

# How do they know – how do we know? Using a SWOT analysis to support first year Medical Laboratory Science students transitioning to university.

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## Abstract

*This paper reports a four-year study to investigate and evaluate the effectiveness of a student-informed strategy that identifies need and supports first year transition in the Bachelor of Medical Laboratory Science (BMLS). Timetabled 'introduction to Support Services' Sessions' and a personal Strengths, Weaknesses, Opportunities and Threats (SWOT) analysis comprised an integrated approach to raise students' self-awareness of need for support and the services available to meet this need. Data from 2013-2016 SWOT analyses revealed a range of factors affecting students' learning for which support services were available, including psychological, medical, financial and English as second language (ESL) learning issues. The SWOT analysis provided a mechanism for personal and class feedback that reinforced information provided by support services' partners. Student and staff feedback was overwhelmingly positive, recognising the value of this strategy in identifying and supporting students' transition needs.*

## Introduction

The need to support transitioning students has been an ongoing focus of the higher education discourse. Commencing first year is a significant step and successful transition is a strong predictor of academic performance (McKenzie & Schweitzer, 2001). The first six weeks of university has been identified as the period of greatest risk for discontinuation (Tinto, 1998; Williams & Anderson, 2001; Wilson et al., 2016) with up to one third of students reconsidering their choice of study or considering withdrawal (Baik, Naylor, & Arkoudis, 2015; Krause, Hartley, James, & McInnis, 2005; Pitkethly & Prosser, 2001). During this time students face personal and academic challenges familiarising and engaging with diverse social and learning communities and environments, teaching styles, classroom activities, exams and assessment methods, new codes of conduct, autonomous learning and academic integrity (Baik et al., 2015; Krause et al., 2005; Nelson & Kift, 2005; Rubin, Evans, & Wilkinson, 2016; Wilson et al., 2016). Students can feel isolated, stressed, overwhelmed, and uncertain where to find information and who to ask for help. This can lead to reduced attendance, online engagement and early withdrawal (Wilcox, Winn, & Fyvie-Gauld, 2005; Wilson & Lizzio, 2012; Wilson et al., 2016).

It is well recognised that first year students are diverse, with a multitude of learning and life support requirements (Baik et al., 2015; Edwards & McMillan, 2015; Habel, Whitman, & Stokes, 2016; Nelson & Kift, 2005). The cultural, social and academic backgrounds of students and pre-entry personal and environmental factors such as medical, family, accommodation and financial issues all influence student success (Edwards & McMillan, 2015; Habel et al., 2016; Lizzio & Wilson, 2013; Nelson, Creagh, Kift, & Clarke, 2014; Wilcox et al., 2005). Those who are first in family, from non-traditional, English as a second language (ESL) or low socioeconomic backgrounds are particularly at risk (Edwards &

McMillan, 2015; Gale & Parker, 2014; Pitkethly & Prosser, 2001). The third generation transition pedagogy framework that underpins the First Year Experience Program (FYEP) at QUT comprises four key curricula and co-curricular strategies for student success: (i) the provision of *proactive, timely* and *visible* access to learning and life support, (ii) engaging curriculum, (iii) establishing a sense of belonging and (iv) development of supporting academic and professional partnerships (Nelson et al., 2014). To support the *individual*, however, we need to know what *they* need. As Stelnicki et al., (2015, p. 222) remind us, “...when students report what they need help with and what they currently use to help themselves, university advisors, academic counsellors and faculty would appear to gain much more useful information to provide the directed support and assistance...”

It is imperative to find ways to ‘ask’ the students and allow their responses to inform support.

### *Using a SWOT analysis to identify need*

A SWOT analysis is a conceptually simple tool used in business to raise awareness and forward plan; it is ideally suited to elucidating students’ learning and personal support needs. In the business context, a SWOT analysis is a critical element of preliminary strategic planning, incorporating personal career planning as well as competitive and competitor advantage assessments (Bell & Rochford, 2016). It applies a simple framework to identify relationships and connections constituting an organisation’s internal strengths and weaknesses, and external opportunities and threats. While variants exist, all SWOT analyses generally contain the following stages: (i) state the objective, (ii) outline the process, (iii) seek individual input, (iv) collate all responses, (v) enable and facilitate strategic discussion, and (vi) develop an informed action plan (Chermack & Kasshanna, 2007). The activity provides participants with a tool to perform an objective self-assessment and situation-analysis, leading to increased self-awareness and decision-making that addresses what needs to be done, and the resources required.

A search of the education literature identified over 250 articles discussing the use of SWOT analyses. Almost all targeted the evaluation of institutions, faculties, organisational units and curriculum (Adepoju & Famade, 2010; Helms & Nixon, 2010), including how the SWOT framework was taught (Bell & Rochford, 2016). Fewer than five percent were student focused and used SWOT analyses to reflect on the value of assessment tasks (McLaurin, Bell, & Smith, 2009) and support graduate career planning (Addams & Allred, 2013; Dickinson & Griffiths, 2015).

This paper reports our four year study to develop a transition support strategy grounded in a SWOT analysis and evaluate its effectiveness in (i) raising students’ awareness of ‘*their*’ potential need for support, and the services and resources available to meet this need and (ii) providing a mechanism to identify students who may benefit from intervention and support, and offer personalised guidance and feedback.

### **Historical context**

In the first iteration of our first year ‘Introduction to Medical Laboratory Science’ unit (LQB181) in 2012, students prepared a SWOT analysis and action plan to retrospectively reflect on their first semester transition and the factors that had affected their learning. While assessing these we discovered a number of students had disclosed learning difficulties, medical and psychological conditions, personal and financial problems previously unknown to the Unit Coordinator (UC) and Course Coordinator (CC). This was consistent with previous studies showing students most in need of support are least likely to ask for it (Baik,

et al., 2015; Ciarrochi, Deane, Wilson, & Rickwood, 2002). Students were invited to discuss their circumstances with the CC and a pattern emerged: (i) all welcomed the opportunity, (ii) very few had attended orientation, (iii) most had missed a number of classes across multiple units, and (iv) none had sought help. They viewed their personal and university-lives as separate worlds, typically making statements like *'because my problems had nothing to do with university, it was up to me to sort out'* and *'I didn't even know the university offered those services'*. Support plans were put in place, however it was clear the benefits from this SWOT analysis in identifying students' needs were realised too late. We had missed the opportunity to support them in those first few weeks when they are feeling particularly vulnerable so we repositioned the SWOT analysis early in semester from 2013.

## **Study methodology**

The aim of this research was to develop a transition support strategy that both identified individual students' needs and provided student-informed 'just-in-time' and 'just-in-case' support information in the critical first weeks of university. The study involved 388 BMLS first year students from 2013-2016. Across all years, most students were domestic (84-96%), ≤ 24 years (65-80%) and identified as female (60-73%); the gender balance was similar to the pathology workforce graduates enter (Urbis, 2011). The 2016 cohort was surveyed (n=129) with a response rate of 75%. We analysed students' SWOT statements over the four-year period; these told us *'what they need'*. Based on these *'needs'*, we partnered with support services' staff to incorporate progressively a suite of 'introduction to Support Services' Sessions' (SSS) into the curriculum that addressed the question – *'how do they (students) know'* what help is available to support them? In 2016, we evaluated the benefit of these sessions using a survey designed to ascertain if students knew about the support services before commencing university, how useful they found the sessions, and if, after the sessions, they would seek help if needed. Statements with a 6-point Likert scale response (1 strongly disagree to 6 strongly agree) measured (i) if it was helpful to be made aware of the range of support services available, and in timetabled classes, and (ii) if after the sessions, students would access support services for academic and personal needs, seek out the UC for advice if unsure of the appropriate service, and feel able to advise their peers where to get help. An open-ended question provided the opportunity for additional qualitative comments. We also sought qualitative feedback from our support services' partners on the value of embedding the awareness-raising SSS in the unit timetable.

### *Transition support strategy – 2016 iteration*

In the week one unit introduction students received an in-class overview of all assessment items, including the SWOT analysis and the nexus of this task to the timetabled SSS. Online resources stating the objective and outlining the process of the SWOT analysis supplemented this. In week three in-class discussion was targeted at understanding the four core elements of a SWOT analysis and how they could be used to carry out a personal situational analysis with a focus on *'my learning at university'*. Complementing the introduction of the SWOT analysis, timetabled SSS were presented by frontline support services' staff in weeks two and three to introduce students to QUT based *'opportunities'* – services and resources available to assist their transition and ongoing learning. The rationale for these was twofold: to raise awareness of available support and how students could access it, and to 'break down barriers'. By bringing a friendly face to the students, it was hoped they would feel more comfortable accessing services or at the very least asking about them if needed. Each session was recorded and uploaded to the unit website with service-specific resources. Support

services included (i) the Library, incorporating the range of targeted learning workshops, Academic Skills Advisers' one-on-one support sessions and general resources advice, (ii) Academic Language and Learning Support (ALLS), who support oral and written language needs, (iii) Counselling Services including mindfulness and wellbeing programs, (iv) Disability Services, who support students with temporary or permanent disabilities, injuries or health conditions, and (v) Careers and Employment who support students to develop discipline-specific career plans, identify work integrated learning opportunities and promote resume building.

One week after the final SSS, students submitted a tabulated SWOT analysis. This comprised three to five statements against each element and a one-paragraph action plan, drawing on their SWOTs to describe steps or actions to address threats identified, improve their approach to learning and build upon their strengths and opportunities. Students received written *personalised* feedback affirming self-identification of support services and referring students to relevant services if required. We also provided whole-of-class feedback. This highlighted the recurrent areas of need, allowing students to recognise their peers had similar concerns, and reinforced the information provided by our support services' partners. By doing this we sought to normalise help-seeking behaviours, sending the message '*it is okay to ask for help and we encourage you to do it*'. An '*Appraisal of Weeks 2-3 Support Services Sessions*' survey was completed anonymously by students in week six.

## **Results and Discussion**

The evaluation of students' SWOT analyses from 2013-2016 addressed the question "*how do we know what they need?*" More than 90% of students completed the activity (see Table 1) and we were able to identify areas of need for individual students and the class overall, allowing for the provision of student-informed feedback. Most students reported procrastination, distraction by technology, for example mobile and smart phones, and social media, time management and organisational skills as personal '*weaknesses*' affecting their learning. Individual students received written feedback however these recurrent themes were particularly well-suited to whole-of-class feedback and formed the basis of the week five session.

The disclosed '*threats*' identified student-specific circumstances that could benefit from support by QUT services. Table 1 categorises these into emergent themes. Psychological and medical conditions requiring ongoing management accounted for the highest percentage of threats disclosed, increasing progressively from 14% in 2013 to 23% in 2016. Of the students disclosing psychological conditions, 33-50% reported two or more conditions. These were mainly anxiety and depression, however each year one to two students reported additional conditions including Obsessive Compulsive Disorder (OCD), Asperger Syndrome (AS) and Attention Deficit Hyperactivity Disorder (ADHD). Three to 17% disclosed family or relationship-based threats including carer responsibilities and isolation issues, for example homesickness, 3-16% 'heavy' personal time commitments including employment, sport and long travel times, and 3-14% learning limitations including ESL difficulties, and technology access and competency issues. One to 3% disclosed financial stress.

Of the students who submitted SWOT analyses in 2013 to 2015, 22-28% disclosed '*threats*' that could be alleviated by academic and/or personal support services. This increased to 46% in 2016. This increase was coincident with the most refined iteration of our transition support strategy, including the most comprehensive suite of SSS to date. Careers and Employment

had been part of the strategy and refining their sessions since 2013, the Library since 2014, ALLS since 2015, and 2016 saw the important inclusion of Counselling and Disability Services' partners. As R. Molan (personal communication, 20 January 2017) commented:

“Seeking assistance which requires disclosure of personal circumstances or challenges can be extremely daunting for students... it helps to see and hear a friendly face saying ‘disability is any condition, including invisible conditions like mental health or temporary conditions like a broken arm’... [and] to know that they can come for information or just a chat before committing to anything further. It is reassuring to be told the service is confidential and a relief to hear that support is available... unit-specific face-to-face delivery of these messages consolidates and personalises them in a way that websites and brochures can’t.”

The majority of threats disclosed encompassed needs that Counselling and/or Disability Services support. Normalising help-seeking behaviours by providing face-to-face information about the range of circumstances supported and ‘how’ they could be supported was likely to have contributed to the increased willingness of students to disclose threats. If this were the case, a similar pattern of disclosure would be expected in future iterations

**Table 1: External 'threats' to learning disclosed in students' SWOT analyses 2013-2016**

Category of 'threat'	Students disclosing threats (% of submitted SWOT analyses)				Examples of threats disclosed
	2016 n=118 n <sub>1</sub> = 54	2015 n=95 n <sub>1</sub> = 21	2014 n=95 n <sub>1</sub> =25	2013 n=80 n <sub>1</sub> =22	
Psychological conditions	14	15	8	10	<ul style="list-style-type: none"> <li>• Anxiety</li> <li>• Depression</li> </ul>
Medical Conditions	9	5	6	4	<ul style="list-style-type: none"> <li>• Diabetes, asthma, chronic migraines</li> <li>• Glandular fever</li> <li>• Spinal injuries</li> </ul>
Carer commitments	5	4	8.	1	<ul style="list-style-type: none"> <li>• Children and/or elderly parents</li> <li>• Family members with disabilities or medical conditions</li> </ul>
Family and relationship difficulties	3	2	4	1	<ul style="list-style-type: none"> <li>• Domestic conflict</li> <li>• Family pressure</li> </ul>
Isolation from family	3	2	4	0	<ul style="list-style-type: none"> <li>• Loneliness and homesickness</li> <li>• Lack of friends</li> </ul>
Financial stress	3	3	2	1	<ul style="list-style-type: none"> <li>• Inability to afford textbooks</li> <li>• Unemployed</li> </ul>
Employment	3	1	1	0	<ul style="list-style-type: none"> <li>• Full-time work with full-time study</li> <li>• Juggling up to four jobs</li> </ul>
Elite athletes	3	0	1	0	<ul style="list-style-type: none"> <li>• Training and competition commitments</li> </ul>
English as a Second Language (ESL)	10	3	1	12	<ul style="list-style-type: none"> <li>• Oral and written language difficulties</li> <li>• Lack of confidence in communication</li> <li>• Poor listening skills</li> </ul>
Travel Time ≥1 hour	10	7	1	3	<ul style="list-style-type: none"> <li>• Two hours travel time each way</li> </ul>
Learning difficulties	1	0	1	0	<ul style="list-style-type: none"> <li>• Dyslexia</li> </ul>
Digital learning	3	3	1	1	<ul style="list-style-type: none"> <li>• No or limited internet access</li> <li>• Poor computer skills</li> </ul>
*Multiple threats (≥2)	16	19	12	6	

*n* - total number submitted; the response rates were 90% in 2013, 92% in 2014, 98% in 2015 and 92% in 2016

*n<sub>1</sub>* - number of students that disclosed issues in their SWOT analyses that may affect their learning

\* Multiple threats disclosed by an individual student across ≥2 categories, for example psychological issues, medical conditions and financial stress, are recorded as separate entries against each of the categories. Multiple threats disclosed for any single category are recorded once within the category, for example a student disclosing anxiety, depression, OCD, and homesickness will have one entry in Psychological conditions and one entry in Isolation from family.

**Table 2: Results of the 2016 survey to evaluate students' experience of support services: knowledge of and access to student support services prior to the LQB181 sessions**

Support Service	Percentage of responding students who:		
	knew QUT offered services	knew of the <i>extent</i> of support	had already contacted support services
Counselling Services	74	44	15
Disability Services	73	45	13
Library & ALLS	80	46	25
Careers & Employment	73	36	11

The results of the 2016 survey (see Table 2) showed 73% of our students knew QUT offered Counselling, Disability and Careers and Employment Services and 80% knew about the Library and ALLS. The increase for the Library was not surprising; it was a familiar resource and one students expect on campus. Although >70% knew of the existence, less than half (36-46%) knew the extent of the services – their ‘opportunities’, and even fewer had made contact. The Library and ALLS was the service group most contacted by students (25%). Only 11-15% had contacted Counselling, Disability and Careers and Employment. This difference may again be attributed to students’ prior experience with Libraries, a lack of awareness of the other services, as well as their unwillingness to disclose personal issues, which we had previously observed. ALLS could be accessed through the Library, hence the grouping in the survey, however anecdotal evidence from conversations with our students indicated many were unaware of the ALLS program. It would be useful in future surveys to distinguish the two.

From the knowledge data, the inference was drawn that the SSS provided the first exposure to these services for nearly 30% of our students, and for >50%, increased knowledge of the scope of support. Increased awareness is success. The QUT website, Orientation week and previous students were all sources of information for commencing students (see Table 3) however, it was clear from the differential between knowledge of existence and knowledge of scope the SSS were bridging an important gap. Survey data further affirmed this (see Table 4): 86% of students agreed or strongly agreed it was helpful to be made aware of the range of support services available and 81% that it was useful to have staff speak to them in timetabled classes. Most students (84%) agreed or strongly agreed they felt able to suggest where their peers might get help, indicating understanding of the scope of services available and affirming the value of the SSS.

**Table 3: Results of the 2016 survey to evaluate students' experience of support services: sources of knowledge prior to the sessions**

Sources of Information	Percentage of students who commented (n= 58)
Online - QUT website	52
Orientation week	19
Previous students	14
Prior university experience	9
Open days/Expos	3
Student services brochure	1
Course Coordinator	2

The survey results also indicated a high level of willingness to access services with 78% of students agreeing or strongly agreeing they would seek academic or personal help if required, now they were aware of the extent of support available. These findings and the doubling of the number of students reporting threats in 2016 were promising indicators our students felt more comfortable to disclose issues and seek support. Our Counselling, ALLS and Careers

and Employment partners all confirmed increased numbers had sought support and the value of our strategy in contributing to this:

“...some participants made contact with the Counselling Service and engaged in individual support, which they probably would not have done otherwise.” M. Herdy (personal communication, 23 January 2017)

“Following these presentations, students have taken advantage of this support... which according to our reporting statistics has resulted in significant numbers requesting assistance.” A. Thomson (personal communication, 23 January 2017)

“I think the value of this approach... is the follow up you carry out with students in their reflective SWOT analysis and throughout with referrals and self-referrals to these support services.” R. Turner (personal communication, 24 January 2017)

Future studies on the numbers of students seeking support, and when, would quantify the extent of the increase over the percentage who reported accessing services prior to the SSS (11-25% in 2016) and the nexus to the number of students disclosing ‘*threats*’ (46% in 2016).

**Table 4: Results of the 2016 student survey to evaluate students' experience of support services' introduction sessions: student impact**

Survey Statement (condensed)	Percentage of responding students who:						Mean score
	strongly agree 6	agree 5	slightly agree 4	slightly disagree 3	disagree 2	strongly disagree 1	
It was helpful to be made aware of the range of support services	39	47	8	2	1	2	5.1
Now that I am aware of them, if I have <i>personal</i> issues I would access support services	39	39	16	3	1	1	5.0
Now that I am aware of them, if I have <i>academic</i> issues I would access support services	40	39	15	3	1	1	5.1
If I was unsure of the best service to help I would contact my UC	39	38	16	1	2	1	5.0
If my friends had problems I could suggest where they might get help at QUT	39	45	12	1	0	1	5.1
It was useful in my transition to have support services staff talk in timetabled sessions.	38	43	12	2	1	2	5.0

*n=92-93 responses for each statement; mean score=  $\frac{\sum(\text{each scale rating (1-6)} \times \# \text{ responses})}{\text{total \# responses across all ratings}}$*

It was encouraging that 77% of students agreed or strongly agreed they would contact the UC if unsure of the best service to help. We believe this reflected the overt partnership approach used in delivery of this strategy with high visibility of the UC in all SSS, introducing and promoting our support services and partners, and partaking in interactive dialogue. Working with our support services staff is integral to the success of this strategy and aligned closely with QUT’s transition pedagogy framework in which ‘development of supporting academic and professional partnerships’ underpins access to learning and life support, engaging curriculum and establishing a sense of belonging (Nelson et al., 2014). Our partners recognised the value of the relationships formed, adding further weight to the intrinsic importance of ‘building partnerships’ for student success:

“...having this organised by academic staff and delivered during scheduled lecture time reinforces the value placed on those services by academic staff and should demonstrate to students that it’s OK to seek out assistance when they need some support” P. Sondergeld (personal communication, 24 January 2017)

“I find the opportunity to engage with first year students within their first semester invaluable... the fact that their lecturer has provided valuable classroom time, gives weight to the importance and value of our support... and allows us to personalise and normalise the idea of accessing our support.” C. Garino (personal communication, 24 January 2017)

The students who provided additional qualitative feedback all commented on the helpfulness of the sessions and that it was reassuring to know services were readily available. The following comment captures the essence of our goals – to increase awareness of support and normalise the disclosure of ‘*threats*’ and help-seeking behaviours:

“It was very helpful to be made aware of the plethora of services available here. I feel quite a bit more comfortable studying - in all honesty - once I realised help was always available - as a depression sufferer, this is excellent. Thank you”

## Conclusions and Future Directions

Using a personal SWOT analysis in combination with student-informed, face-to-face timetabled services’ presentations to support transition is a novel repurposing of a framework used in the business context. This is the first time a study grounded in SWOT analysis theory has been reported in the First Year Experience (FYE) discourse for this purpose. We used the SWOT analysis to ‘ask’ the students what impacted their learning. They grasped the conceptually simple tool rapidly and our findings showed it to be highly useful in supporting our students. It allowed us to become attuned to our students’ *individual* needs and recommend how and where to get help in the critical first weeks of their transition. Each year, we were humbled as we reviewed the SWOT analyses, and often struck by the acuteness with which the students’ conveyed feeling, the level of self-disclosure, and the complexity of personal and academic influences and challenges they experienced during their transition. The SWOT analyses revealed the number of students who would benefit from support was far higher than the number who reported they had sought help. Almost half of the 2016 cohort disclosed circumstances that would benefit from some form of academic or personal support. This was almost double that of previous years and allowed us to connect with an additional 24% of students, closing some of the gap highlighted by Baik et al., (2015, p. 40) who reported around 30% of students who need support would not seek it. This increased disclosure was coincident with the first iteration of this evolving strategy that included sessions for all of QUT’s frontline student support services prior to completion of the SWOT analysis. Our professional partners affirmed the value of this transition support strategy and reported increased numbers of our students attending and contacting services, in most cases first reaching out to whoever had presented the SSS.

The findings from our 2016 survey indicated just under three quarters of students knew about the support services available, but less than half knew of the scope and even fewer had made contact. In addition, survey data revealed only half of the students knew about the services from the university website and 20% from Orientation week. Universities place great emphasis on providing comprehensive orientation programs and digital content however, it was clear from our study this information and opportunities were not being accessed by all students. These findings have implications for all staff interacting with first year students and highlight the importance of not assuming commencing students are aware of the support that is available. In our transition strategy we brought support information to our students in timetabled classes, when they were in attendance, all was still ‘new’ and the ‘reality shock’ of being at university was setting in (Galatzer-Levy, Burton, & Bonanno, 2012; Geng & Midford, 2015; Krause, et al., 2005). Our students confirmed we bridged an important knowledge gap in their awareness of the available support services and resources.

Our integrated transition strategy incorporated a reflective, personal SWOT analysis in conjunction with curriculum-based ‘introduction to Support Services Sessions’. The findings of our four-year study validated its effectiveness in raising students’ awareness of their need and the support available, and as a mechanism to identify and offer personalised guidance



and feedback to students who needed support. Future iterations and refinements of this strategy will be targeted at spreading the word that *'it's okay to ask for help'* and promoting the types of support services available, in ways that aim to encourage and normalise help-seeking behaviours further. We want to reduce and connect with the 20% of students who are still somewhat reticent about accessing support services. In future surveys, a question that asks why a student chooses not to access services available will help inform the reasons behind this. A First Year Coordinator has been appointed in 2017, part of whose role is to 'get to know' individual students better and allocate dedicated time to follow up issues disclosed in the SWOT analyses face-to-face. As part of the FYE, a peer support network is being implemented, and through this student-facilitated network we hope to spread the *'it's okay'* message even further, reaching more of those with needs who still find it hard to approach the UC or indeed support staff.

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