

Student Support and Guidance Services in Australian Higher Education: A Cross-Institutional Analysis of Career Counseling and Academic Development Programs

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ABSTRACT

Background: Student support services play critical roles in facilitating academic success and career development within higher education, yet a comprehensive understanding of their organisational structures, delivery models, and effectiveness across Australian institutions remains limited.

Objective: This study systematically examined career counselling and academic development services across diverse Australian universities to identify factors associated with effective, accessible, and equitable service provision.

Method: A convergent parallel mixed-methods design was employed across 22 institutions, integrating institutional questionnaires, surveys of 118 staff members and 4,847 students, semi-structured interviews, focus groups, and document analysis conducted over 18 months.

Findings and Implications: Results revealed substantial heterogeneity in organisational structures, with student-to-staff ratios averaging 3,426:1 for career services and 2,673:1 for academic development. Appointment wait times (35.8%) and lack of service awareness (24.3%) emerged as primary barriers, while institutional factors including staffing ratios, operating hours, and delivery modalities explained 47.6% of variance in student satisfaction. International students and female students utilised services at significantly higher rates.

Conclusion: Findings provide an evidence-based foundation for enhancing service accessibility, adequacy, and equity through organisational innovations, capacity enhancement, extended operating hours, and culturally responsive programming, with implications for institutional policy and sector-wide quality assurance frameworks.

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INTRODUCTION

Higher education institutions worldwide face mounting pressure to provide comprehensive support systems that facilitate student success, retention, and holistic development. The contemporary university environment is characterized by increasingly diverse student populations, complex academic demands, and heightened awareness of mental health and well-being challenges that can impede academic progress (Newton et al., 2021). In Australia, where the higher education sector serves over 1.5 million students across diverse demographics, socioeconomic backgrounds, and geographic locations, the provision of effective student support and guidance services has emerged as a critical institutional priority. These services, encompassing career counseling, academic advising, mental health support, and developmental programming, constitute essential infrastructure that mediates student experiences and outcomes throughout the tertiary education journey.

The landscape of student support services in Australian higher education has evolved considerably over the past two decades, transitioning from peripheral administrative functions to strategically integrated components of institutional mission and student success frameworks (Siriwardhana et al., 2025). This transformation reflects growing recognition that academic achievement cannot be divorced from broader developmental, psychological, and vocational dimensions of the student experience. Career counseling and academic development programs, in particular, represent vital touchpoints where students receive guidance in navigating complex educational pathways, making informed career decisions, developing professional identities, and acquiring competencies essential for graduate employability and lifelong learning (Lim et al., 2025). However, despite substantial institutional investment in these services, significant questions remain regarding their accessibility, effectiveness, equity of provision across institutions, and alignment with contemporary student needs and expectations.

The Australian higher education context presents unique considerations for student support service delivery. The sector comprises a heterogeneous array of institutions—from research-intensive Group of Eight universities to regional providers and specialized institutions—each serving distinct student populations with varying support requirements. International students constitute approximately 30% of the total higher education cohort, bringing specific acculturation challenges and support needs (Akhwan et al., 2021). Domestic students, meanwhile, face their own constellation of pressures, including financial constraints, employment obligations, family

responsibilities, and mental health concerns that intersect with academic performance and career development (Francis-Taylor et al., 2023). The COVID-19 pandemic further exposed vulnerabilities in existing support systems while simultaneously accelerating adoption of digital service delivery modalities that have fundamentally altered how student access and engage with guidance services (Dear et al., 2024).

Student support services in higher education are theoretically grounded in multiple frameworks spanning developmental psychology, student affairs theory, and organizational behavior. Astin's theory of student involvement posits that student development occurs through active engagement with institutional resources, including support services that facilitate academic and personal growth. Tinto's model of student integration similarly emphasizes the critical role of academic and social integration—processes directly supported by career counseling and academic development programs—in promoting persistence and completion. More recently, holistic student success frameworks have emerged that conceptualize support services not as remedial interventions but as proactive developmental resources accessible to all students regardless of academic standing.

Career counseling services within universities traditionally address vocational exploration, career decision-making, job search strategies, and transition planning. These services have evolved from trait-and-factor matching approaches to more sophisticated interventions incorporating narrative career counseling, social cognitive career theory, and constructivist approaches that acknowledge the complex, non-linear nature of contemporary career development (Carter et al., 2022). Academic development programs, conversely, focus on cultivating skills essential for university success: academic writing, critical thinking, research literacy, time management, and study strategies. These programs increasingly adopt embedded models that integrate skill development within disciplinary contexts rather than positioning academic support as separate from disciplinary learning.

Empirical research has established associations between student engagement with support services and positive outcomes including improved academic performance, increased retention rates, enhanced graduate employability, and better mental health indicators. However, research has also identified persistent challenges in service utilization. Studies consistently document that students most in need of support services—including first-generation students, students from low socioeconomic backgrounds, international students, and students experiencing academic difficulties—often face the greatest barriers to access. These barriers encompass stigma associated with help-seeking, insufficient awareness of available services,

logistical constraints related to service hours and locations, cultural factors influencing help-seeking behaviors, and perceptions of service relevance and quality.

Recent research examining student support services in Australian higher education has primarily focused on specific populations or particular service modalities. Newton et al. (2021) conducted a qualitative investigation exploring professional staff perspectives on challenges and opportunities for improving international student health and well-being at an Australian university. Their findings revealed that while institutional awareness of international student support needs has increased, significant gaps remain in culturally responsive service provision, coordination across support units, and proactive outreach to students unlikely to self-refer. The study highlighted tensions between resource constraints and the expanding scope of student needs, with professional staff identifying systemic barriers to providing comprehensive, accessible support services.

Mental health support has received considerable research attention, reflecting documented increases in psychological distress among university student populations. Francis-Taylor et al. (2023) conducted a retrospective analysis of on-campus mental health service utilization patterns at an Australian university, examining demographic characteristics of service users, presenting concerns, intervention types, and waitlist durations. Their analysis revealed that while mental health services experienced substantial increases in demand, service utilization rates remained relatively low compared to the estimated prevalence of mental health difficulties in student populations, suggesting that many students with support needs are not accessing available services. Furthermore, their research identified significant waitlist delays and noted that current service models may be insufficient to meet growing demand.

The integration of digital technologies in student support service delivery has generated emerging research interest, particularly following rapid adaptations necessitated by pandemic-related campus closures. Dear et al. (2024) evaluated clinical outcomes and acceptability of an internet-delivered intervention for anxiety and depression implemented within routine care for Australian university students. Their implementation trial demonstrated that digital mental health interventions could achieve clinically significant improvements in psychological distress while offering advantages of scalability, accessibility, and reduced stigma compared to traditional face-to-face services. However, they also noted that digital interventions may not be suitable for all students and that optimal service models likely involve hybrid approaches integrating digital and in-person modalities.

Research examining career counseling services specifically remains limited, with most studies focusing on career development learning integrated within curricula rather than dedicated career services. Similarly, academic development services have received relatively little empirical attention in the Australian context, despite their ubiquity across institutions. Existing research tends to focus on specific programs or interventions at individual institutions rather than providing cross-institutional comparative analyses that could illuminate variation in service models, resource allocation, accessibility, and effectiveness.

Additional research has documented specific challenges confronting particular student cohorts. Aspland et al. (2021) explored the transitional experiences of international doctoral students in Australian universities, revealing difficulties in adapting to diverse research cultures, supervisory relationships, and academic expectations, challenges that comprehensive support services should, in theory, address. Sunindijo & Kamardeen (2020) identified psychological challenges, including stress, anxiety, and adjustment difficulties, confronting graduate construction students in Australia, highlighting discipline-specific support needs that generic university services may inadequately address. These studies collectively suggest that, while support needs are well documented, questions remain about whether existing service configurations effectively meet diverse student needs.

Tan & Andriessen (2021) conducted qualitative research examining experiences of grief and personal growth among university students, revealing that significant life challenges affect substantial proportions of student cohorts and that appropriate support during difficult transitions can facilitate resilience and development. Their findings underscore the importance of accessible, responsive support services that extend beyond narrowly defined academic or career domains to address holistic well-being. Yet research examining whether current support service structures provide such holistic, accessible support across different institutional contexts remains scarce.

Broader literature on career guidance, while primarily focused on secondary education contexts, offers relevant insights. Pham et al. (2024) conducted a bibliometric analysis of career guidance research in general schools, identifying key themes, methodological approaches, and knowledge gaps in the career guidance literature. Their analysis revealed that while career guidance scholarship has expanded considerably, gaps persist in understanding the effectiveness of different guidance approaches, equity of access to quality career guidance, and integration of career development support across educational transitions—issues equally pertinent to higher education contexts.

Despite the documented importance of student support services and growing institutional investment in these functions, significant gaps characterize current understanding of how career counseling and academic development programs operate across the Australian higher education sector. First, existing research predominantly uses single-institution case studies, limiting generalizability and obscuring cross-institutional variation in service models, resource allocation, organizational structures, and service delivery approaches. No comprehensive cross-institutional analysis has systematically examined career counseling and academic development services across different university types, geographic locations, and student population characteristics. Consequently, the sector lacks an empirical foundation for identifying best practices, understanding factors associated with effective service provision, or developing evidence-based recommendations for service improvement.

Second, while student needs and challenges are increasingly well documented, limited research has examined the institutional capacity to meet these needs through existing support service configurations. Questions remain regarding the adequacy of staffing levels, staff qualifications and professional development, service accessibility across different student groups, integration of career and academic support services, and alignment between service offerings and contemporary student requirements. Understanding these dimensions is essential for informing resource allocation decisions, service planning, and policy development at institutional and sectoral levels.

Third, the transition toward hybrid service delivery models incorporating digital technologies alongside traditional face-to-face approaches has occurred rapidly and somewhat reactively, particularly during pandemic disruptions, without systematic evaluation of implications for service accessibility, effectiveness, and equity. While emerging evidence suggests potential benefits of digital service modalities, a comprehensive analysis is needed to understand how different delivery modes serve different student populations and support needs, and how institutions can optimize service delivery through strategic integration of digital and in-person approaches.

Fourth, limited research has examined student perspectives on support service quality, accessibility, and relevance across institutions. While satisfaction surveys are routinely conducted at individual institutions, comparative analysis of student experiences and perceptions across different institutional contexts could illuminate factors that enhance or impede service effectiveness and utilization. Understanding student perspectives is crucial for developing services that are responsive, accessible, and aligned with user needs and preferences.

Finally, there is insufficient understanding of how organizational and structural factors—including service governance, the institutional positioning of support units, cross-functional coordination, and the strategic integration of support services within broader institutional frameworks—influence service effectiveness and accessibility. Career counseling and academic development services do not operate in isolation but function within complex organizational ecosystems involving academic units, administrative divisions, student services portfolios, and external partners. Understanding these organizational dynamics is essential for optimizing service design and delivery.

This study addresses identified gaps through a comprehensive cross-institutional analysis of career counseling and academic development programs across Australian higher education institutions. The primary research objective is to systematically examine how these critical support services are structured, resourced, delivered, and experienced across diverse institutional contexts. Specifically, the study aims to: (1) map organizational structures and governance models of career counseling and academic development services across institution types; (2) examine resource allocation patterns including staffing, qualifications, and budget provisions; (3) investigate service delivery models, program offerings, and delivery modalities (face-to-face, digital, hybrid); (4) analyze student utilization patterns, barriers to access, and satisfaction levels; (5) explore staff perspectives on challenges and resource needs for effective service provision; and (6) identify institutional practices associated with effective, accessible, and equitable support services. The research questions correspondingly address how services are organizationally structured, what delivery models are employed, how resources are allocated, what factors influence student utilization and barriers to access, how stakeholders perceive service quality and effectiveness, and what practices are associated with optimal service provision.

This research makes important contributions across theoretical, methodological, and practical domains. Theoretically, it advances understanding of student support services within higher education organizational contexts by providing an empirical foundation for nuanced frameworks accounting for contextual variation. Methodologically, the mixed-methods cross-institutional design offers a model for examining higher education practices across diverse institutional settings. Practically, findings provide university administrators with benchmarking data and evidence-based practices to inform resource allocation, service improvement, and strategic planning decisions, while offering sector-level policy insights regarding quality assurance and standards for support service provision. Most

critically, this research serves student interests by identifying factors that enhance service accessibility, effectiveness, and relevance, particularly for underrepresented populations, including first-generation students, low socioeconomic status students, and regional students who often face the greatest barriers to accessing support services. By examining equity implications across institutions, the study contributes to ensuring support services function as equalizing resources that facilitate success, well-being, and development for all students throughout their higher education journey.

RESEARCH METHOD

This study utilized a convergent parallel mixed-methods research design to explore career counseling and academic development services in Australian higher education institutions. The mixed-methods approach allowed for triangulation of data, offering both breadth through quantitative data and depth via qualitative insights. The study employed concurrent data collection and independent analysis for both methods, followed by integration during interpretation to generate comprehensive findings.

The research design was particularly suitable for mapping sector-wide patterns in service provision (quantitative) and understanding contextual, organizational, and stakeholder factors (qualitative). The study spanned 18 months, from January 2024 to June 2025, to allow for robust data collection across multiple institutions, ensuring both comprehensive coverage and the consideration of academic cycles. The research took a cross-institutional comparative approach, examining services across various types of institutions in Australia to highlight both shared patterns and contextual differences, offering a broader understanding of effective service delivery.

The study's sampling involved purposive stratified selection of institutions based on four criteria: institutional grouping, geographic location, student population size, and proportion of international students. From an initial sample of 43 universities, 22 agreed to participate, including Group of Eight universities, Australian Technology Network universities, and regional institutions. The sample was balanced to reflect diversity across institutional characteristics, with a particular focus on regional institutions, which face distinct service delivery challenges. A multi-tiered participant sampling approach was adopted, involving senior administrators, frontline service staff, and students who had utilized the services. Senior administrators, key frontline staff such as career counselors, and students from diverse demographics were recruited to ensure the study captured a comprehensive view of the service provision landscape. The study's participant response rates

ranged from 76% to 78%, with 4,847 students completing surveys and 72 students participating in focus groups or interviews.

Data were collected using a combination of instruments, including institutional service profile questionnaires, staff surveys, student experience surveys, semi-structured interview protocols, and document analysis. The institutional service profile questionnaire gathered data on service structures, staffing, resources, and delivery models. Staff surveys focused on service delivery practices, effectiveness, and resource adequacy, while student surveys examined service utilization, satisfaction, and barriers to access. To ensure measurement quality, all survey instruments underwent rigorous validity and reliability assessment. Content validity was established through expert panel review involving five senior student services professionals and three higher education researchers who evaluated item relevance and comprehensiveness. Construct validity was examined through exploratory factor analysis on pilot data ($n = 287$), confirming theoretically expected dimensional structures.

Internal consistency reliability was assessed using Cronbach's alpha, with acceptable coefficients obtained for all scales (staff survey: $\alpha = .82-.91$; student survey: $\alpha = .79-.88$). Test-retest reliability was evaluated with a subsample ($n = 64$) over a two-week interval, yielding correlation coefficients ranging from $r = .76$ to $r = .84$, indicating adequate temporal stability. Qualitative data were analyzed using thematic analysis, ensuring rich insights from interviews, focus groups, and open-ended survey responses. The integration of quantitative and qualitative data occurred through convergent, building, and joint display integration strategies, enabling a holistic understanding of service delivery and its impact. Ethical considerations were rigorously adhered to, ensuring participant confidentiality, informed consent, and minimizing harm, with data security measures in place throughout the study.

RESULT AND DISCUSSION

Results

Organizational Structures and Governance Models

Analysis of institutional questionnaire data revealed considerable variation in organizational structures for career counseling and academic development services across the 22 participating institutions. Career services were most commonly positioned within centralized student services divisions ($n = 14, 63.6\%$), while seven institutions (31.8%) operated career services within faculty or school structures, and one institution (4.5%) employed a hybrid model. Academic development services showed similar patterns, with

15 institutions (68.2%) maintaining centralized structures and seven institutions (31.8%) utilizing distributed models embedded within academic faculties.

Reporting lines for these services varied substantially. Career services most frequently reported to Directors of Student Services (n = 9, 40.9%), Deputy Vice-Chancellors (Students) (n = 7, 31.8%), or Deans of Students (n = 6, 27.3%). Academic development services reported to similar positions, with additional reporting to Pro-Vice-Chancellors (Learning and Teaching) in four institutions (18.2%). Seventeen institutions (77.3%) reported having formal governance committees overseeing student support services, while five institutions (22.7%) lacked such structures.

Strategic planning processes for student support services were documented in 19 institutions (86.4%), typically aligned with 3-5 year institutional strategic cycles. However, only 12 institutions (54.5%) reported having specific strategic plans dedicated to career counseling or academic development services. Cross-functional coordination mechanisms varied considerably, with 18 institutions (81.8%) reporting regular meetings between career and academic development units, but only nine institutions (40.9%) described formal integration frameworks for these services.

Staffing Patterns and Resource Allocation

Table 1 presents staffing data for career counseling and academic development services across participating institutions, disaggregated by institutional size and type.

Table 1. Staffing Levels for Student Support Services by Institutional Characteristics

Institutional Characteristic	Career Counseling Staff	Academic Development Staff	Student:Staff Ratio (Career)	Student:Staff Ratio (Academic)
By Size	M (SD)	M (SD)	M (SD)	M (SD)
Small (<20,000)	4.2 (1.5)	5.8 (2.1)	3,810 (945)	2,759 (892)
Medium (20,000-40,000)	8.6 (2.8)	11.3 (3.6)	3,256 (673)	2,478 (621)
Large (>40,000)	15.3 (4.2)	18.7 (5.4)	3,464 (821)	2,834 (756)
By Group				
Group of Eight	12.8 (5.1)	16.4 (6.2)	3,906 (1,124)	3,049 (984)
ATN Universities	9.5 (2.9)	12.1 (3.8)	2,947 (568)	2,316 (512)

IRU	7.3 (2.4)	9.7 (3.1)	3,562 (892)	2,671 (734)
RUN	5.6 (1.8)	7.9 (2.5)	3,125 (745)	2,215 (568)
Unaligned	6.9 (2.6)	8.8 (3.3)	3,478 (912)	2,804 (823)
Overall	9.1 (4.6)	11.8 (5.7)	3,426 (894)	2,673 (764)

Note. ATN = Australian Technology Network; IRU = Innovative Research Universities; RUN = Regional Universities Network. Staffing figures include full-time equivalent (FTE) positions. Student:staff ratios calculated based on total enrolled student population.

One-way ANOVA revealed significant differences in staffing levels across institution sizes for both career counseling ($F(2, 19) = 28.34, p < .001, \eta^2 = .749$) and academic development services ($F(2, 19) = 24.67, p < .001, \eta^2 = .722$). Post-hoc tests indicated that large institutions employed significantly more staff than medium institutions ($p < .01$), which in turn employed more than small institutions ($p < .01$). However, when examining student-to-staff ratios, differences across institution sizes were not statistically significant for career counseling ($F(2, 19) = 1.68, p = .213$) or academic development ($F(2, 19) = 2.14, p = .145$), suggesting relatively consistent staffing ratios regardless of institutional scale.

Budget allocations for student support services, reported by 20 institutions (two declined to provide budget data), ranged from AU\$342,000 to AU\$2,847,000 for career services ($M = AU\$1,124,000, SD = AU\$687,000$) and AU\$456,000 to AU\$3,254,000 for academic development ($M = AU\$1,389,000, SD = AU\$821,000$). When calculated as per-student allocations, career services budgets ranged from AU\$18.50 to AU\$64.30 per student ($M = AU\$36.40, SD = AU\12.80), while academic development budgets ranged from AU\$24.70 to AU\$78.50 per student ($M = AU\$44.20, SD = AU\15.60).

Staff qualifications showed consistency across institutions, with master's degrees being the most common highest qualification for both career counseling (59.4%) and academic development staff (53.7%). Professional development budgets were reported by 18 institutions, ranging from AU\$500 to AU\$3,500 per staff member annually ($M = AU\$1,750, SD = AU\890). Thirteen institutions (59.1%) reported dedicated professional development plans for student services staff, while nine institutions (40.9%) indicated that professional development was managed informally.

Service Delivery Models and Program Offerings

All participating institutions offered individual face-to-face career counseling and group workshops for both service types. However, substantial variation existed in adoption of digital delivery modes. Twenty-one institutions (95.5%) provided online appointment options for career

counseling, representing significant growth from pre-pandemic baselines reported by institutions. Telephone consultations were offered by 16 institutions (72.7%), while only four institutions (18.2%) had developed mobile applications for career support.

Service operating hours varied across institutions. Fourteen institutions (63.6%) operated services during standard business hours only (9:00 AM - 5:00 PM, Monday-Friday), seven institutions (31.8%) extended hours to evenings (until 7:00 PM or 8:00 PM) at least two days per week, and one institution (4.5%) offered weekend appointments. Wait times for individual appointments ranged from same-day availability to four weeks, with median wait times of 5 business days (IQR = 3-8 days) for career counseling and 7 business days (IQR = 4-10 days) for academic skills consultations.

Student Service Utilization Patterns

Analysis of student survey data (N = 4,847) revealed utilization patterns across services and demographic groups. Overall, 65.1% of respondents had utilized career counseling services, while 59.6% had accessed academic writing support. Table 6 presents service utilization rates disaggregated by student characteristics.

Table 2. Service Utilization Rates by Student Demographic Characteristics

Student Characteristic	Career Counseling Utilization % (n)	Academic Development Utilization % (n)	χ^2	p
Gender				
Female (n = 3,012)	68.4 (2,061)	62.7 (1,889)	$\chi^2(2) = 18.45$	< .001
Male (n = 1,653)	59.3 (980)	53.8 (889)		
Non-binary/Other (n = 135)	71.1 (96)	68.1 (92)		
Student Type				
Domestic undergraduate	62.8 (1,644)	56.2 (1,471)	$\chi^2(5) = 47.82$	< .001
Domestic postgraduate CW	69.7 (611)	64.3 (563)		
Domestic postgraduate RES	58.8 (167)	71.1 (202)		
International undergraduate	71.3 (508)	68.5 (488)		
International postgraduate CW	75.0 (234)	72.4 (226)		

Student Characteristic	Career Counseling Utilization % (n)	Academic Development Utilization % (n)	χ^2	p
International postgraduate RES	62.2 (28)	80.0 (36)		
Year of Study				
First year	58.4 (933)	64.8 (1,036)	$\chi^2(3) = 34.56$	< .001
Second year	64.9 (787)	60.3 (731)		
Third year	69.5 (774)	56.1 (625)		
Fourth year or higher	71.8 (662)	54.4 (502)		

Note. CW = Coursework; RES = Research. Percentages represent proportion of each subgroup who utilized services at least once in the past 12 months.

Chi-square analyses revealed significant associations between student characteristics and service utilization. International students reported higher utilization rates than domestic students for both career counseling ($\chi^2(1) = 28.93, p < .001, \phi = .077$) and academic development services ($\chi^2(1) = 42.67, p < .001, \phi = .094$). Female students utilized services at higher rates than male students across both service types (career: $\chi^2(1) = 23.45, p < .001, \phi = .071$; academic: $\chi^2(1) = 31.28, p < .001, \phi = .082$).

Regarding frequency of engagement, among students who utilized services, 34.7% attended single sessions only, 41.2% attended 2-4 sessions, 18.6% attended 5-8 sessions, and 5.5% attended more than 8 sessions over the 12-month period. Multiple regression analysis examining factors predicting frequency of engagement indicated that international student status ($\beta = .184, p < .001$), first-year status ($\beta = .156, p < .001$), and study intensity measured by full-time enrollment ($\beta = .127, p < .01$) significantly predicted greater engagement frequency ($R^2 = .156, F(8, 4838) = 111.47, p < .001$).

Barriers to Service Access

Student survey respondents rated various potential barriers to accessing support services on 5-point scales. Figure 2 presents the percentage of students rating each barrier as "moderate" or "major."

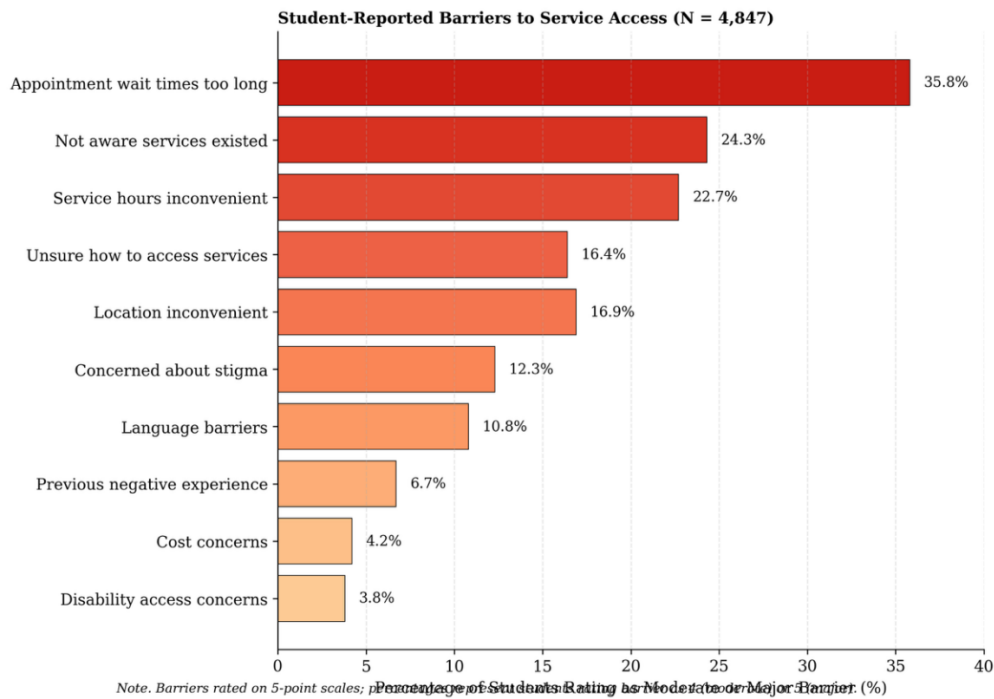


Figure 1. Student-Reported Barriers to Service Access (N = 4,847)
Moderate or Major Barriers (% of students)

The most frequently reported barrier was appointment wait times (35.8%), followed by lack of awareness of service existence (24.3%) and inconvenient service hours (22.7%). Independent samples t-tests comparing barrier ratings between students who did and did not utilize services revealed that non-users rated lack of awareness significantly higher ($M = 3.68$, $SD = 1.12$) than users ($M = 2.14$, $SD = 0.98$), $t(4845) = 42.56$, $p < .001$, $d = 1.47$. Similarly, non-users rated uncertainty about access procedures higher ($M = 3.21$, $SD = 1.08$) than users ($M = 2.03$, $SD = 0.94$), $t(4845) = 34.28$, $p < .001$, $d = 1.18$. International students reported significantly higher barrier ratings for language concerns ($M = 2.84$, $SD = 1.34$) compared to domestic students ($M = 1.67$, $SD = 0.89$), $t(4845) = 28.73$, $p < .001$, $d = 1.03$. Part-time students rated service hour inconvenience higher ($M = 3.45$, $SD = 1.16$) than full-time students ($M = 2.34$, $SD = 1.07$), $t(4845) = 23.14$, $p < .001$, $d = 0.99$.

Staff Perspectives on Service Delivery

Staff survey data (N = 118) provided insights into frontline service delivery experiences and resource perceptions. When rating adequacy of various resources on 5-point scales (1 = highly inadequate, 5 = highly adequate), staff reported moderate adequacy levels: staffing levels ($M = 2.87$, $SD = 1.12$), professional development opportunities ($M = 3.24$, $SD = 0.98$), physical workspace ($M = 3.56$, $SD = 1.04$), and technological infrastructure (M

= 3.68, SD = 0.92). Independent samples t-tests revealed no significant differences in adequacy ratings between career counseling and academic development staff for any resource category (all $p > .05$).

Staff reported working with median caseloads of 28 students per week (IQR = 22-36) for career counseling staff and 31 students per week (IQR = 24-39) for academic development staff. Seventy-three staff members (61.9%) reported that their caseloads had increased over the past three years, while 34 (28.8%) reported stable caseloads and 11 (9.3%) reported decreased caseloads. Staff in large institutions reported significantly higher weekly caseloads ($M = 35.4$, $SD = 8.7$) than those in small institutions ($M = 24.6$, $SD = 6.3$), $t(116) = 5.82$, $p < .001$, $d = 1.38$.

Regarding service delivery challenges, staff rated the significance of various challenges on 5-point scales. The highest-rated challenges were insufficient staffing for student demand ($M = 4.12$, $SD = 0.94$), managing complex student presentations ($M = 3.87$, $SD = 0.89$), limited appointment time with students ($M = 3.76$, $SD = 1.02$), and inadequate professional development time ($M = 3.68$, $SD = 0.97$). One-way ANOVA revealed significant differences in challenge ratings across institution types only for insufficient staffing, $F(4, 113) = 3.84$, $p = .006$, $\eta^2 = .120$, with staff at large institutions rating this challenge higher ($M = 4.45$, $SD = 0.76$) than those at small institutions ($M = 3.67$, $SD = 1.08$).

Service Quality and Student Satisfaction

Student perceptions of service quality were assessed using 7-point Likert scales (1 = strongly disagree, 7 = strongly agree) across multiple dimensions. Table 3 presents mean ratings for service quality indicators.

Table 3. Student Ratings of Service Quality (N = 4,847)

Service Quality Indicator	Career Counseling M (SD)	Academic Development M (SD)	t	p	d
Staff were knowledgeable	5.84 (1.12)	5.92 (1.08)	-2.14	.032	0.07
Staff were approachable	5.97 (1.09)	6.04 (1.06)	-1.87	.062	0.06
Received timely service	4.87 (1.34)	4.76 (1.38)	2.35	.019	0.08
Services met my needs	5.34 (1.21)	5.28 (1.24)	1.42	.156	0.05
Would recommend to others	5.68 (1.18)	5.61 (1.22)	1.68	.093	0.06

Services easy to access	4.92 (1.29)	4.88 (1.31)	0.89	.374	0.03
Sufficient appointment length	5.47 (1.15)	5.41 (1.18)	1.48	.139	0.05
Overall satisfaction	5.52 (1.23)	5.46 (1.26)	1.39	.165	0.05

Note. Ratings on 7-point scales where 1 = strongly disagree, 7 = strongly agree. Effect sizes (Cohen's d) were calculated for paired comparisons between service types.

Overall satisfaction ratings were moderately high for both service types (career counseling: $M = 5.52$, $SD = 1.23$; academic development: $M = 5.46$, $SD = 1.26$), with no significant difference between services, $t(4846) = 1.39$, $p = .165$. The lowest-rated quality indicator was timeliness of service (career counseling: $M = 4.87$, $SD = 1.34$; academic development: $M = 4.76$, $SD = 1.38$), aligning with wait times identified as a significant barrier.

Multilevel modeling examining institutional-level variance in student satisfaction revealed that 18.3% of the overall satisfaction variance resided between institutions ($ICC = .183$), indicating meaningful institutional differences. Institutional-level predictors, including student-to-staff ratios ($\beta = -.34$, $p < .01$), service operating hours ($\beta = .28$, $p < .05$), and availability of online appointment options ($\beta = .31$, $p < .05$), collectively explained 47.6% of between-institution variance in satisfaction.

Students were asked to rate the perceived impact of services on various outcomes using 5-point scales (1 = no impact, 5 = very high impact). Career counseling services received the highest impact ratings for career direction clarity ($M = 4.12$, $SD = 0.87$), job search confidence ($M = 3.94$, $SD = 0.92$), and career decision-making skills ($M = 3.89$, $SD = 0.89$). Academic development services received the highest impact ratings for writing skills ($M = 4.23$, $SD = 0.84$), academic confidence ($M = 4.08$, $SD = 0.88$), and time management ($M = 3.87$, $SD = 0.95$).

Discussion

Organizational Structures and Resource Allocation in Student Support Services

The findings reveal considerable heterogeneity in organizational structures for career counseling and academic development services across Australian higher education institutions, with most institutions maintaining centralized models while a substantial minority employ distributed or hybrid approaches. This structural variation reflects ongoing debates within higher education regarding optimal positioning of student support services. The prevalence of centralized models aligns with organizational theory suggesting that centralized services enable economies of scale, consistent quality

standards, and efficient resource management (Donnelly et al., 2025). However, distributed models embedded within faculties may offer advantages of disciplinary contextualization and integration with academic programs, as evidenced by research demonstrating benefits of embedded academic support (King et al., 2023; Rigby et al., 2022).

The observed student-to-staff ratios averaging 3,426:1 for career counseling and 2,673:1 for academic development services raise important questions regarding service capacity and adequacy. While these ratios remained relatively consistent across institution sizes, suggesting sector-wide norms, they substantially exceed recommended ratios in professional guidelines. Sekhon et al. (2022) highlighted similar concerns regarding adequacy of counseling education and support capacity for speech-language pathology students in Australia, noting that insufficient staffing compromises depth and quality of individualized support. The consistency of ratios across institutional contexts suggests systemic under-resourcing rather than institution-specific challenges, indicating need for sector-level policy attention to adequacy standards for student support staffing.

Budget allocations averaging AU\$36.40 per student for career services and AU\$44.20 for academic development represent modest investments given the documented importance of these services for student success and graduate outcomes. These allocations must support not only personnel costs but also professional development, technology infrastructure, promotional activities, and program delivery expenses. Research examining curriculum preparation for professional practice consistently identifies resource constraints as barriers to comprehensive student development (Breare et al., 2025; Carter et al., 2022; Donnelly et al., 2025). The finding that only 59.1% of institutions maintained dedicated professional development plans for student services staff suggests that workforce development receives insufficient strategic attention, despite research demonstrating that ongoing professional learning enhances counselor effectiveness and capacity to address complex student presentations (Fajardo et al., 2020; Sekhon et al., 2022).

Future research should investigate relationships between organizational structures, resource allocations, and student outcomes more rigorously. Longitudinal studies examining whether centralized versus distributed models produce differential outcomes for diverse student populations would inform evidence-based organizational decision-making. Additionally, research determining optimal staffing ratios based on student characteristics, service complexity, and desired outcomes would provide empirical foundation for resourcing advocacy and policy development.

Service Delivery Models and Digital Transformation

The near-universal adoption of online appointment modalities (95.5% of institutions) represents dramatic transformation in service delivery, largely accelerated by COVID-19 pandemic disruptions. This digital shift aligns with broader trends in telehealth and digital intervention delivery across health and social services. Research evaluating internet-delivered mental health interventions for university students has demonstrated that digital modalities can achieve comparable clinical outcomes to traditional face-to-face approaches while offering advantages of accessibility, scalability, and reduced stigma (Dear et al., 2024; Keyan et al., 2022). However, the persistence of traditional face-to-face services alongside digital options suggests recognition that multimodal approaches best serve diverse student preferences and needs.

The relatively limited adoption of mobile applications (18.2% of institutions) and peer-delivered support models (36.4%) indicates untapped potential for innovative service delivery approaches. Blakemore & Agllias (2020) examined social work students' reflections on digital communication and emphasized that while technology offers important benefits, concerns exist regarding potential impacts on development of interpersonal skills and empathy—competencies central to counseling relationships. This tension between technological efficiency and relational depth represents important consideration for service design, suggesting that digital modalities should complement rather than replace face-to-face interaction for complex or relationally intensive support needs.

The finding that 63.6% of institutions operate services only during standard business hours highlights accessibility limitations for students with competing commitments including employment, caregiving responsibilities, and other obligations. Part-time students rated service hours as significantly greater barriers than full-time students, consistent with research documenting challenges confronting non-traditional student populations. Extended operating hours and weekend availability, while resource-intensive, represent important accessibility enhancements, particularly for institutions serving substantial proportions of part-time or mature-age students. Research on telephone crisis support services has demonstrated feasibility and effectiveness of extended-hours models Vivekananda et al. (2021), suggesting transferable insights for student support service planning.

Median wait times of 5-7 business days for appointments, while perhaps acceptable by general healthcare standards, represent barriers in educational contexts where timely support can prevent academic difficulties from escalating. The identification of wait times as the most significant barrier (35.8% of students) underscores urgency of capacity enhancement. Research

examining stepped-care models in psychological support suggests that tiered service approaches incorporating self-help resources, peer support, brief interventions, and intensive counseling can optimize resource utilization while improving access (Keyan et al., 2024). Adaptation of such models to career counseling and academic development contexts warrants investigation.

Utilization Patterns and Equity Considerations

The finding that international students utilized services at significantly higher rates than domestic students across both career counseling and academic development aligns with extensive literature documenting distinctive support needs of international student populations. Akhwan et al. (2021) identified numerous acculturation challenges confronting Malaysian Muslim students studying abroad, including cultural adjustment, language barriers, academic system differences, and social integration difficulties—challenges that support services should theoretically address. Similarly, Okeke (2022) examined how international students navigate health risks and emphasized importance of culturally responsive, accessible support systems. The higher utilization rates among international students may reflect either greater awareness of services, more pressing support needs, or both factors operating concurrently.

However, high utilization among international students does not necessarily indicate that services adequately address their distinctive needs. Language barriers, identified as moderate or major barriers by 10.8% of students overall but significantly higher among international students, suggest that linguistic and cultural responsiveness of services requires enhancement. Research examining international doctoral student transitions has highlighted that generic support services often inadequately address culturally specific challenges and that international students require targeted, culturally informed programming (Aspland et al., 2021; Newton et al., 2021). The development of specialized services, multilingual support options, and staff cultural competency development represent important directions for improving service responsiveness.

The gender disparity in utilization, with female students accessing services at higher rates than male students, reflects well-documented patterns in help-seeking behavior. This finding has important equity implications, suggesting that male students may experience support needs but face barriers—potentially including masculinity norms discouraging help-seeking or service marketing that inadequately reaches male students—preventing access. Research examining health and well-being interventions for young people living with HIV identified gender-specific engagement challenges and

emphasized need for gender-responsive outreach and programming (Wojciechowski et al., 2025). Similar attention to gender-inclusive service design in student support contexts warrants consideration.

The progressive increase in career counseling utilization across year levels, contrasting with decreased academic development utilization in later years, suggests evolving support needs throughout educational trajectories. Career concerns naturally intensify as students approach graduation, while foundational academic skills typically stabilize after initial university transition. These patterns support developmental approaches to service provision, with targeted programming and outreach calibrated to year-level needs. Research examining student experiences of grief and personal growth emphasized that support needs vary across developmental stages and life transitions (Tan & Andriessen, 2021), reinforcing importance of developmentally informed service design.

Barriers to Access and Service Quality Perceptions

The identification of service awareness as a substantial barrier (24.3% rating as moderate or major) represents significant concern, suggesting that communication and marketing of services require enhancement. Even more concerning, the finding that non-users rated awareness significantly higher than users indicates that substantial proportions of students remain unaware of available support, representing missed opportunities for intervention. Research examining implementation of diverse health and educational programs consistently identifies awareness and knowledge as foundational prerequisites for utilization (Khan et al., 2021; Mazza et al., 2023). Strategic communication approaches including orientation programming, faculty partnerships for service promotion, digital marketing through student-frequented platforms, and peer ambassador models represent potential strategies for enhancing awareness.

Student satisfaction ratings ($M = 5.52$ on 7-point scales) indicate moderately positive perceptions of service quality, with particularly strong ratings for staff approachability and knowledge. These findings affirm staff professionalism and interpersonal effectiveness, consistent with research emphasizing importance of counselor qualities including empathy, knowledge, and interpersonal skills for effective practice (Gilmore et al., 2022; Thompson & Girz, 2020). However, the multilevel modeling finding that 18.3% of satisfaction variance resided between institutions indicates that structural and organizational factors substantially influence student experiences, beyond individual practitioner effects. Institutional-level predictors including student-to-staff ratios, operating hours, and digital appointment availability

collectively explained nearly half of between-institution variance, demonstrating that organizational decisions regarding service design and resourcing materially impact student satisfaction.

The relatively lower ratings for service timeliness and accessibility highlight specific improvement priorities. These dimensions are substantially determined by resource adequacy and organizational policies rather than individual practitioner performance, reinforcing the systemic nature of service quality challenges. Research examining physical activity knowledge and attitudes among medical students identified that structural factors including time constraints and competing demands significantly influence engagement with health-promoting resources, parallels applicable to student support service access (Sahlqvist et al., 2022).

Students' high ratings of perceived service impact on skill development and confidence outcomes provide important evidence of service value. Career counseling's impact on career clarity and confidence, and academic development's impact on writing skills and academic confidence, demonstrate that services achieve intended developmental outcomes when students access them. These findings support continued investment in these services while simultaneously underscoring the importance of addressing access barriers to extend benefits to broader student populations.

Staff Perspectives and Workforce Sustainability

Staff perceptions of resource adequacy, particularly the relatively low rating for staffing levels ($M = 2.87$ on 5-point scales), align with quantitative data on student-to-staff ratios and raise concerns regarding workforce sustainability. The finding that 61.9% of staff reported caseload increases over three years, combined with perceptions of insufficient staffing, suggests growing demands outpacing capacity growth. Research examining healthcare professionals' experiences consistently identifies unsustainable workloads as contributors to burnout, reduced quality of care, and workforce attrition (Millington et al., 2020; Rogers et al., 2022). While student services contexts differ from clinical healthcare settings, parallels regarding impacts of resource constraints on professional practice and well-being warrant attention.

Staff find managing complex student presentations challenging due to rising mental health issues and support needs. Research shows increased demand and complexity in university mental health service use Francis-Taylor et al. (2023) affecting all student support areas. Career and academic staff often deal with students facing psychological distress, financial issues, family responsibilities, and health problems, complicating support. Training staff in

psychological first aid, trauma-informed practices, and referral pathways is crucial for workforce development.

The finding that institutions varied substantially in professional development provisions, with only 59.1% maintaining formal plans, suggests inconsistent recognition of workforce development needs. Professional development requirements for counseling roles are well established in the health professions literature Sekhon et al. (2022), and similar attention to ongoing learning for student services professionals would enhance practice quality and staff retention. Research examining counseling helpline staff training emphasized that structured, ongoing professional development improves service quality and staff confidence in addressing diverse and complex caller needs, principles applicable to university student support contexts (Gilmore et al., 2022).

Limitations and Directions for Future Research

Several limitations warrant acknowledgment. First, the cross-sectional design precludes causal inference regarding relationships between service characteristics and outcomes. Longitudinal research tracking students' service engagement and academic, career, and well-being outcomes over time would enable more robust conclusions regarding service effectiveness. Second, while the sample included diverse institution types and geographic locations, participation was voluntary and responding institutions may differ systematically from non-participants, potentially limiting generalizability. Third, student survey respondents were service users, and perspectives of students who have not accessed services despite experiencing support needs remain underexplored. Targeted research with non-users would illuminate additional barriers and inform outreach strategies.

Fourth, the research relied substantially on self-reported data from surveys and interviews, which may be subject to social desirability bias or recall limitations. Integration of objective institutional data including retention rates, academic performance indicators, and graduate employment outcomes would strengthen findings. Fifth, while the study examined staff perspectives, it did not directly assess staff well-being, burnout, or intention to remain in roles—factors with implications for service quality and sustainability that warrant future investigation.

Future research should employ experimental or quasi-experimental designs evaluating specific service innovations, including comparative effectiveness studies of delivery modalities, intervention approaches, and service models. Implementation science frameworks could guide research examining facilitators and barriers to the adoption of evidence-based practices

in student support services. Additionally, economic evaluations examining the cost-effectiveness of different service models would inform resource allocation decisions (Wagner et al., 2023). Research should also investigate the longer-term impacts of student support services on graduate outcomes, including employment, career satisfaction, and ongoing skill development, and provide evidence of services' value that extends beyond immediate university contexts.

CONCLUSION

This cross-institutional study systematically examined career counseling and academic development services across 22 Australian universities, addressing critical gaps in understanding how these essential support functions are structured, resourced, and experienced. The research revealed substantial heterogeneity in organizational models alongside universal adoption of hybrid delivery approaches. Significant challenges emerged including high student-to-staff ratios (career services: 3,426:1; academic development: 2,673:1), appointment wait times as barriers for 35.8% of students, and service awareness gaps affecting 24.3% of students.

Findings provide actionable insights for addressing awareness gaps, reducing wait times through capacity enhancement and stepped-care models, extending operating hours, and developing culturally responsive services for international students. Sector-level implications include need for policy attention to resourcing standards and quality assurance frameworks. Study limitations include cross-sectional design precluding causal inference and focus on service users rather than non-users. Future research should employ longitudinal designs examining service trajectories and impacts on academic outcomes, conduct economic evaluations of service models, and investigate organizational factors in high-performing services.

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