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Applying systems principles to achieve greater integration of student support at a decentralised institution

Abstract

The role of student support in enabling successful student outcomes is widely acknowledged. However, student support functions and the structures within which they reside often emerge independently at universities, and are seldom designed with integration in mind, leading to systemic inefficiencies. This paper draws on systems thinking to develop a framework to guide the assessment and improvement of student support. Following an exploratory case study design, we collected data on staff and student perceptions of student support by conducting semi-structured interviews and a focus group in a single faculty within a South African university. These data are analyzed alongside several documents produced by the faculty that refer to, and are part of, student support. We map four student support functions used by students within the faculty. These are: orientation, student advising, peer mentoring, and career advising. The analyses reveal that student support in the faculty does not constitute an integrated system and that this creates challenges in communication, continuity and efficiency of student support within the faculty. This paper argues that by adapting existing support structures to closer approximate an integrated system we can increase the efficiency of student support without the need for complete redesign or a significant increase in resources or staff capacity.

Keywords: *student support, decentralised, integration, systems thinking*

1. Introduction

South Africa has made significant strides in improving access to higher education, yet it still faces a number of challenges as reflected in low completion rates for the sector (59%) and prolonged times to graduation (Council on Higher Education (CHE), 2018). Black students are disproportionately affected by these success challenges (CHE, 2018) and loss to the system dampens transformation, not only in higher education, but throughout the country. It is clear that student success is not simply a function of providing access, indeed, providing access without appropriate support is, for many, not a meaningful

opportunity to succeed in the university (Engstrom & Tinto, 2008). In a study of South African universities, students report difficulties in navigating student support, becoming overwhelmed by the experience (Swartz *et al.*, 2018) and student retention data confirm that this is a factor for some students dropping out (Letseka *et al.*, 2010). The often-alienating culture of higher education can be a significant barrier to success (Grayson, 1997; Strydom *et al.*, 2016), and the quality of student support provided can therefore make the difference between retention and withdrawal (Kantanis, 2000; Lawrence, 2003; Croxon & Maginnis, 2006). It stands then, that if we are to take equity in student success seriously, we need to take student support seriously (Tinto, 2014).

While institutions may offer many support services to students, if this support does not work efficiently for students, then the support is not enabling success and we need to seriously re-assess these structures. But there is often little appetite or capacity for full-scale redesign of student support. This has been attributed to multiple factors, including reluctance on the part of institutional support structures to collaborate, a lack of regular assessment of the impact of support systems, and too few resources or too little capacity in overburdened systems (Zhang *et al.*, 2017). Additionally, there are also few guiding frameworks to help institutions assess and align their existing structures to become more efficient and effective (Tinto & Pusser, 2006). In general, institutions lack coherent frameworks for the management of multiple projects that work toward a particular goal (Tinto & Pusser, 2006; Ogude, Kilfoil & du Plessis, 2012). In this paper we draw on systems thinking to develop a conceptual framework for assessing student support structures and then make recommendations for greater integration and increased efficiency without the need for complete redesign, centralized control or significant investment in resources or human capacity.

1.1 Literature review

Student support

It is well known that student support services contribute to academic success (Hill *et al.*, 2003) by helping to decrease the university dropout rate and improve the student experience (Tinto, 1993). A recent Blackboard (2021) study indicates that well designed student support can also have a disproportionately larger effect on the experience of at-risk students. While the details differ, the provision of student support in higher education is ubiquitous and most institutions offer services that contribute to personal wellbeing, financial health, careers planning and academic performance. Among these, the most important are those which help students meet their academic, personal development and emotional needs (McInnis, 2004). However, student support services do not necessarily have the intended outcomes, especially when there is a mismatch between provision and accessibility (Dhillon, McGowan & Wang, 2006).

Student support includes both academic and non-academic functions, such as curriculum advising, career advising, peer mentoring, student wellness, and financial services. These tend to evolve independently, and are usually decentralised into different institutional structures that are often not intentionally integrated (Zhang *et al.*, 2017) to approximate an efficient system. Decentralisation itself is not a problem, however, a lack of integration is, because without mechanisms in place that allow for quick feedback between structures (Barki & Pinsonneault, 2005), there is limited communication and collaboration (Klempin *et al.*, 2019) between them, which can lead to confusion and fatigue for student users of these structures. The inefficiencies that emerge due to a lack of integration in student support are well known (Mann, 2020) and can be seen to create similar difficulties as poorly integrated health care systems that

limit workers' ability to identify diagnostic errors and monitor patients, create communication errors, and increase inefficiency, all of which contribute to poor patient outcomes as well as worker stress and burnout (Mathews & Pronovost, 2011). This is analogous to challenges in higher education where poorly integrated structures make it difficult to identify students at risk, maintain effective communication with students and ensure that students get appropriate help when they need it. To achieve integration in student support would require the coordination of many independent structures and functions (Tinto, 2014). This is where taking a systems approach to thinking about student support structures is of considerable value.

Systems theory

Systems are defined in different ways, depending on the context in which they are being applied (Checkland, 1984; Banathy, 1995; Musser, 2006; Benham-Hutchins & Clancy, 2010; Bridgen, 2017). Here, we define an integrated system as a set of components, i.e. structures working together as a complex whole to form an interconnecting network (Colchester, 2016). According to this definition, a system is further characterised as: (i) having a defined overarching purpose/goal that is commonly understood across structures; (ii) that work together to efficiently meet this purpose/goal; and (iii), that have effective feedback/communication channels between them (Colchester, 2016). The value in achieving integration through a systems approach is that as a whole, the support we provide to students could produce greater impact (be more effective) than the sum of stand-alone structures (Colchester, 2016). This is due to complexity, in that at each level of organisation within a system there are emergent properties that cannot be explained as merely an interaction of the parts at the lower level (Gershenson, 2011). Accordingly, an integrated student support system could be more effective and achieve greater impact than individual support structures working independently. Another advantage of adopting a systems approach in a decentralised institution is that it does not require central control of structures, but, instead, the development of connections and interdependencies (such as communication and feedback mechanisms) between them will enable them to work together in an integrated way.

Conceptual framework

A general challenge is that few guiding frameworks exist to help institutions assess and improve student support to become more efficient and effective (Tinto & Pusser, 2006) and in general institutions lack coherent frameworks for the management of multiple projects that work toward a particular goal (Tinto & Pusser, 2006; Ogude, Kilfoil & du Plessis, 2012). In this paper the authors address this challenge by developing a conceptual framework (Kivunja, 2018, Ravitch & Riggan, 2017) to assess and improve student support without the need for complete redesign or significant resource investment. This is particularly useful for institutions that cannot afford the time or resources for complete redesign (Applegate, 2012). Drawing on systems thinking, this paper provides a practical approach to achieving greater integration and efficiency in an existing support structure. We regard system integration as the process of linking together different components to functionally cooperate, allowing for flow of data and functionality between them, optimal communication and increased efficiency through improved decision-making (Intergration, 2022) which will ultimately create opportunities for monitoring and evaluation (Bourdreau & Couillard, 1999).

The framework requires that the student support structure to be assessed must first be defined. The components of support can then be intensively investigated to understand the function of each support structure and how they relate to each other. The data generated are

then evaluated against systems criteria to establish how well the structure approximates a system. Recommendations can then be made as to how the structure could achieve greater integration and therefore systems efficiencies.

The case study

In the South African University (SAU), academic units such as faculties and support services operate with a high degree of autonomy, and the functions of student support are devolved to multiple, structures within the institution (van Pletzen *et al.*, 2021) most closely resembling Kuhn's so-called 'decentralised model' (Kuhn, 2008). Our study site, Faculty X, is an academic faculty within the SAU. Despite having highly competitive admissions requirements, SAU also reports high attrition rates (22% of the 2013 cohort that enrolled in three-year non-professional degrees left without a qualification after five years) (SAU, 2018). The performance patterns are not random, but, following the national pattern, are largely defined by factors defining historic oppression, evidenced in the broader structural conflagration between race and socio-economic status (SAU, 2018). Our study site, Faculty-X, offers a three-year non-professional bachelor's degree. Faculty-X is research-intensive, and is a major contributor to SAU's international research rankings (Faculty webpage, 2021). However, when we compare undergraduate completion rates for Faculty-X in 2017 against the institutional average of 80%, they are 10% lower, with significant discrepancies between performance of historically disadvantaged (Black) students, and others (SAU, 2018). This racially defined pattern is referred to as the achievement gap, or the opportunity gap, as described by Engstrom and Tinto (2008). Along with completion rates lower than the institutional average, Faculty-X also reports that "student academic engagement and academic success are on the decline" (SAU, 2018: 127). This is not surprising, as when students are struggling with their discipline, they also tend to struggle to connect with staff and even each other (Baik, Larcombe & Brooker, 2019).

In this paper, we map four student support functions used by students within Faculty-X. These are: orientation, student advising, peer mentoring, and career advising. Orientation and student advising are situated within the central structure of the faculty, while peer mentoring is based in departmental structures. Career advising sits within a career services unit, which is a structure external to the faculty. To understand whether these support structures approximate a system, we used systems criteria to ask the following questions:

- To what extent are the existing student structures working?
- Is there a defined overarching purpose/goal for student support? If there is, how is that interpreted across structures?
- Are there feedback/communication mechanisms between structures and are they effective?
- What is the level of integration between existing structures?

The paper will answer these questions by analyzing existing student support within a single Faculty and comparing the findings to systems criteria.

2. Methodology

2.1 Ethical considerations

Participants in this study volunteered to be interviewed and provided informed consent for their views to be included in the study with the understanding that all individuals will be anonymized. Ethical clearance for this work was provided by an SAU research ethics committee (CHED REC 2018_25_van Pletzen) who provides oversight for responsible conduct of research.

2.2 Research design

This study seeks to understand in detail how the student support structures of a single faculty work together before comparing these findings to an idealized framework. This is therefore best defined as an intensive, exploratory case study (De Massis & Kotlar, 2014, Yin 2014; Gerring, 2016).

2.3 Sampling and data collection

For the interviews, we identified informants with a rich knowledge of student support functions and practices in Faculty-X. The following informants were identified and interviewed using semi-structured instruments: the faculty's Student Support Coordinator (SSC), who oversees advising in Faculty-X and has long experience as a student advisor; three departmental representatives, who coordinate peer mentoring programmes in three different departments in Faculty-X; and a Careers Service (CS) advisor, who represents an institutional student support service (that is, a service located outside Faculty-X). One focus group of five first-year students registered in Faculty-X provided information of the students' experience of the faculty's support structures. First year students were targeted as having most recently been through orientation, and having the most naïve experience of student support, making them information-rich informants (senior students may have acquired further knowledge through experience and may not be able to focus as clearly on the workings of the support systems itself). Interviews and the focus group were audio recorded and transcribed by a professional company.

2.4 Data analysis

The total sample therefore consists of four staff and five students. To analyse the data, we read and verified the transcripts, and discussed initial observations. Next, we coded the data, highlighting text of interest. We then generated and compared categories of findings, dividing them into themes until saturation was reached. Documents produced by Faculty-X for the purposes of student information and advice were a further data source, along with other relevant documents. As a method of triangulation (Gerring, 2016), we used content analysis of these documents and materials to identify patterns that supplement and align with themes described as findings emerging from the interview and focus group transcriptions. A complete list of data sources can be found in Table 1 below.

Table 1: List of data sources referenced in this paper

In text reference	Description
SSC_Interview	Transcript of interview with Student Support Coordinator (SSC)
Mentor_Interview1 Mentor_Interview2 Mentor_Interview3	Transcripts of interviews with coordinators of the peer mentoring initiatives in three different departments of Faculty-X
CS_interview	Transcript of interview with advisor in the Careers Service (CS)
Focus_Group	Transcript of focus group with first year students in Faculty-X
Handbook	This is a legal document, detailing the rules and regulations of the degree including what is offered in the faculty, class schedules, and important faculty contacts. This faculty book is given to students on registration at orientation. Available@url
SSC_Job Description	An internal document detailing the job description of the SSC for student support in Faculty-X.
Info_Booklet	A student guide for students of Faculty-X that includes information about orientation, student support services, important dates and contacts. It was produced in 2020, and also outlines registration procedures and other general information, including where to go to for help if needed. Available@url
Orientation_Guide	The schedule of events for the Orientation period. Orientation is a once off, eight-day event designed to allow first year students to register and transition into higher education. Available@url
Survival_Guide	A document produced by a student run postgraduate council. It includes a welcome message, council member details, contact details for support services, and a calendar of events for postgraduate students. Available@url

3. Findings

The student information booklet or 'Info_Booklet' describes student support functions and structures within the faculty and provides key contact details. We summarise this information as a schematic in Figure 1.

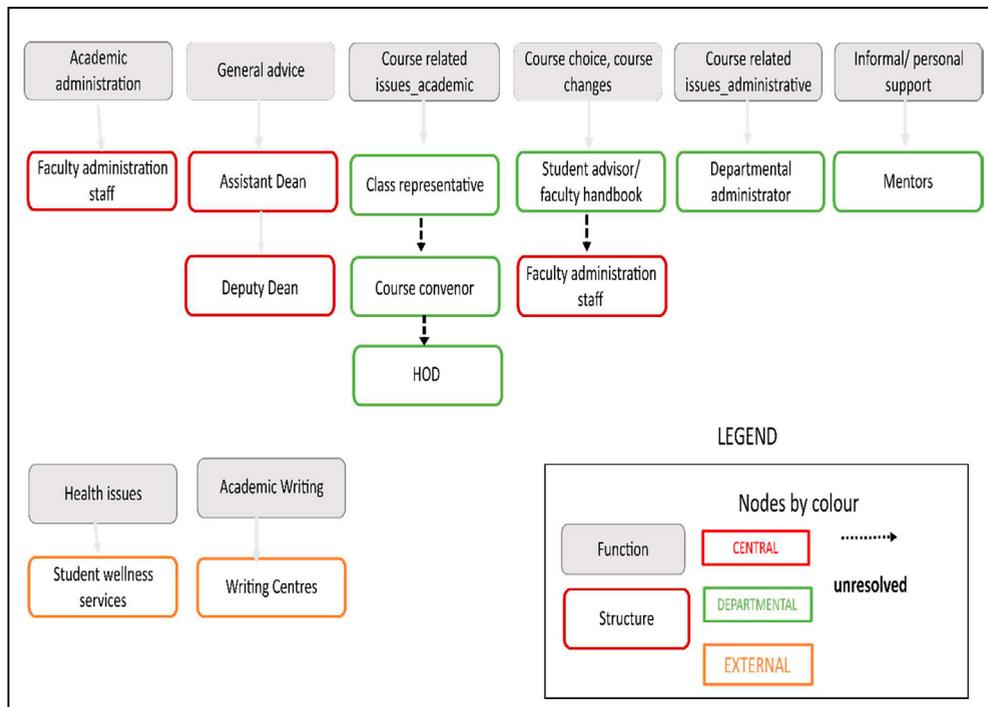


Figure 1: indicates that support functions are located centrally (within the Faculty office), in academic departments, or in institutional structures external to the Faculty.

3.1 Existing student support within Faculty-X

We undertook a detailed analysis of three support functions within Faculty-X, orientation, student advising, and peer mentoring and we identified several issues within all three functions that impact on their effectiveness (Fig 1).

Orientation is a set of activities scheduled over eight days. These activities aim at introducing incoming first year students to the institution. Data collected from students indicate that they experience the orientation programme in Faculty-X as somewhat misleading, rushed and overloaded, and that they find it difficult to make important decisions about their curriculum choices based on the information provided in one day (Focus_Group). Students (all participants are cited verbatim in what follows) are reportedly confused by the messaging of the programme:

“I think that the orientation we did is misleading. It’s happy, you’re all bubbly and I was like, ‘this is going to be fun’... Because like, it’s not going to be fun after that.”

Another student noted:

“Like I think we’re supposed to be told ... not in a scary way, but like just to inform us that like, it’s not going to be easy so don’t expect like you know, fun stuff and all those like, yeah” (Focus_Group).

The function of student advising is the responsibility of student advisors and the Student Support Coordinator (SSC) within Faculty-X, but both are overburdened. The student advisors who are responsible for curriculum advising are full-time academics and according to the SSC, advising is sometimes seen as a thankless task: “most student advisors still carry a regular academic load” and “there’s no formal recognition that they should be given a lower teaching job ... it takes its toll” (SSC_Interview). The role is seen as so burdensome that the Dean will ask staff to serve for only a year at a time (SSC_Interview). Additionally, the main resource of information used by advisors is the handbook, which is a legal and technical document that contains all the rules and requirements of the degree: “it is absolutely concise and accurate and technically sets out everything that governs the academic curriculum” (SSC_Interview) but is “... an impenetrable document” (SSC_Interview). It is also one of the first resources that students are directed to (Info-Booklet) even though it proves “extremely difficult for students to come to grips with it. And even students ... in advanced years, clearly still have not dipped into it, in the very basic way” (SSC_Interview).

The SSC, whose role is to advise at-risk students, as well as those with non-academic queries, is challenged by the fact that the faculty does not have in place a way to systematically identify at-risk students or specific processes to reach them. Instead, students are expected to approach the SSC voluntarily. Pro-active advising is offered by the SSC in the form of workshops, but these are neither mandated (not even for at-risk students) nor formally curriculated, and “it ends up actually being a smallish group who really stay the course” (SSC). The SSC also has limited capacity to deal with more senior students: “So the reality is I have concentrated my efforts mostly on first and second year... I mean it’s a matter of capacity as well, one can only do so much.”

The peer mentoring programme in the faculty has poor uptake, and a high attrition rate. Mentoring is a relationship in which a more experienced student shares advice and/or experiences with peers, in areas such as personal goals, problems, and interests (Nel, 2014). While attempts have been made to add structure to this function (Mentor_Interview 1), there is a struggle for continuity as the work is voluntary, unpaid and takes up a lot of time. First-year students are assigned a mentor and “mentors would then have to email them and set up meetings, and then at some undefined place and some undefined time and mentoring would happen” (Mentor_Interview 3). Mentor coordinators also describe attrition challenges “I sent an email out to the, to all the mentors to say come along, you know, this is the time, it’s going to be in this lecture room. Um, I got five people saying they couldn’t make it, and then, in the end, one person turned up. And that’s kind of indicative of, of how it’s been” (Mentor_Interview 2).

Together these data show that despite considerable effort these three existing student support functions within Faculty-X are not working optimally.

3.2 Purpose of student support

In the Info_Booklet, orientation is described as having three objectives: (i) to provide students with information to make the right choices about their studies; (ii) to prepare students for the academic challenges of higher education; (iii) to give students an overview of the support available in the faculty and institution at large. This is expressed independently of other information within the book, and orientation is not explicitly linked to any greater purpose for student support.

Faculty-X places high value, and therefore focus, on the function of student advising, which has, as its primary goal, the provision of curriculum advising (SSC_Interview, Info_Booklet). This is clearly explained in the Student information book, and each student is assigned to a student advisor at the start of their first year (Orientation_Guide). When the SSC was asked about the goal of advising within the faculty, answers included: “to help students understand technical requirements of the degree”; “to advise on curriculum choice”; and “to give guidance on credits”. When students were asked the same question, they also focused on their need for various kinds of academic information, for instance, as captured in this student’s comment: “I think, academic advising should be, I don’t know, sort of, information on what to do with your studies. Or like, advice on whether, I don’t know, on which subjects to, which electives to choose for your major... Another thing, the resources available to you... where to go when you need anything.” (Focus_Group). The student here picks up on the need for advice on non-academic issues, which according to documentation is the purview of the Student Support Coordinator, who is “available to assist you to cope with these new challenges, or to refer you to the right place to get the help you need.” (Info_Booklet:18). The SSC role includes being “available to intercept, if you like, a whole host of things”, including academic support, referral, running a developmental curriculum and providing one-on-one student engagement (SSC). Again, there does not seem to be an explicit articulation of how student advising contributes to an overarching purpose for student support.

According to the SAU Report (2018), peer mentoring is aimed at improving student engagement and a mentor is described as “a senior student who has been through what you are going through and can help you to make sense of life at SAU” (Info-Booklet:19). The three coordinators running departmental peer mentoring programmes who were interviewed for the study were asked what they thought the goals of peer mentoring were. Their responses included: “to make students feel a bit more comfortable and at home” (Mentor_Interview1); “to help with the psychosocial issues related to adjustment and transition” (Mentor_Interview1); to “create a little community, connections between junior and senior students” (Mentor_interview2); and “to be a mechanism for creating a sense of belonging and well-being” (Mentor_interview2). Nowhere is it articulated how and why this programme promotes student engagement, or how this is part of a larger student support strategy for the faculty.

The primary document that describes student support in the faculty is the Info-Booklet, which is a student resource. The book places significant emphasis on support for academic issues, and while it describes many types of support, it does not communicate an overall purpose or strategy for student support within the faculty, or how the various functions might contribute to this purpose. While support functions analysed in this paper do articulate their own goals, there does not appear to be a commonly held, well communicated, overarching purpose for student support for Faculty-X students.

3.3 Feedback and communication

The faculty sends a strong message that, while support is provided for students, success is entirely dependent on the student’s willingness to engage with this support. This sentiment is communicated in the Dean’s message: “While we undertake to provide you with a high-quality, internationally competitive education, your success in your studies depends largely on you... There are many services available to assist you, and I encourage you to make use of these throughout the year” (Info_Booklet: 3). However, it is unclear how students are to make sense of and navigate the support that is on offer. Neither the documentation nor the interviews

clarify how these structures relate to one another, or how students should know where to start when they need help. The student information booklet itself is not laid out according to any explicit organising principles, and it seems that the structures (Fig 1) operate relatively independently of one another. For the student user, this means that they will need to need to unpack their own query, decide for themselves which function is best suited to helping them, and start there. If they make a mistake in this assessment, they will likely end up repeating their query many times.

Further to this, communication channels with students are challenging. All staff interviewees report difficulties, one saying that “they [students] simply don’t read emails”. Students also express frustration of not having the information they need. This is described by one mentor coordinator as follows: “I get comments from students at the very beginning of the year going, you know, this or this person hasn’t sent any announcements, and ‘I don’t know what’s going on’, and ‘I don’t even know where I’m supposed to be going to lectures’. And my first reaction was, ‘wow, you know, this is terrible, you know, they’re, they’re not giving them any information, the students are really lost’” (Mentor_Interview 3).

There also does not appear to be a strong community of practice for support providers within the faculty. Student advisors only meet occasionally around high-volume advising periods to discuss logistics and other technical issues (SSC), and there is no official training for mentors or student advisors within Faculty-X. The mentoring coordinators find this frustrating, noting that “it’s not easy to know what the right structure is” or “what works”. Even communication with the peer mentors is difficult: “Training is largely ad hoc and informal, we would appoint students; we would give them a training session in the week prior to term and then we would appoint them” (Mentor_interview1-3).

The faculty also does not have a good communication strategy for collaborating with important external functions, such as career advising. The Careers Service at SAU is an external support structure, which provides the important function of career advising, i.e., providing information, advice, and opportunities to students to support their career planning. In Faculty-X, which offers a formative rather than a professional degree, there is acknowledgement that many students are unclear about how the degree relates to their future careers, for instance: “there are a large proportion of students who don’t know why they are here and what they are doing.” (SSC). Despite this acknowledgment there is only a limited, ad hoc relationship with the Careers Service, in that student advisors and the SSC only “occasionally refer students to the Careers Services” (SSC). In the Info-Booklet the Careers Service is listed under “general information” section between security and disability services, and not in the section on student support. The lay-out of the Info-Booklet therefore does not recognize the importance of careers advising. This is confirmed by the Careers Service advisor interview, where it is stated that even very experienced academic staff within Faculty-X have no idea that the Careers Service exists, or what they do and collaboration between Career Services and Faculty-X is dependent on personal relationships between staff members, rather than systematic use of the service (CS_interview).

Despite offering a number of support functions there is a clear lack of effective feedback or communication between structures or with student users of support in Faculty-X.

3.4 Integration

Integration requires that there be mechanisms in place that allow for quick feedback between support structures (Barki & Pinsonneault, 2005), such as communication channels. But the data shows that there is limited communication and hence collaboration between the support structures of Faculty-X. For example, the three mentoring programmes are run in three different departments within the faculty. The SSC is meant to have “responsibility for management and coordination of academic and general student support as well as the planning and implementation of key strategic interventions in the Faculty” (cf. SSC_JobDescription). The SSCs however admit that they do not “really know what happens in the departments”. All three mentoring coordinators report that there is no consultation with the central Faculty Office regarding the setup of their mentoring programmes (Mentor_Interview 1-3). This lack of coordination leads to overlap and high attrition rates because “there is too much on offer, students can’t meaningfully engage with all of it” (Mentor_Interview 2). The result is that students appear to be overwhelmed and either disengage, or ignore communications (SSC). Support structures do not work as an integrated system therefore a lot of effort, time and goodwill invested that often has very little return in terms of student engagement (SSC, Mentor_Interview 1).

4. Discussion and recommendations

Well-integrated and efficient student support in higher education is known to promote better student outcomes (Klempin *et al.*, 2019). Here, we assess support structures in Faculty-X at SAU against systems criteria and make recommendations on how to achieve greater efficiency through better integration of student support, without the need for redesign. In our assessment of four support functions used by students of Faculty-X, we found that the existing student structures within the faculty are not working optimally, that there is no clearly articulated overarching purpose/goal for student support that is commonly understood and shared across structures and that the existing feedback and communication mechanisms are inefficient. Alongside this sits the case of potentially high turnover of student advisors and mentors, without a systematic approach to training of these support providers to ensure continuity of service. Conspicuously missing from the data is any mention of a process, protocol, or system for sharing of student case files, notes, or history of their engagement with support services, i.e. a feedback mechanism. Based on the evidence, we can conclude that the existing student support structures do not constitute a coherent and integrated system.

The case of Faculty-X is not unique. The functions of support in higher education are often decentralised into various student support structures that are not always integrated towards a defined and agreed upon goal (Bridgen, 2017; *Achieving the dream*, 2018). This is often more pronounced in institutions using decentralised, faculty-only and/or shared organisational models of student support (Tyton Planning, 2017), which is the case at SAU. In such an environment, student support is often more reflective of the characteristics of the siloed structures than it is of a coherent alignment of practices aimed at providing a more seamless student experience (Education Advisory Board, 2018a, 2018b). However, a lack of cohesion across the structures leads to student fatigue, wastefulness and inefficiency (*Achieving the Dream*, 2018), making it important to think carefully how we might be able to facilitate better integration. By applying systems thinking, it may be possible to create a more integrated way of working, without redesigning an entire support infrastructure or even increasing capacity.

Our first recommendation is to set clear goals for student support. Developing a conceptual framework of an overarching goal, sub-sets of goals, outcomes for student support and identifying areas of responsibility, management, and accountability, would contribute to monitoring and improvement of the system (Melander, 2005). These goals should speak directly to student success challenges that have been identified. All systems in a higher education institution should ideally be designed to contribute to the goal and educational mission of that institution (Melander, 2005). In the case of Faculty-X, high attrition rates have been identified, as well as a significant racial achievement gap and low-level of student engagement (SAU, 2018). We recommend that an overarching goal for student support be defined in terms of mitigating these challenges and identifying how existing support structures and the functions contained within them could each contribute to the sub-goals. To do this will require consensus from distinct and interdependent organisational structures to work towards a common goal. The benefit to this process is that it creates a shared ownership of the goal (Achieving the dream, 2018) and makes it much more likely that staff will be willing to make the necessary changes to achieve this goal (Barki & Pinsonneault, 2005).

Our second recommendation is structural in nature. For integration to be realised, it is not enough to engage support providers; there is also a need for high-level leadership in designing, reviewing, and implementing the student support strategies. In this respect, a centrally based student support coordinator could take responsibility for implementing the overall student support goal by facilitating coordination of various student support functions, such as peer mentoring and student advising. Research shows that students who meet with advisors more frequently tend to report higher levels of persistence (Klepfer & Hull, 2012), and in one study, the likelihood of first-generation students persisting increased by 13% with every advisor meeting (Swecker, Fifolt & Searby, 2013). However, if advisors are overloaded and engagement with students is cursory, the student may leave unsatisfied and not return. Coordinating across functions could reduce some of the overlap in the system, allowing overloaded structures to devolve some activities to other structures, for example, in this case study, student advisors in Faculty-X might make more referrals to the Careers Service or peer mentoring programmes. Central co-ordination of structures will also create a more efficient flow of information between support structures and with students themselves, which is particularly important if higher education were to shift further online and students were to spend less time on campus (Betts, 2009).

Thirdly, we recommend a well thought out training programme for all support providers. A training programme facilitated at central level for all incoming staff would ensure that the central goals, ethos, and protocols for support are communicated to all support providers. This is particularly important to ensuring a consistent quality of advising and referral across the system (Bloom *et al.*, 2007). The quality of staff engagement with students can play a role in retention (Tinto & Pusser, 2006), as knowing that staff do care can positively impact a student's level of commitment and engagement (Chickering & Gamson, 1987). Proper training of support providers that includes a coherent understanding of existing structures will also create more points of contact for students and lead to greater accuracy in referrals (Achieving the dream, 2018). Very few students enter higher education with the capacity to make a multitude of choices and looking for support is often an overwhelming and confusing experience (Lowenstein, 2005). This can impact on future help-seeking behaviour, which has been shown to be positively associated with academic success (Karabenick, 1998; Lee, 2007). In a survey of student services in an Australian university, the authors describe how

students dislike having to “hunt” for help (Bultjens & Robinson, 2011). Having more points of contact with well-informed support staff makes it easier for students to find the help they need quickly, which can contribute to persistence, which is in turn correlates with better student outcomes (Klepfer & Hull, 2012; Swecker, Fifolt & Searby, 2013).

Finally, we recommend the introduction of feedback mechanisms, which allow for the flow of information between the structures/components (Colchester, 2016), providing a kind of control over the system as a whole. A platform for data sharing such as a case management system (CMS) for student queries that is shared between structures is a type of feedback mechanism. This tool is increasingly used in higher education to assist students who are struggling with navigating the services and resources on campus (Wilson *et al.*, n.d.), including academic advising (Pierce, 2016). A CMS enables student information to be “tracked and managed in a way that allows information to be captured, understood and shared to best support the student” (Texas, 2021). Having such a system in place will allow for a flexible, coherent, transparent and systematic approach to student support.

4.1 Implications of the study

In this paper the authors develop a conceptual framework to assess student and provides practical recommendations for improvements. This approach has allowed us to review student support within a university site and make recommendations towards greater integration without additional staffing or resources, but through setting an overarching goal for student support, alignment of practice between support structures, increased training, and the introduction of better communication and data management strategies.

5. Conclusion

Many students do not know what they need, especially at the start of their academic journeys. Support provided should enable them and not add complexity to their journey. South African higher education faces significant challenges related to student success. The university in our case study reflects some of these issues, particularly in relation to equity of outcomes. If we are to take student success seriously, we must design student support intentionally with student success in mind (Tinto, 2014). Without the luxury of being able to design our systems from scratch, we need to consider adapting existing structures so as to be more efficient both for staff and students (Applegate, 2012). Applying systems principles to achieve greater integration of services could offer a powerful way to enable student success and provide an overall improved student experience.

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