are domestic students. As such, the findings may not represent the views of male students and international students. Another limitation is that based on investigation of two contrasting regional case studies, the findings may be typical of students in regional universities only. Despite this, irrespective of the location of their studies, students in Australian universities share similar characteristics (i.e., low income earners, young (under 25 years of age), and recently out of high school) (Australian Bureau of Statistics 2013; Edwards and Van der Brugge 2012). Hence, the findings from our study may also be applicable to students studying in metropolitan areas. As a result, we propose that future in-depth research could compare the results of this study with the housing preferences of students in an urban/metropolitan area and in regional and urban universities overseas.

Conclusion

The aim of this study was to examine student housing needs and preferences considering the increasing numbers and heterogeneity of the student population. Students need a secure and stable place to live to make the most of their higher education. Discussions around the provision of student housing require a multi-faceted approach. Reasons differ as to why an individual or a demographic will prefer one housing attribute over the other and the findings from this study show that demographic differences may be a factor in students' housing preferences. Hence, a one-size-fits-all approach towards addressing the housing needs of a heterogeneous student population is unproductive.

Furthermore, the overall findings show that students' most important housing need is for affordable accommodation. In Australia, students are not actively represented in policies or measures addressing the need for affordable housing provision despite the fact that the three tiers of government consider that significant population growth and changing demography have an impact on housing affordability. The increasing tertiary student population is a signif-

icant part of that demographic. It can be interpreted that tertiary students and how they might be accommodated are not considered highly problematic. Or, one might interpret this to be that governments consider it to be the role of the private market to address students' housing needs. This stance by governments fails to recognise that access to affordable housing by persons or groups, which the government expressly recognises to be vulnerable to housing stress, is vital for community wellbeing and the building of sustainable communities. Thus, affordable housing delivery is a complex issue and its provision requires a multifaceted approach involving all sectors.

The impact of planning process and systems in delivering affordable housing has been discussed in previous studies and recognises that a more efficient planning process and development assessment system can improve housing affordability (Ike, Baldwin and Lathouras 2017). These include government costs such as infrastructure charges that are required to be paid upfront by developers even before the development has started. Restrictions placed on land available for development or Greenfield development can have a significant effect on the rate of supply and cost of new dwellings that can be beneficial to students. These restrictions are often a major barrier to the supply of new housing and can contribute considerably to the affordability problem by increasing costs as development projects are usually sensitive to time delays and planning, zoning and approvals processes can sometimes be slow, adding considerably to the cost of new housing. Combined with high infrastructure charges to developers, this results in a marked increase in the cost of supplying serviced land for new housing as these costs are passed down to the buyer or renter.

To address the affordability challenge faced by students, we suggest consideration of provision of land by universities or municipalities in a public private partnership model. To decrease costs, concessions and incentives to investors and developers of student housing through the planning and development system could include reduced infrastructure charges, fast-tracked development assessment and reduction in parking space requirements. A related contractual agreement could ensure such costs savings are passed on to students as reduced rents to achieve affordable accommodation, rather than as additional profit for the developers and investors. It can be argued that universities have a responsibility towards ensuring that their students live in a safe environment, given the importance for academic results, student wellbeing and student retention rates. To induce student housing providers to offer adequate quality housing, universities may offer student accommodation providers the ability to register with the university as 'an approved provider'. In this way, universities can monitor those properties on a regular basis. Another option is for the university to appoint student housing ambassadors living in the accommodation to monitor and report irregular practices that undermine the wellbeing of the occupants.

Finally, the study fills a gap in understanding student housing preferences. A practical implication from the study is for universities to analyse the demographics of their students and their preferences over time to inform student housing providers and local council of housing needs so they can be considered in planning policy and processes. Any need assessment should engage students as active agents with valuable input in determining their housing priorities rather than as passive victims who must settle with whatever is offered.

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Notes

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