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SUPPORTING MATURE-AGED STUDENTS FROM A LOW SOCIOECONOMIC BACKGROUND

ABSTRACT

The aim of the current study was to examine mature-aged student perceptions of university support services and barriers to study. Using a mixed methods approach, interviews and focus groups were conducted with mature-aged students to identify barriers to study, knowledge and use of current student support services, and suggestions to improve upon these services. From these data and an audit of university support services, an online survey was created to examine study barriers and patterns of support service use, as well as perceptions of proposed support services not currently offered by the university within a larger sample of mature-aged students. Analysis of survey data indicated distinct patterns of barriers and support service use according to socioeconomic status as well as other demographic factors such as, age and enrolment status. Study findings are discussed in terms of generating support services for the retention of mature-aged students of low socioeconomic status and for the retention of mature-aged students in general.

KEYWORDS: low socioeconomic status, mature-aged students, non traditional students, study barriers, student support services, student marketing, family, employers

INTRODUCTION

Mature-aged students comprise a significant proportion of the higher education sector in Australia. Cullity (2006) estimates that nationally, 38% of commencing undergraduate university students are aged over 21 years. While the definition of mature-aged varies, the age of 25 years has been used an appropriate cut off point (Western, McMillan & Durrington, 1998) . This definition is based on the significant differences in life circumstances between students aged less than 25 years, who are classed as school leavers or traditional students, and mature-aged students. Compared to school leavers, mature-aged students are more likely to be living away from home with a partner, and to have dependent children (Western et al, 1998). These circumstances impose additional economic and time demands, both of which might hinder mature-aged students from completing their studies (Taniguchi & Kaufman, 2005).

It should be noted, however, that mature-aged students demonstrate academic performance that equals or is superior to that of school leavers (Cantwell, Archer & Bourke, 2001; Donaldson, 1999; McGivney, 1996; Richardson, 1995). According to Richardson (1994), the superior academic performance of mature-aged students is attributable to their life experience, which predisposes them to adopt a deep learning approach. However, while mature-aged students have the potential to succeed at university, their economic and family responsibilities are barriers to study and might lead to attrition (Davies, 2001). Study barriers are likely to be intensified for mature-aged students from low socioeconomic backgrounds, who are unlikely to have progressed directly from high school to further education (Andrews, 1999). In Australia, low socioeconomic status (LSES) is assigned to individuals who reside in postcode regions that comprise the lowest quartile of educational and occupational levels as determined by the Education and Occupation Index of the Australian Bureau of Statistics [ABS] (Western et al, 1998). Factors used to determine LSES at Australian tertiary

institutions include education and occupational level, attendance at a high school in a socio-economically disadvantaged area, family income, and possession of a health care card.

Students from low socioeconomic backgrounds are considered an equity group within Australian higher education institutions because they face several disadvantages according to equity indicators (access, participation, retention, and success) compared to students from medium or high SES backgrounds (Department of Education, Employment and Training [DEET], 1990). The discrepancy in equity outcomes between low and medium or high SES students is greater for mature-aged students over the age of 25 years, than for younger students aged up to 24 years (Foskett, Roberts & Maringe, 2006). In addition, university students from a LSES background often belong to multiple equity groups, the most common of which is living in a rural or isolated area (Western et al., 1998). As a result of their educational disadvantage, LSES individuals might remain in a low wage labour market, surrounded by a social network of fellow LSES individuals and with limited opportunity for career progression (Scully Russ, 2005). The only opportunity to escape the cycle of low wage employment for the majority of LSES individuals is to participate in higher education during mature age.

Regardless of socioeconomic status, the decision to commence or return to higher education in mature age involves a questioning of learning identity, which Davies (2001) describes as a shift from a negative or apathetic attitude to a positive attitude, as well as addressing motives to study. The diversity of learning identities and motives to study might create challenges for universities in supporting and retaining mature-aged students. Cullity (2006) states that the diverse learning identities and experiences of mature-aged students create a challenge for universities, in that lecturers and mature-aged students might lack mutual understanding of academic expectations. Earlier, qualitative research by Lynch and O'Roidan (1998) demonstrated that LSES school leavers felt that they did not fit into the

social and cultural environment of the university, because they perceived staff and fellow students to be from middle or upper class backgrounds. According to Tinto's (1975) theoretical model of student dropout, academic and social integration are vital components of student retention. More recent research exploring this theory by Mannan (2007) reveals that student retention is facilitated by either academic or social integration at university, suggesting that the absence of one component is compensated for by the presence of the other, although participants' ages were not specified. However, social and academic engagement is likely to be equally important for school leaver and mature-aged students, although Donaldson (1999) suggests that mature-aged students might fulfill these needs in different ways. For instance, mature-aged students might take advantage of social and academic interaction opportunities in family, community, and work settings.

Given the strong potential for mature-aged students to succeed in their studies, it is surprising that research on support services to assist and promote retention among this demographic is virtually non-existent. Mature students from a LSES background are likely to require additional support services to compensate for probable financial, educational, and social disadvantages, although little is known about the usage and efficacy of support services for this target group (Searle, 1997). The purpose of the current study was to examine a) barriers to study, b) use of current university support services, c) helpfulness of support services if used, and d) responses to a range of proposed support strategies not currently offered by a major Australian institution among mature-aged students. Responses for mature-aged students who identify as LSES and students who do not identify as LSES were compared. In addition, in an exploratory manner, any differences in students' responses based on a number of demographic and institutional variables including age, gender, year level, and enrolment status, were also noted.

Current Study

The current study was conducted in 2006 at a large metropolitan university in Queensland, Australia. Sixty percent of new enrolments are mature-aged students, the highest in the state. Attrition rates are almost identical for school leavers and mature-aged students at approximately 19% (Day & Dlugosz, 2001). Retention and success ratios are similar for mature-aged and traditional LSES students, and comparable to the student body as a whole. A faculty (hereafter referred to as the Faculty) comprising six professional schools and known to have a high percentage of mature-aged students from a LSES background was selected for the study. According to the 2005 Student Equity Report issued by the University, approximately 16% of commencing students within the Faculty identified as LSES, and attrition rates of LSES students were slightly lower than the national average.

University entrance for students from LSES backgrounds is facilitated by an equity-driven program designed to enable educationally disadvantaged students in economic hardship to gain a university place (Kelly, 2005). Applicants to this equity program are also invited to a specialised orientation program where extensive information is provided regarding additional equity, student support, and academic support programs. Outcomes of a survey assessing the efficacy of the orientation program indicated that 52% of attendees felt more confident about commencing study after attending the program (Morley, 2005). Financial support is available to students via scholarships, access to computers and textbooks, an employment service, and temporary financial assistance such as food vouchers and student loans. An Equity Scholarship scheme was first introduced by the university in 2003, and has been expanding ever since, with the result of improved retention amongst LSES students (Equity Section, 2006).

METHODOLOGY

A qualitative, mixed methods approach was used. Qualitative approaches to research are recommended when the phenomena under scrutiny concerns a specific group or when the

issue is poorly defined (Christensen, 2001; Hinkin, 1998). The study fulfilled both criteria.

A two phased study was undertaken to investigate the research questions. The first phase was

a pilot study, which involved a series of focus groups and interviews with mature-aged

students. Focus group and interview questions were designed to determine barriers to study,

as well as support and coping systems/ mechanisms and potential support strategies that

could be offered in a cost effective manner by the university. The findings of phase one were

used to inform a multifaceted strategy developed by the research team to support mature-aged

students from LSES backgrounds. The proposed strategies were evaluated via online survey

in phase two.

Survey design allowed cost effective collection of data from a large number of

respondents (Christensen, 2001). Aside from evaluation of the proposed strategies, the

survey also validated the responses provided by focus group participants and interviewees.

Use and efficacy of existing student support services were also audited. While it was not

possible for ethical reasons to recruit participants based on socioeconomic status, possession

of a health care card was used as a screening question in both studies to identify students who

were of LSES.

Phase One: Focus Groups and Interviews (Pilot Study)

Participants

The participants included 31 students from the Faculty. Ten students indicated LSES

status. Course level ranged from first year undergraduate to postgraduate. Because of the

small number of participants in this phase of the research and in order to preserve their

anonymity, no further demographic information will be provided.

Procedure

The researchers invited mature-aged students from the Faculty to participate in the

first phase at the beginning of classes. Four focus groups were conducted with a total of 23

students. Eight participants who were unable to attend focus groups participated in an

individual interview. All focus group discussions were tape recorded for analysis and

extensive notes were taken during telephone interviews. Participants were asked a series of

semi-structured questions to guide the focus group discussion or interview. The questions

were as follows:

1. What difficulties have you faced while studying at this university?

2. What university initiatives are you aware of that are designed to keep you going in

   your studies at this university?

3. What other strategies/schemes/initiatives may assist you and other mature-age students

   in studying at this university?

Findings

The two main barriers reported by students were responsibility conflicts and

adjustment to university life. Most students reported that they were unaware of support

services provided by the university, and mixed responses were elicited from students who had

used them. Instead, students relied on their own initiative and support from family and

friends to cope with their studies, and proposed several new initiatives. A brief summary of

focus group and interview themes is provided in Table 1.

INSERT TABLE 1 HERE

Responsibility conflicts primarily related to work or family responsibilities. The

majority of participants were females and spoke of "squeezing" study in around other

responsibilities. Adjustment to university life was the second main theme to emerge when

discussing barriers to study. Most students expressed concerns about how they would cope

with academic work after a break in their studies, and many also reported a gap between their

own expectations and perceptions and those of their lecturers in terms of assignment writing. Comments about social experiences at university were mixed, with participants reporting both positive and negative interactions with younger students and lecturers. Respondents from a low socioeconomic background reported additional barriers including disabilities, difficulties accessing the campus due to living in a remote location, and the devaluation of education by family and friends.

Students named a variety of university support services during the focus groups and interviews, and often discussed whether particular services were helpful. It was also apparent that lack of awareness of support services was an issue, as was the limited availability of some services, and time poverty amongst students. When asked what support services might help to retain mature-aged students, comments covered social events for mature-aged students, computing courses and greater flexibility in delivery formats. Student responses to the focus groups and interviews were used to generate the survey developed for phase two, which evaluated barriers to study and responses to current and proposed support services amongst mature-aged students within the Faculty on a larger scale.

Phase Two: Supporting Mature-Aged Students in the Faculty Survey

Participants

A total of 305 mature-aged students participated in the second phase of the study, which involved completion of an online survey. Complete data were available only for 223 participants (73.44%) due to attrition at each step of the survey. Several demographic questions were asked of participants, and responses to these items are provided in Table 2.

INSERT TABLE 2 HERE

Survey Development

The *Supporting Mature-aged Students within the Faculty Survey* was constructed from an audit of current university student support services and the findings of phase one. The first section enquired about participants' usage of university services, including whether they had used the service, and if so, how helpful it was on a scale of one (very helpful) to five (very unhelpful). If a service had not been used, respondents were asked to select a reason from a list ("Did not need or want to use this service," "Service was unavailable at the time or for the duration I wanted to use it," "No time to use this service," and "Did not know about this service").

The second section suggested potential support services for mature-aged students:

- Specialised courses targeted towards mature-aged students through the university's teaching and learning support program, such as computing courses and study skills.

- Staff awareness training, including tips for lecturing and assisting mature-aged students in their learning (e.g., encourage lecturers/tutors to draw on life experiences of mature-aged students).

- "Mature-aged student survival guide," a printed source book for students aimed to provide a realistic understanding of university study, and available services for mature-aged students.

- Enable students to elect internal or external study for each enrolled unit at the start of each semester, such that contact time on campus might be reduced and mixed internal/ external modes are possible.

- Mature-aged orientation at the start of Orientation Week to assist in forming peer networks/ supports amongst mature-aged students.

Respondents were asked to rate each item in terms of its relevance (1 "not relevant," 2, "relevant," or 3, "very relevant") and potential to be helpful (1 "unhelpful," 2 "neither," or

3, "helpful") to them in completing their studies. The last section presented respondents with a list of barriers to study that were identified in the focus groups and interviews. Examples of these barriers include finances, childcare or feeling different to school leavers. For each barrier, participants were required to report on a scale of 1 (None) to 5 (Very Much) how much of an impact it had on their studies.

Procedure

All mature-aged students within the Faculty were invited to participate in the survey. Invitations were sent via email to all students in the Faculty with instructions that the survey was aimed at mature-aged students (i.e., students aged 25 years or older at the commencement of their current degree program). The email contained a link to the online survey, which was hosted by www.SurveyMaker.com.au.

RESULTS

Data Analysis

Responses to the survey items were coded for analysis via SPSS Version 16 to compare LSES and non LSES mature-aged students on their survey responses. Further exploratory comparisons were also conducted for age, gender, year level, and enrolment status (both fulltime versus part-time employment and internal versus external employment). Because the sample sizes were unequal, non parametric procedures were used (Aron & Aron, 2001). Chi square statistics were computed from two way contingency tables to compare groups in terms of the proportion of respondents who accessed a specific university service, as well as reasons for not accessing services, as these items requested nominal responses. A series of Mann Whitney *U* tests was used to compare group differences for the "Helpfulness of current services," "Opinions of new recommendations" and "Barriers to study" items because they were assessed with Likert scales that produced group means.

Findings will be reported for each section of the survey in turn: current service use and helpfulness of services, reasons for not accessing services, opinions about recommendations, and barriers to study. Due to the large number of tests conducted (over 100), the alpha level was set to $p < .01$ to reduce the family wise type 1 error rate.

University Support Service Use and Helpfulness

Table 3 shows service use by all demographic variables. Low SES students were observed to make use of financial assistance services more often than students who did not identify as LSES. There were no statistically significant differences in reported helpfulness of services according to socioeconomic status. However, trends towards greater use of disability and counselling services among LSES students emerged, who also found academic support services to be more helpful. A greater number of full time and internal students reported the use of a variety of student services, compared to part time or external students. Differences in the "helpfulness" of service varied by year level for parking services ($\chi^2 = 12.452$, p<.01), University email ($\chi^2 = 14.776$, p<.01) and personalized web pages for student administrative services and course information ($\chi^2 = 14.088$, p<.01). In all cases, services were viewed as more helpful by first and second year students than by third and fourth year or postgraduate students.

INSERT TABLE 3 HERE

Reasons for Not Using Student Support Services

When students were asked why they did not use support services, a consistent pattern of reasons emerged according to socioeconomic status and age. As shown in Table 4, students who identified as LSES failed to access services because the services were not available when they needed them. The same pattern emerged for students who were over 45

years of age. Table 4 also shows that part time and external students did not perceive as great

a need or desire as full time and internal students to access support services. Similarly, fourth

year and postgraduate students indicated less frequent need for or interest in accessing

support services.

INSERT TABLE 4 HERE

Relevance and Helpfulness of New Recommendations

Table 5 lists responses to the items describing potential new support services. Staff

awareness training was more relevant to LSES students than to students who did not identify

as LSES. Along with shifting the mature-aged Orientation Week to the beginning of the

program, this proposal was also viewed as more helpful by LSES students compared to non

LSES students.   In general, new support services were perceived to be of greater relevance to

students aged 35-44 years and over the age of 45 years, first and second year students and

internal students.

INSERT TABLE 5 HERE

Barriers to Study

As shown in Tables 6 and 7, students who were from a LSES background reported

barriers to study more often than students who were not from a LSES background. Notably,

"Finance" and "Not sure of what is expected of me at university" were observed to be more

frequent barriers and have a greater impact on the studies of LSES students compared to non

LSES students. The barriers "Childcare" and "Care responsibilities" varied by age, with

students aged 35-44 years most likely to report these barriers. However, in terms of barrier

impact, students over the age of 45 years appeared to be disadvantaged by a lack of computer skills and uncertainty of where to go for help at university. External, part time and fourth year or post graduate students experienced fewer barriers and barriers of lower impact than internal, full time and undergraduate students.

INSERT TABLE 7 HERE

INSERT TABLE 8 HERE

DISCUSSION

The aims of this study were to identify specific barriers and facilitators of retention of LSES mature-aged students within the Faculty, to design a strategy to increase awareness among Faculty staff of the specific needs of LSES mature-aged students, and to improve current University, Faculty and School resources for this group. Consistent with Davies (2001), Phase one of the research showed that the predominant problems faced by LSES mature-aged students related to family and financial responsibilities and adjusting to university. However, awareness of university support services was poor. The second phase of the study focused on comparing students from LSES and medium to high SES backgrounds in relation to support service use/ helpfulness, reasons for not using support services, responses to new recommendations and barriers to study. A number of differences in responses emerged, especially in relation to use of financial assistance services, unavailability of counseling services, the requirement for new services tailored towards staff awareness training and facilitating adjustment to university for LSES mature students In

addition, some interesting overall patterns across the survey data emerged for mature-aged students based on, age and institutional factors.

Low SES students reported more frequent usage of university provided financial assistance services than did non LSES students. However, some current support services, such as counselling, were rarely accessed because they were not available when they needed or wanted to use them. Adjustment difficulties constituted a major barrier for this subgroup who reported uncertainty about university expectations, feeling different to school leavers, and not knowing where to go for help. They also had limited personal resources in the form of financial assets, health, study skills and access to a home computer. Uncertainty about what was expected of them at university and financial worries also had a stronger impact on their studies than for non LSES students, as did family problems and emergencies. Given that the uncertainty about university expectations emerged as such a significant issue for LSES students, it is understandable that staff awareness training was considered by this group to be relevant and helpful to them.

In relation to other demographic factors examined, mature-aged students over the age of 45 years appeared to require greater support with adjusting to university life. Access to current support services was reported to be inadequate by this group, who indicated that several services were not available when they needed or wanted to use them. Students over the age of 45 years reported that limited computer skills and not knowing where to go for help had a strong impact on their studies. Perhaps to cope with these barriers, they indicated that specialised courses via TALSS, a printed booklet detailing support services, and establishment of mature-age student networks during orientation were relevant to them. Family responsibilities were most likely to affect the studies of 35-44 year olds, although there was no unique pattern relating to student services for this age group, Amongst external, part time and fourth year or postgraduate mature-aged students there was a fairly consistent

pattern of low service use, lack of interest in or need for services, low incidence and weak

impact of barriers, and limited relevance of proposed services. In contrast, internal, full time

and undergraduate students reported greater service use, more frequent barriers of higher

impact, and greater relevance of new services proposed. This latter pattern underscores the

need to provide adequate support services to all mature-aged students.

Mature-aged students from LSES backgrounds, as well as mature-aged students over

the age of 45 years, emerged as groups in probable need of further support to promote

retention. Survey responses indicated that, although LSES students accessed financial

support services, finances remained a barrier to study. Other findings that emerged for LSES

students were the higher impact of family problems and emergencies on their studies, and

inadequate access to counselling services. Earlier research by Scott, Burns, and Cooney

(1996) revealed that the types of family problems contributing to the attrition of LSES

women included financial difficulty, illness of a family member, and lack of social support.

Although friction between the student and family and friends did not emerge as a barrier

specific to SES, a later study by Scott et al. (1998) indicated that mature-aged female students

from LSES backgrounds viewed university as a setting to escape from difficult life

circumstances.

A more significant issue for LSES mature-aged students and mature-aged students

over the age of 45 years appeared to be related to learning identity and experiences. While

rusty study skills and adjustment to university were also common barriers for internal and full

time mature-aged students, LSES and older students were also troubled by uncertainty about

academic expectations and lack of awareness about support services. In addition, LSES

students rated staff awareness training as more relevant and helpful compared to non LSES

students, while older students requested specialised courses and a survival guide. These

findings suggest LSES students in general and older LSES students in particular experience

more difficulties with academic integration than younger mature-aged students or students from non LSES backgrounds (Cullity, 2006; Mannan, 2007). The issue of academic integration and mutual expectations of students and staff was a frequent topic within the focus groups and interviews, with students reporting difficulties understanding assignment requirements, for example. However, there were few SES or age differences in the use, helpfulness and non use of current academic and study assistance support services. Usage of these services was relatively high for mature-aged students within the present study, with 33-50% of respondents indicating that they had used each academic or study related support service. Nonetheless, students with a higher need for support services appeared to be inhibited by the lack of availability of services, time poverty and lack of awareness of support services.

The patterns of limited support service use and disinterest in service use by part time and external students could pose a risk for attrition. Taniguchi and Kaufman (2005) found that part time study and duration of coursework were risks for attrition in mature-aged students. Limited campus attendance has the potential to restrict student integration, although communication technologies might ameliorate this via the availability of online or telephone access to academic staff and the student community. However, part time and external students appeared to use some internet services less often than full time and internal students, and LSES and older mature-aged students are more likely to experience barriers associated with computer access or skills. It was notable in the current study that part time or external enrolment reduced the likelihood and impact of barriers to study. Nonetheless, it is possible that for part time and external students there is a tradeoff between student integration and barriers to study. Postgraduate and fourth year students reported a similar pattern to part time and external students, in that there appeared to be lower needs for student support, and fewer barriers to study of less impact. Focus group comments suggested that mature-aged students

adjusted to university life over time, and found successful ways to combine work, family and study. Over time, it is also likely that mature students develop more effective academic skills, and as such become less dependent on support services and possibly require less effort and time to complete assignments. These interpretations are supported by lower use of academic support services amongst fourth year and postgraduate students, and lower incidence of barriers associated with poor study skills and not fitting in with school leavers. Fourth year students also reported lower usage of financial support services, and that finances were less of a barrier to study for them than for undergraduate students. While LSES students were more likely to be undergraduates in the current study, many postgraduate programs have substantial educational prerequisites and are research based. As a group, postgraduate students might occupy high status jobs prior to commencing their studies as a consequence of their previous tertiary education, and possibly continue working throughout their studies, which would reduce the requirement for financial assistance during study.

Implications and Recommendations

The findings indicate that adjustment to university life poses a significant stress to mature-aged students, especially if they are from a LSES background. As mature-aged students comprise a significant proportion of students within the Faculty and university as a whole, adequate support is required to retain this student demographic through academic and social engagement. While financial and adjustment difficulties were commonly reported by mature-aged students, these barriers were more frequently reported by LSES students, and often had a greater impact on the studies of LSES students compared to non LSES students. In the current study, LSES students reported accessing financial assistance services more often than non LSES students. However, there was no difference in reported helpfulness of financial assistance services between LSES and non LSES students. If current financial assistance services had benefited mature-aged LSES students, it would be expected that a

significant difference would have emerged between the LSES and non LSES groups on the helpfulness of financial assistance services. Given that financial difficulties were reported to be a significant barrier to study for all mature-aged students, it would be impossible for the university to meet the high demand of mature-aged students for financial aid as the university has limited funds available to assist students who are experiencing financial difficulties. Therefore, equity programs tailored towards the provision of financial assistance might only benefit students living in extreme hardship due to the need to prioritize, and may not be available to the average LSES mature-aged student.

The significance of adjustment difficulties for LSES students was also apparent in the responses towards support services for LSES students. A number of services, particularly counseling and career counseling services, were reported to be unavailable for use by LSES mature students. Current support services such as counseling or courses in academic skills might help facilitate adjustment to university by furnishing students with study skills necessary to succeed academically, and introduction to fellow students to form social networks, for example. Again, from the findings it would seem that current support services are insufficient in overcoming barriers faced by LSES students. Excess demand emerged as one reason for the non use of services by LSES students. However, uncertainty of where to go for assistance was reported by 76% of LSES students, and 54% of non LSES students suggests that current support services targeted at adjustment to university life are not adequately promoted, or that students are unaware of how services could help them. Despite improved dissemination of support service information to students, current services may still be inadequate to meet the diverse needs of LSES mature-aged students. Cullity (2006) stated that staff preparation for the diversity of mature student experiences and backgrounds was imperative for promoting shared understanding of academic expectations. In the current study, staff awareness training was perceived to be both relevant and helpful by LSES mature

age students. Therefore, the development of a training program to educate staff on mature age student and LSES issues could carry benefits to mature-aged students in facilitating a shared understanding of academic requirements, thus helping to ease this demographic into university life.

In addition, adjustment to university life can be more difficult for mature-aged students if they are: older than 45 years of age, commencing undergraduate study, or enrolled in internal full time study. Similar to LSES mature-aged students, students from the above groups indicated that they would benefit from additional support services to facilitate adjustment. For example, older and commencing undergraduate mature-aged students reported that specialized computer courses and orientation programs would be of relevance to them. At present, many academic support programs are delivered online or available via face to face courses with limited places. Online delivery would be inappropriate for students without computers or computing skills, issues for LSES and older students respectively. High demand or time poverty might limit students' ability to access face to face training, and it might be more appropriate to offer courses more frequently, or spread out through the year in different timeslots such as weekends, evenings, semester breaks or immediately prior to commencing coursework.

Another significant finding in the present study was the discrepancy between service use according to enrolment status and year level. Given that part time, external and fourth year or postgraduate mature students reported less need or interest in using current support services, it is not possible to determine whether these students are self sufficient in their studies, or have support needs that are not met by the university. Donaldson (1999) suggests that the external networks of mature-aged students provide avenues for support and engagement, so lower integration within the university could be compensated for by integration within external networks and activities that fulfill identical needs in mature-aged

students. Investigation of external networks that maintain academic or social integration would be a worthwhile research topic in the pursuit of understanding factors that lead to retention or attrition of mature-aged students, although it shifts the focus away from universities. However, it is probable that LSES and older mature-aged students are more dependent on university resources for academic and social integration, so university based sources of academic and social integration for mature-aged students are likely to remain worthy of research interest. In addition, interesting patterns for support service usage and recommendations, and barriers to study were found for other demographic and institutional barriers besides SES. It is also highly likely that other demographic variables, such as marital (relationship) and parenting status may have also exhibited unique patterns in the survey data. While not included in the present study, these variables should be considered in future studies examining university support service use.

Strengths and limitations

This study is one of the first to examine both barriers to study and university support service use amongst mature-aged students, and compare responses according to SES. However, the current study has a number of limitations. First, SES indicators were limited to healthcare card status, and did not include indicators such as post code or prior educational/ occupational status.   Healthcare cards are issued to low income individuals and families by the government and are used by the university as an indicator of LSES, although the card does not imply educational disadvantage. Educational/ occupational status is the superior measure for mature-aged students according to Western et al. (1998), although this method requires participants to disclose more personal data, as post codes are more effective at identifying LSES at the population or community, rather than individual level. Second, one quarter of the students who commenced the survey failed to complete it, resulting in a large proportion of incomplete data. The most likely reasons for this were technical difficulties

associated with the survey software or an unwillingness to complete the survey. Third, the study might have limited generalisability as the participant pool was limited to one Faculty within an urban setting. Within Australia, students from rural settings are more likely to be of LSES than urban students, and a different set of challenges is likely to exist in rural areas.

Conclusion

Findings from this study reveal two distinct patterns of barriers to study and support service use among mature-aged students. First, mature-aged students from a LSES background and mature-aged students aged over 45 years reported facing greater barriers to study in terms of adjustment to university and learning identity than other mature-aged student (non LSES and younger, respectively), and in the case of LSES mature-aged students, finances pose a major barrier. Second, LSES mature-aged students and older mature-aged students were more likely than other mature-aged students (non LSES and younger, respectively) to report lack of availability, lack of time or lack of awareness as barriers to using support services, with the exception of financial assistance support services which were accessible to LSES students. Second, part time, external and fourth year or postgraduate mature-aged students reported fewer barriers to or less impact on their studies than full time, internal or undergraduate mature-aged students, and less interest or need to access current support services. A greater understanding of mature-aged students' academic and social integration strategies leading to academic success is a prerequisite to understanding how their life experiences influence their expression of learning at university, and subsequent retention or attrition. Fostering a culture that is supportive of the diverse needs of mature-aged students, particularly those who are potentially disadvantaged via circumstances common to LSES and older students, is a priority in order to retain these students who are capable of academic success given appropriate assistance from the university. .

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Table 1.

Themes Identified in Phase One (Pilot)

Theme	Example
Responsibility Conflicts	"… having to balance exams and assignments with work and money. I don't live with parents, and have to support myself. I have to be organized to be able to cover costs during exam time." " …when you've got an assignment due tomorrow and you've got 3 kids you can't say 'well kids, you can't have dinner tonight', you've got to cook."
Adjustment to university	"I stay with family in Brisbane for a low boarding cost because I live so far away." "I have mobility problems walking between X and Y blocks, I can't walk up stairs and lifts are too far out of the way." "For mature-aged students it can be hard going back into education after so long, class can be intimidating because younger students seem to catch on more quickly and find things easier because they are in the habit of studying." "It's a long time since I was at school and my work notes are different to academic writing. The lecturers and tutors shouldn't assume we know how to write academically." "I find that the more I get involved with study, the less I identify with being a mature-aged student. In past experience I felt it really really strongly when I began, I walking in thinking, "how's my old brain going to keep up" as I progressed through, now I identify less with the tag "mature age" and more with the tag "just student," trying to accommodate my life around study."
Supports/ Facilitators to Study	"I didn't know that there were doctors and career advisors for some time. Maybe I got bombarded at the beginning of Uni and couldn't take it all in." "I can't attend Uni during the day and all support services are open business hours."
Potential Support Strategies	"One of the things was getting to meet all the mature-aged students, you know at the orientation. The mature-aged workshop was actually at the end, it would have been great if that was at the beginning, then you would have known people."

Table 2

Demographic Characteristics of Participants, Healthcare Card Holders versus Non

Healthcare Card Holders

Healthcare Card Holders (N=49)	22%	Non Healthcare Card Holders (N=174)	78%
Age		Age	
25-34	48%	25-34	50.6%
35-44	30%	35-44	20.3%
45-54	18%	45-54	26.2%
55+	4%	55+	2.9%
Gender		Gender	
Male	14.3%	Male	21.5%
Female	85.7%	Female	78.5%
Internal/ External		Internal/ External	
Internal	90%	Internal	90.6%
External	8%	External	7.6%
Full Time/ Part Time		Full Time/ Part Time	
Full time	78%	Full time	64%
Part Time	20%	Part Time	33.7%
Year level		Year level	
First year undergraduate	34%	First year undergraduate	15.1%
Second year undergraduate	16%	Second year undergraduate	23.8%
Third year undergraduate	24%	Third year undergraduate	18%
Fourth year/Honours/Postgraduate	8%	Fourth year/Honours/Postgraduate	11.6%
Masters or PhD	14%	Masters or PhD	26.2%
Other	4%	Other	5.2%

Table 3

Service Use by Demographic and Institutional Variables

Service	Socioeconomic Status		χ^2	Year Level				χ^2	Enrolment		χ^2	Enrolment		χ^2
	LSES	Non LSES		1st	2nd	3rd	Other		Full Time	Part Time		Internal	External	
Alternative Entry pathway				27%	39%	30%	11%	χ^2=14.417	30%	11%	χ^2=9.236			
Mature age orientation				46%	45%	44%	17%	χ^2=16.399						
Student centre				89%	76%	87%	57%	χ^2=20.934	80%	57%	χ^2=12.135	76%	29%	χ^2=17.030
Counselling service				25%	43%	46%	20%	χ^2=12.904						
Health and medical services									47%	17%	χ^2=18.403	40%	6%	χ^2=7.806
Campus gym/ fitness centre									30%	13%	χ^2=8.056			
Second hand bookshop				50%	80%	83%	41%	χ^2=31.258	66%	47%	χ^2=8.046	64%	29%	χ^2=8.129
Shuttle bus				61%	69%	63%	40%	χ^2=13.413	66%	48%	χ^2=6.978	65%	24%	χ^2=11.359
Parking services									68%	27%	χ^2=32.836	58%	24%	χ^2=7.571
Security services												77%	41%	χ^2=10.099
University Cafes												92%	59%	χ^2=17.605
Student Guild bars				36%	43%	72%	41%	χ^2=14.815						
Information desks (library)												86%	59%	χ^2=8.365
Information retrieval skills classes (library)												55%	18%	χ^2=8.836
Audiovisual/ communication resources												60%	24%	χ^2=8.425
Online information navigator				55%	33%	39%	21%	χ^2=14.432						
Computing laboratories				91%	96%	91%	62%	χ^2=34.295	88%	67%	χ^2=12.948	86%	24%	χ^2=40.886
Student Computing Helpdesk												83%	53%	χ^2=9.417
University Email												100	88%	χ^2=14.975
Internet access				93%	100	94%	74%	χ^2=23.697	93%	75%	χ^2=14.038	90%	53%	χ^2=19.819
Student Financial Assistance Scheme	26%	11%	χ^2=7.782											
Student Guild Welfare Service	38%	10%	χ^2=22.540											
Equity scholarships/ bursaries	50%	20%	χ^2=17.931						34%	16%	χ^2=7.577			
Free computer scheme	36%	14%	χ^2=12.126						25%	10%	χ^2=6.673			

NB. All $p<.01$, no differences in service use were observed for age or gender

Table 4: *Reason for not Using Service by Demographic and Institutional Variables*

Reason for not using service	Socioeconomic Status LSES	Non LSES	χ²	Gender Male	Female	χ²	Age 25-34	35-44	45-54	χ²	Year Level 1st	2nd	3rd	Other	χ²	Enrolment Full Time	Part Time	χ²	Enrolment Internal	External	χ²
Special entry scheme Unavailable	4%	0%	χ^2=6.862																		
Mature age orientation Did not have time											10%	29%	7%	5%	χ^2=13.542						
Alternative Entry pathway Unavailable	6%	0%	χ^2=6.889																		
Student centre Did not know	25%	5%	χ^2=6.609																		
Counselling services																					
Did not need/ want	48%	80%	χ^2=11.197																		
Unavailable	20%	2%	χ^2=14.560																		
Health and medical services Did not need/ want																			62%	100	χ^2=7
Physiotherapy services Did not need/ want																			58%	100	χ^2=9
Disability Services Did not need/ want																			0%	8%	χ^2=1
Did not know											0%	3%	17%	2%	χ^2=12.818						
Career counselling services																					
Did not need/ want	39%	73%	χ^2=11.824													58%	79%	χ^2=6.612			
Unavailable	14%	2%	χ^2=7.241																		
Second hand bookshop Did not need/ want	40%	9%	χ^2=11.728																		
Student guild																					
Unavailable	31%	4%	χ^2=14.187																		
Did not need/ want																50%	81%	χ^2=9.642	57%	100	χ^2=6
Student centre Did not need/ want																41%	73%	χ^2=9.068			
Shuttle bus Did not need/ want																63%	86%	χ^2=7.123			
Parking services Did not know																3%	20%	χ^2=6.860			
University Cafes Did not need/ want																			27%	83%	χ^2=7
Ask a librarian Did not have time							0%	0%	14%	χ^2=13.681											
Information desks (library) Did not need/ want											21%	8%	26%	74%	χ^2=12.272	26%	68%	χ^2=10.55	34%	100	χ^2=1

Service / Category																	
Learning/ study seminars										24%	63%	65%	65%	χ^2=14.305			
Online Teaching Web																	
Did not need/ want										23%	42%	53%	63%	χ^2=11.304			
Did not know															38%	60%	χ^2=6.977
Peer Advisors Academic Learning																	
Did not need/ want															43%	86%	χ^2=9
Did not know															43%	19%	χ^2=9.092
Peer mentoring																	
Did not need/ want															40%	64%	χ^2=8.690
Unavailable															0.9%	10%	χ^2=8.288
Did not know															42%	14%	χ^2=13.49
Information retrieval skills classes (library)																	
Unavailable	22%	4%	χ^2=8.206														
Library books, journals and resources																	
Did not need/ want				53.8%	14.3%	χ^2=7.912											
Student Computing Helpdesk																	
Did not need/ want										28%	65%	χ^2=8.685			36%	100	χ^2=1
Unavailable	43%	10%	χ^2=8.776														
Audiovisual/ communication resources																	
Did not need/ want															50%	100	χ^2=9
Computing laboratories																	
Did not need/ want								39%	14%	14%	77%	χ^2=18.762			33%	100	χ^2=1
Unavailable								0%	29%	36%	4%	χ^2=11.500					
Student Employment Service																	
Unavailable	8%	0%	χ^2=10.978			0%	10%	0%	χ^2=14.172								
Student Financial Assistance Scheme																	
Did not need/ want										62%	58%	63%	89%	χ^2=14.960	61%	88%	χ^2=13.27
Didn't know about service															27%	7%	χ^2=9.768
Student Guild Welfare Service																	
Did not need/ want	45%	79%	χ^2=14.414							55%	65%	65%	86%	χ^2=11.864	62%	86%	χ^2=10.99
Did not know	39%	14%	χ^2=10.661														
Unavailable						2.5%	14%	0%	χ^2=9.839								
Equity scholarships/ bursaries																	
Did not need/ want	29%	68%	χ^2=12.854							37%	55%	53%	82%	χ^2=19.404	48%	80%	χ^2=15.43
Textbook bursary/ hire scheme																	
Unavailable	12%	0.7%	χ^2=12.158			1.1%	9.5%	0%	χ^2=9.445	38%	40%	61%	66%	χ^2=11.240	44%	68%	χ^2=8.873

Note: additional columns on the right (69% / 100 / χ^2=6) appear for the Student Guild Welfare Service "Did not need/ want" row.

Free computer scheme Did not need/ want	60%	93%	$\chi^2=6$

NB. All $p<.01$

Did not need/ want – student did not use service because they either did not need it or did not want to.

Unavailable – student did not use service because it was not available at the time they either needed or wanted to use it.

Did not have time – student did not use service because they did not have time to access it

Did not know – student did not access the service because they did not know it existed.

Table 5

Relevance and Helpfulness of new initiatives

Service	χ^2	Socioeconomic Status		χ^2	Age			χ^2	Year Level				χ^2	Enrolment		χ^2
Relevance		LSES	Non LSES		25-34	35-44	45+		1st	2nd	3rd	Other		Internal	External	
Specialised courses targeted towards mature-aged students					95.90	124.73	135.87	χ^2=19.072	109.58	125.02	117.07	90.62	χ^2=11.959			
Staff awareness training		2.40 (0.73)	2.03 (0.78)	Z= -2.966					131.10	122.59	109.68	90.64	χ^2=13.972			
Mature-aged student survival guide					95.81	123.24	137.28	χ^2=19.072								
Mature-aged orientation at the start of Orientation Week to assist in forming peer networks/ supports					100	121.89	130.85	χ^2=11.465	127	126.06	115.35	80.91	χ^2=26.714	2.22 (0.79)	1.65 (0.61)	Z= -2.9
Workshops and information for families and employers of mature-aged students									117	121.70	114.36	90.11	χ^2=11.539			
Mid semester get togethers for mature-aged students to network and support one another.									125.82	119.76	112	87.68	χ^2=15.582			
Helpfulness																
Staff awareness training		124.11	99.61	Z= -3.214												
Mature-aged orientation at the start of Orientation Week to assist in forming peer networks/ supports		120.66	98.29	Z= -2.959												

NB. All *p*<.01, no differences emerged in relevance and helpfulness of new initiatives for gender or part time versus full time enrolment status.

Table 6: *Barriers to Study by Demographic and Institutional Variables*

Service	Socioeconomic Status		χ^2	Age			χ^2	Year Level				χ^2	Enrolment		χ^2	Enrolment	
	LSES	Non LSES		25-34	35-44	45+		1st	2nd	3rd	Other		Full Time	Part Time		Internal	Extern
Finances	100%	83%	χ^2=9.315													56%	24%
Childcare				29%	56%	23%	χ^2=15.390										
Care responsibilities				44%	69%	57%	χ^2=9.467										
Travel/ transport costs													77%	57%	χ^2=8.416	74%	29%
Feeling different to school leavers	84%	61%	χ^2=8.750					76%	76%	80%	48%	χ^2=18.841				70%	24%
Illness/ disability	47%	23%	χ^2=10.628														
No quiet study space																54%	12%
Limited study skills	69%	46%	χ^2=8.208					74%	63%	62%	28%	χ^2=29.689			χ^2=6.749	55%	18%
Not knowing where to go for help at university	76%	54%	χ^2=7.355														
No computer/ internet access at home	37%	15%	χ^2=11.550														
Adjustment to university life													66%	43%	χ^2=10.527	61%	12%
Having to move frequently													31%	13%	χ^2=8.028		
Unsure of what is expected of me at university	71%	50%	χ^2=7.232														
Family problems/ emergencies													74%	29%	χ^2=15.833		

NB. All *p*<.01, no differences emerged in reported barriers to study for gender.

Table 7

Impact of barriers to study by Demographic and Institutional Variables

Service	Socioeconomic Status		χ^2	Age			χ^2	Year Level				χ^2	Enrolment	
	LSES	*Non LSES*		*25-34*	*35-44*	*45+*		*1st*	*2nd*	*3rd*	*Other*		*Full Time*	*Part Time*
Finances	122.49	86.12	Z= -4.211					109.77	95.07	102.18	76.83	χ^2 =11.949	102.69	77.86
Limited computer skills				35.39	38.74	56.30	χ^2 =13.662							
Not knowing where to go for help at university				58.59	60.14	84.91	χ^2 =13.104							
Unsure of what is expected of me at university	72.70	54.71	Z= -2.724											
Family problems/ emergencies	95.34	71.66	Z= -2.961											

NB. All $p<.01$, no differences emerged in reported impact of barriers to study for gender or internal versus external enrolment status.