

Evaluating the impact of the Learning Centre on student learning and satisfaction



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This paper discusses the importance of evaluating the impact of the learning centre on student learning and satisfaction at a regional university with a significant online presence. The foci of this article are the aspiration and challenges in creating a database to begin a formal self-evaluation process to help determine the benefits that student learning support programs have on student learning accomplishments in academic programs. An argument is made for how to evaluate a mature student learning support program in an era of change and high accountability expectations and how this framework will shape the creation and use of a database using existing data heretofore not collected, with potential capacity for linkages to other campus student record databases.

Keywords: CAS standards, learning activity programs, learning centre, self-evaluation, TEQSA

Introduction

An important component of the University of Southern Queensland's (USQ) *2009-2013 Strategic Plan* is to '[diversify] its operations to include a far greater mix of open and flexible programs that meet the education needs of its students' (n.d., p. 1). With its institutional mission highlighting the creation of fulfilling experiences for all students based on the commitment of skilled and caring staff and stated values of respecting the individual and success for all students has led to a defined performance objective of enhancing the learning journey. Thus for the past few years, the University has been actively involved in reviewing its student learning support activities and programs to evaluate their effectiveness and if these are sufficient to meet the aspirations of the Strategic Plan. This paper discusses the University's focus on its Learning Centre, the challenges and aspirations from creating a longitudinal database for the Centre's activities at the University's three sites for on-campus and distance learning students to (1) identify what Pascarella and Terenzini (2005) call the *interconnections* that are more likely to produce a more effective educational experience and (2) determine the value to the University community (Challis *et al.*, 2009) by providing the basis for self-evaluation in order to make appropriate determinations about access to and quality of services, resource need and allocation, and impact on institutional student learning.

Background: Theoretical concerns

Connection between student satisfaction and student engagement data

Student satisfaction and student engagement are two concepts that are mutually supportive because student experiences in formal and informal components of the academic system are the basis for students determining the extent of belonging and the benefit their university experience provides them (Tinto, 1987; Kuh *et al.*, 2007; Astin, 1985). Publications from the Australian Council for Educational Research [ACER] (n.d.) regarding the Australian Survey of Student Engagement (AUSSE) put forth the claim that there is a link between student satisfaction and learning experiences. In a regime where performance is measured by student satisfaction, Coates' (2006; Krause & Coates, 2008) call for the gathering and analysis of engagement data therefore makes sense because student engagement is at the

intersection between ‘student behaviour and institutional performance that colleges and universities can do something about, at least on the margins’ (Kuh *et al.*, p. 11).

From an institutional perspective, the issue becomes one of how to utilise student-focused data in evaluating academic and support programs targeted and improving student learning (or at least performance). The challenge and potential limitation is that ‘[s]ome of the more difficult to measure aspects of student success are the degree to which students are satisfied with their experience and feel comfortable and affirmed in their learning environment’ (Kuh *et al.*, 2007, p. 8). To mitigate some of the difficulties of measuring satisfaction, Krause and Coates (2008), suggestive of Tinto’s (1987) view of formal and informal systems, argue for a broad-based, multi-dimensional definition of student engagement. Gray and Daymond (2010), argue for expanding the definition even further by adding a holistic student-campus engagement dimension that promotes connections to the university which stimulate personal development and student motivation viewed from a customer satisfaction prism. Their rationale is that student satisfaction cannot be measured in a transaction-specific analysis; student engagement adds a dimension of student in the roles of learner and member of the university community linking to the institution’s service quality dimension. In contrast, Hu and Kuh’s (2002) proposed a more limited academic performance-focused definition of student engagement: ‘the quality of effort students themselves devote to educationally purposeful activities that contribute directly to desired outcomes ...’ (p. 555).

Learning centres as part of learning activity programs

While most of the literature concentrates on course and program activities, there has been much less attention to support programs and especially the impact of the different aspects of learning assistance programs (LAPs) have on student learning and satisfaction. This presents a potential analytical gap because research consistently indicates that comprehensive activity programs have a statistically positive effect on student persistence and graduation (Pascarella & Terenzini, 2005). In combination with Kuh *et al.*’s (2007) assertion that ‘[t]he single best predictor of student satisfaction... is the degree to which students perceive the college environment to be supportive of their academic and social needs’ (p. 53), in spite of the difficulties in collecting and then disaggregating data on the impact a learning centre has on student learning over time can provide an additional dimension in explaining a university’s contribution to student learning.

Coates and Ransom (2011) define support ‘broadly as the university’s interaction with a student, whether it be with academic or service professional staff, that enhances the study experience’ (p. 2). Drilling down to a more specific level, the definition of what a learning assistance centre within a LAP environment is has changed over the years (Truschel & Reedy, 2009). According to the Council for the Advancement of Standards in Higher Education [CAS] (2012), LAPs help students to succeed academically, facilitate student development, and develop in students appropriate strategies to increase learning efficiency. These programs usually provide individualised instruction in the form of tutoring, mentoring, academic coaching, and counselling, thus operating at the crossroad of academic affairs and student services (CAS, 2012). The nature of what learning centre activities as distinguished from other LAP activities or units entail as part of instilling knowledge requires the understanding of the broader learning environment (institutional, social, and educational) in which learning takes place (Entwistle, 2009). Areas needing further research are how and what type of data has to be gathered to measure student learning and improve LAPs because, as Trammell (2005, as cited in CAS, 2012) points out, LAPs have to demonstrate effectiveness and not only that they are providing services to students. Effectiveness needs to be viewed as to how well the LAP is aligned and supports institutional mission and in so doing, compliments the teaching happening at the university’s programs.

When there is an emphasis on online learning course offerings provides the additional challenge of demonstrating LAP effectiveness for online learners as well as face-to-face. A further challenge is added when the online program is international in nature. A third challenge may also come from pursuing an OpenCourseWare (OCW) strategy in online learning (cf. Huijser, Bedford, & Bull, 2008). Learning and learning assistance can be seen from the lens of student issues in general as per Krause,

Coates and James (2005, as cited in Msweli, 2012, p. 98) and/or more specifically from a support of international student perspective. Online distance learning (ODL) goals converge with those of internationalisation (Msweli, 2012) even if Elkin, Devjee, and Farnsworth's (2005) and Elkin, Farnsworth, and Templer's (2008) dimensions of internationalisation place the support of international students as a dimension occupying lesser importance in terms of rank order of investment and strategic prioritisation. Their findings regarding the lower priority may reflect the more traditional thinking evidenced in practice that LAP activities are primarily based on tutorial and workshop programs (Truschel & Reedy, 2009), be these face-to-face or online generic skills development workshops, subject specific task-based assistance/support, ancillary subject tutoring, or home-made or off-the-shelf web-based tutorial modules and programs. If the assumptions made by Elkins, Devjee, and Farnsworth (2005) and Elkin, Farnsworth and Templer (2008) are true, the premise that LAP is of secondary importance is myopic because as AUSSE data suggest that '[i]ndividualisation is a key component of successful support – students' perceptions that the assistance meets their specific needs increases student satisfaction and consequently retention' (Coates & Ransom, 2011, p. 2). As important is Coates and Ransom's (2011) observation that there are disjuncts between the support students need from universities to meet their goals/needs that may have adverse consequences ranging from unstated dissatisfaction to levying formal complaints to 'voting with their feet' and moving elsewhere or leaving higher education entirely. All three challenges identified above have potential adverse consequences for a university. At the least dissatisfaction has the potential to create a negative 'word-of-mouth'. This can impact future recruitment and create negative reporting widgets impacting quality assurance (QA) reporting of institutional performance. Worst case scenario has students permanently leaving the institution, thus costing revenue and adding to the cost of doing business because of the need to find replacement students.

TEQSA expectations for learning activities support: Some considerations

Tertiary Education Quality and Standards Agency (TEQSA) Provider Registration Standard 6.5 (2011) asks universities to identify and adequately meet the learning needs of students, with one of the identified elements being learning support. TEQSA Provider Category Standard 2.7 (2011) suggests that the Agency is placing an emphasis on student and academic learning support as an important component of resources for student learning in all disciplines offered, with Category Standard 4.4 (2011) looking at how these support activities help identify and support students who are/may be at risk of not progressing academically. Their approach could take more of a cost-benefit analysis toward evaluating student learning performance (e.g., Meyer, 2006). There is a further question of whether the emphasis of the review will be more on the student and student learning assessment than on process, especially when there is an online component that has to be taken into account (Meyer, 2002). Regardless of these two concerns, what seems a reasonable conjecture is that TEQSA is buying in to Kuh *et al.*'s (2007) proposition that student engagement represents two critical features: (1) the amount of time and effort students put into their studies and other educationally purposeful activities and (2) a proxy that demonstrates 'how the institution deploys its resources and organises the curriculum, other learning opportunities, and support services to induce students to participate in activities that lead to the experiences and desired outcomes such as persistence, satisfaction, learning, and graduation...' (p. 44).

Learning Centre at USQ

Offerings through The Learning Centre (TLC) at USQ represent the traditional approach toward service activities offered through learning centres: one-on-one consultations (tutorials) and workshops. Currently, the TLC provides support for academic language learning skills and mathematics at no cost to the students. This support is delivered as one-to-one (and small group) consultations, generic learning skills workshops (for both academic learning and mathematics) and online resources. This support is designed to provide assistance to all on-campus and online undergraduate students. Workshops are delivered face to face at the three campuses and online, via an online classroom environment.

The one-to-one (or small group) consultations are delivered either face-to-face, over the phone or via email with an academic staff member. At the Toowoomba campus, bookings by on-campus, online and external students can be made online. Bookings can be made in person at all three University sites. The consultations are only available during standard working hours, local time. Bookings are encouraged, but drop-ins are catered for if time is available. This encourages students who are studying off campus to book phone consultation in their “lunch hours” or book asynchronous email consultations.

There are approximately eight workshops for each academic learning skills and mathematics which include topics such as time management, writing academically, grammar, using a scientific calculator and mathematics refreshers, just to name a few. The online resources include self-tests for mathematics, to allow students to self-diagnose their mathematical ability and then develops a study plan to assist to develop the knowledge required. Other online resources include short “quick tips” flyers, larger self-paced content documents and short multimedia presentations for troublesome concepts.

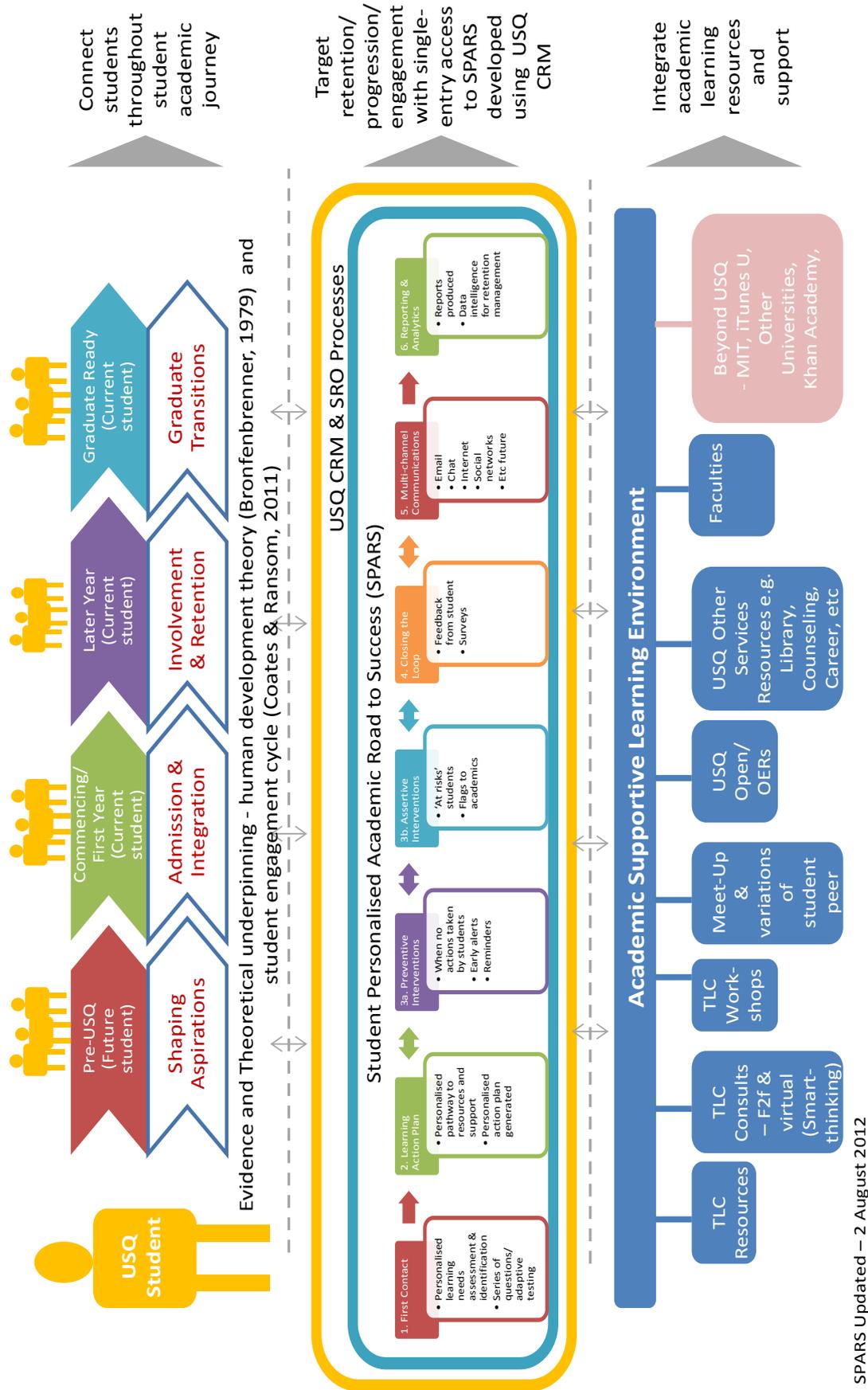
At present, USQ, as part of a University Participation & Partnership Program (UPPP) grant, is looking at its support program offerings as a means of improving student retention rates and increasing the number of domestic students from low socio-economic status (SES) backgrounds. The framework of this program, called the Student Personalised Academic Road to Success (SPARS):

... facilitates student academic success and experiences by *connecting and formalising* essential informal academic learning support, non-academic student support, administrative and strategic quality enhancement processes to *a single support point*. This is not a ‘one-size fits all’ solution but one of many in USQ’s suite of student support and services initiated to increase student retention/ progression as well as to enhance students’ experience throughout their journey in the university. (Kek, 2012, p. 1)

SPARS’ objective is one of integrating programs such as those provided by TLC, the Library and various elements from the University’s student services sector (Figure 1). One of its two outcomes is enhanced measurable student engagement in academic study skills development (Kek, 2012). To meet this outcome, it is in the University’s best interest to be able to measure the impact and influence these different non-academic support components have on student learning as measured by the Course Experience Questionnaire (CEQ).

Evaluating the impact of TLC

The heightened emphasis on accountability makes the review of learning even more management centric in spite of the ideal for leadership and managerial concerns being student centric (Marshall *et al.*, 2011). As a result, the early emphasis in establishing the evaluation framework at USQ is to focus on transactional data to demonstrate demand and extent of service rather than beginning to look at student success data. This also reflects a lack of capacity in accessing student success data from other university databases such as the student management system. Student success as defined by Kuh *et al.* (2007) – academic achievement; engagement in educationally purposeful activities; satisfaction; acquisition of desired knowledge, skills, and competencies; persistence; and attainment of educational objectives – therefore is subordinated to the perspectives of Scott’s (2003) forces of change: rapid increase in competition, significant decrease in funding from government sources, greater government scrutiny, a growing consumer’s right movement, and the rapid spread of information technology in education and training. Framing student success in managerial terms as we are doing is in keeping with Stufflebeam’s (2002) view that it is important for a program evaluation to align expectations and perceptions between evaluators, clients, and audiences. However, the evaluation has to enter a next level to provide insights to the educational quality aspects of student learning at TLC and not only the ‘business drivers’ that a significant online presence may suggest as the primary concern (Reid, 2005).



SPARS Updated – 2 August 2012

Figure 1: Conceptual framework for USQ student retention (Source: Kek, 2012)

The rationale for the changes occurring at USQ echo Holt, Palmer, and Challis' (2011) views regarding the profound change occurring for academic program development from the student support perspective. This is because at USQ both elements are housed within the same Teaching and Learning unit. Therefore, changes are part of our 'search for long-term strategic benefits' (Holt, Palmer, & Challis, 2011) From a standards-based evaluation approach based on explicitness and commitment to procedures and values (Stake, 2004), the question is how to be able to identify indicators and measures that are able to provide meaningful information. The CAS (2012, p. 8) standards dictate that LAPs must be intentionally designed; guided by theories and knowledge of learning and development; integrated into the life of the institution; reflective of developmental and demographic profiles of the student population; responsive to needs of individuals, populations with distinct needs, and relevant constituencies; and delivered using multiple formats, strategies, and contexts.

An evaluation framework for a maturing or mature learning centres, given the CAS standards and the views of those by Kuh *et al.* (2007), Scott (2003), and Meyer (2002, 2006) frames intentional, interconnected, and diversified learning support activities through the institutional lenses of student engagement and satisfaction, meeting individual needs of domestic and international students, value to the university and alignment to mission/vision, and TEQSA standards along with the larger social and policy concerns driving change. This is the goal driving the creation of the database and identification of indicators and metrics. Figure 2 demonstrates the evaluative framework once fully developed. At this point, the TLC can only be described as having a 'developing' framework precisely because we are at the identifying and developing antecedent and transactional data levels (Stake, 2004), beginning to form the processes and values that generate meaningful data for the unit.

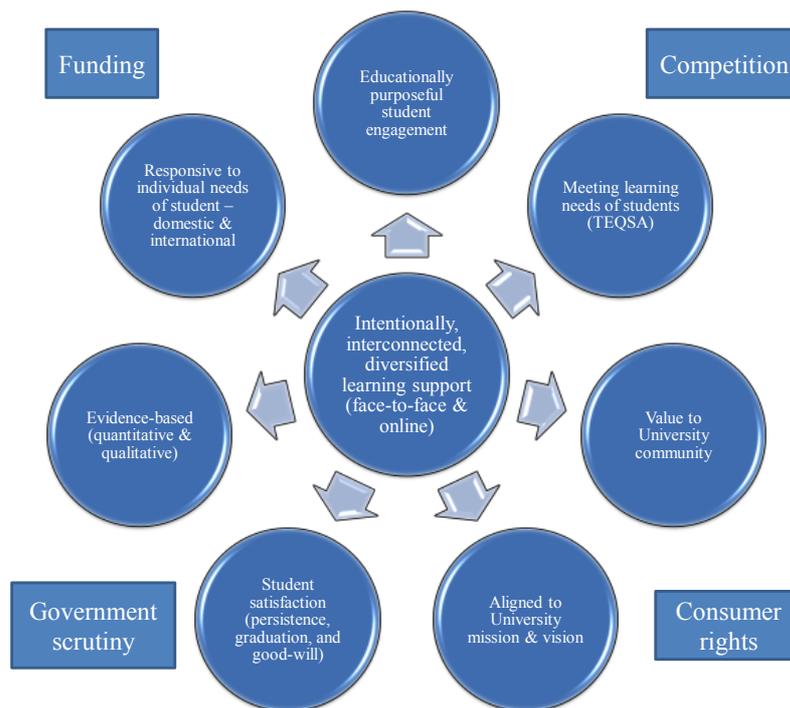


Figure 2: Where USQ has to go: Evaluation framework for a mature LAP

Establishing the basis for an evaluation of the USQ Learning Centre: Creating the database – description and quandaries

The discussion in the previous section is aspirational when it comes to evaluating TLC because, while the Centre has been active for a number of years, centralised and formal data collection to begin a formal internal evaluation process is new. Using Donaldson's (2009) five points of what delineates what credible evidence is, USQ is at the initial phases of generating useful data and evaluative

processes, only having met some of these points. There is an interest, but still missing is the identification of all of the questions of interest that can be answered through what is currently in place. Context in internal evaluation processes is what yields practical knowledge and influences organisational decision making (Volkov, 2011). In USQ's case, the context is changing for the activities by the Learning and Teaching Support (LTS) unit as will be seen below, requiring a rethinking of all aspects of the university's LAP. This is due to:

- a desire to reconsider LAP activities in light of an interest in expanding access to higher education (Huijser, Bedford, & Bull, 2008),
- a goal to establish best practices in the areas of persistence and increasing the opportunities for low SES students (Kek, 2012) who come to the University to successfully complete a degree and translate that degree to a fulfilling occupation (cf. Padró, 2012), and
- a need to meet the regulatory requirements per TEQSA standards.

Because of the changes in contexts, assumptions (Donaldson's third point on achieving credible evidence) that should be made by evaluators and stakeholders are not concrete, especially given the infusion of a student development approach into the new LAP structure. The only given at this time are the upcoming TEQSA standards. The evaluation theory used to guide this practice has been identified (Figure 2) and frames the emerging approach toward generating credible evidence. This is something USQ must do because the creation of the database provides a foundation for 'a clearly articulated assessment plan to document achievement of stated goals and learning outcomes, demonstrate accountability, provide evidence of improvement, and describe resulting changes in programs and services' (CAS, 2012, p. 23). What is still at the formative stages is the discussion regarding practicality, time considerations, and resource constraints beyond what has been already committed on an exploratory basis. Still evolving are the answers to two questions important in the management of evaluation processes: (1) 'What is the best science for this study?' and (2) 'What is the best way to make this science happen?' (Baizerman, 2009, p. 92).

LTS, as the provider of academic and student support programs, has been getting data in electronic and paper forms for minimum of three years to track support activities in academic language and learning and mathematics, but it was not formally collected for analysis and evaluation purposes until this past year. During this past year, all disparate data from the three campuses were collected and placed in an Excel spreadsheet. Data was collected by one academic and she cleaned up the data by ensure accuracy by cross-checking and, as needed, using other data to confirm the accuracy of the entry; established consistency in reporting from all three campuses; created algorithms to generate results from collected data; and determined what data is available for comparative purposes and/or trend analysis.

At this time, constructing the database has become a gap analysis to identify holes and limitations that need to be addressed. In other words, creating and performing due diligence on existing data provides a means to determine what other connections to databases are needed and/or what additional data can be captured to meet needs.

Data regarding one-on-one (or small group) sessions comes from the online booking system at the Toowoomba campus. These data from the other two locations are recorded manually, on paper. Currently this booking system is connected to the learning management system (LMS), only allowing access to certain parts of each student record.

When making a booking with Toowoomba staff, students are required to be logged into the LMS. Using the LMS, students are asked to indicate the course for which they need assistance with (voluntarily), give their contact number (the only mandatory field) and register. Students booking for an academic language consultation, have to identify what specific type of support they want.

Paper forms from the other locations have been inputted manually into the *Excel* master file. Figure 3 below identifies the data fields used to categorise these data. As a result of this exercise, we have found that data for these categories from the three campuses are available from semester 2, 2009 onward while data for the Toowoomba campus is available from semester 2, 2008 onward.

<p>Entry number:</p> <p>Semester, Year (e.g. S1, 2012):</p> <p>Type of week:</p> <ul style="list-style-type: none"> Teaching Mid-semester break Exam period End semester break Orientation Week <p>Location:</p> <ul style="list-style-type: none"> Toowoomba Springfield Fraser Coast <p>Broad support area (Academic Language and Learning, Mathematics)</p> <p>Type of contact (Drop in, booked)</p> <p>Actual time spent with student (in minutes)</p> <p>Contact type (Face to face, phone, email)</p> <p>Academic Language and Learning specific assistance options:</p> <ul style="list-style-type: none"> Question analysis Research strategies Reading strategies Referencing Assignment structure Logical presentation ideas Sentence structure Exams Oral Other <p>Learner advisor comment (optional)</p> <p>Course code</p> <p>Course level (Undergraduate or Postgraduate)</p> <p>Faculty from where the course is offered</p> <p>Enrolment type (on-campus, external or online)</p> <p>Enrolment Location (Toowoomba, Springfield, Fraser Coast)</p> <p>Date and time</p> <p>Appointment status (Complete, did not show)</p> <p>Student number</p> <ul style="list-style-type: none"> Student first name Student last name <p>Contact details (Supplied by students in online booking system)</p>

Figure 3: Data collected from TLC online booking system and drop-in forms filled out by students and staff

Creating a database from these sources has presented major challenges in data scrubbing to assure the accuracy and completeness of the data. The major concerns that have arisen are:

- the accuracy of the information students provided
- the consistency in filling out the forms by the academic staff

- the ability to capture sufficient information to provide a more accurate picture of students seeking assistance
- limitation of what data fields can be collected automatically
- an inability of the booking system to only handle future bookings and not account for drop-ins
- the incapacity of the booking system to handle more than one tutor for each broad area (academic language, mathematics), making the system difficult to meet student demand during peak periods.

For example, right now, we cannot capture information about whether a student is international or domestic, or if a student is from a non-English speaking background. We cannot know if a student is undergraduate or postgraduate. Decisions are solely based on the course the student requests assistance for. Another example where these limitations create a challenge comes from the potential for error arising from the assumption that has to be made regarding the students' accuracy when reporting the course in which they are enrolled. This capacity for entropy impacts the reliability of other data about which course the consult is supporting: the faculty from which the course is offered, the enrolment of the student in the course, and the year level of the course. Currently, students are not required to choose a course as such and they can ask for assistance for courses other than that selected when they show up for the session. This makes it difficult to track the actual support activity in relation to a particular course. In order to account for this shortcoming, when course information cannot be identified or is missing, it is registered as a missing value, and all other data reliant on the course information is labelled as missing. A third example of a gap providing a challenge has been the inability to fully capture data from drop-ins. Data for drop-ins was not typically recorded until Semester 1, 2012, requiring other forms of confirmation had to be pursued to ensure data accuracy in this regard.

Current considered use of database

Present use of the database is formative in scope, limited to identifying antecedent and transactional aspects of TLC services in mathematics and academic language and learning. The focus is in identifying how many different students access these services, when, and how often. As can be seen from the previous discussion and Figure 3, usage has to be linked to course and program in a more reliable manner. Because the database is not fully integrated to other student learning databases, it is difficult to go beyond this stage at this point; therefore, it is currently impossible to find out whether these services provide a benefit to at-risk students and/or those seeking HD grades, the desired next step relating to linking our activities to student learning measures.

Next steps

One frustration in this process is remembering that the creation of the database only provides the basis for a more comprehensive summative evaluative process. The *de facto* gap analysis the creation of the database provided shows how much further we need to go from an emergent phase in the evaluation cycle to a maturing phase, let alone a mature phase. For USQ, this means the immediate next step for the database is to provide evidence of the degree of usage of TLC to justify the resources currently given to it. Data are needed to evaluate historical resource and staffing patterns (who, when, how often, type of staff, etc.). This is consistent with an early phase approach to evaluation where managerial concerns are important. To move beyond the transactional evaluative level to an outcomes level (Stake, 2004), we need to identify the capacity to tap into student records. This way, we can mine data to determine whether TLC programs make a positive difference on students availing themselves of the services as well as identify the demographic of users of the consultations and workshops. TLC needs to corroborate the data reported in the AUSSE relating to the frequency of engagement with student learning support services (which currently has 34.93% of students never engaging these services, 41.41% sometimes engaging these services, 17.18% often engaging, and 6.48% very often). This is also important to distinguish the quality and level of benefit of services between on-campus and online learning students at this University, given that, according to the recent AUSSE data, only 6.5% of students do not study online while 37.4% of students at USQ report that their proportion of online study comprises nearly all or all of their study time.

More cannot be done yet because of the changing context of LAP as envisioned in the SPARS Project and its impact on TLC activities. As the project matures Patton's framework for clarifying goals (1997 as cited in Stufflebeam & Shinkfield, 2007) will help provide the needed focus in as far as outcomes, analytics and indicators, and data collection and analysis plans. The mid-term plan is to link the larger data collection and analysis requirements of the new SPARS Program to be able to generate evidence of the benefits to student persistence and enhanced student access opportunities so that we can see the strengths of the interconnections of this approach as envisioned in Figure 2.

Conclusion

An evaluational choice influenced by the program maturity phase is an attractive one (Mark, 2012). From an evaluative perspective, USQ is finding that historical neglect in collecting system-wide data from LAP activities is making the transition to TEQSA reporting a greater challenge. From a QA view, what we are doing is adding another lens through which to analyse student learning *vis a vis* student learning support. The catalyst of the SPARS Program is revising the context through which the interconnected learning support network is seen and analysed as suggested by Kuh *et al.* (2007) for on-campus, online, and external students. The model SPARS articulates a stronger leadership role for Teaching and Learning centres in adding to the student learning experience, potentially adding a measurable value-added dimension to this QA framework (controversies surrounding value-added notwithstanding). From an internal political perspective, this leadership role should translate to inclusion in the development of institutional policies related to student learning and representation in relevant committees (cf. Challis *et al.*, 2009) because of the impact academic development has on campus (Taylor, 2005). Meanwhile, from a standards-based external review perspective, there is interest because of the enhanced role that analytics play that is both assessment and evaluation-based. This paper has not touched upon the assessment aspect as it is beyond the scope of this discussion; however, the linkage of assessments to monitor student success, particularly with at-risk students, links student engagement with institutional inputs and outcomes as proposed by Astin's (1985) I-E-O model.

This paper brings together two issues: the impact LAPs have on student learning and the ability to measure that impact. TEQSA makes clear the expectations for performance have to be positivistic and somewhat framed from a cost benefit view. However, they do take LAP activity for granted in the sense that the important things are the outcomes of learning, persistence, and graduation. Any evaluation process of LAP activities must keep this in mind. The challenge for universities is that student engagement is multi-dimensional and that each dimension has a direct or indirect impact on student learning as measured by grades, engagement, AND satisfaction. Ergo the need to identify and use these interconnections to identify analytics that add to what these activities provide for students. USQ's exercise in creating a database to initiate a formalised evaluation structure of its LAP is an example of the challenges and steps required to understand and work through Donaldson's (2009) five points of what makes for credible evidence along with sound decisionmaking, feedback and reporting loops.

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