

# Chapter 6

## Agile Student Development and Engagement for Learning

### Introduction

As has become clear by now, within an agile PBL ecology for learning, there are four interrelated systems or environments that feed into each other and depend on each other. In this chapter, we turn our attention to the exo-environments surrounding the students' immediate formal micro-environment where learning, teaching and assessment interconnect to initiate the development of students' ways-of-being and them becoming change ready for supercomplex future contexts. Our imagining of the 'new' university for learning will not be complete if we do not discuss these environments and systems. While students are not directly situated in them, the decisions and actions of actors and systems situated in exo-environments can influence the development of their 'ways-of-being' by enhancing student engagement.

In this chapter, the focus is on student development and engagement and how the whole university environment – people, policies, tools and systems – academic teachers, professional staff, administrators and managers must be interconnected and take a whole-of-university approach to be able to codevelop a way-of-being and becoming. The future university for learning must consider the whole development of a student – emotions and affect as well as cognitive and performative development in terms of learning knowledges, competencies, dispositions and skills. Thus, this would involve the continuous interaction between the various systems of the agile PBL ecology for learning.

Based on this model, a university for learning applies an integrative, rather than an add-on or bolt-on, approach to engage students. By interconnecting the four university environments for learning, consequential, immediate and micro level student success, in the form of learning and development outcomes, can be achieved. Furthermore, consequential, distal and institutional student success, in the form of retention, progression and completion rates, can be achieved as well. It is only when the micro-system, i.e. the curricular environment, and the exo-system, the non-curricular environment, are interconnected and viewed as a totality that we are able

to say that the university for learning is *mattering* (Schlossberg, 1989). A mattering institution sends a clear signal to the students that they matter, which then propels them to engage in their learning and development, and this in turn is part of fostering development of the self and of professional and/or academic identities, precisely because they feel they mattered. In return, mattering institutions would expect to experience high student success, in the form of retention and educational outcomes such as lifelong learning (Kuh et al., 2005; Pascarella, Seifert, & Blaich, 2010; Schlossberg, Lynch, & Chickering, 1989; Trowler & Trowler, 2010).

This chapter draws primarily on the student development literature, which covers the factors that play a crucial role in facilitating growth in university students (Evans, Forney, Guido, Patton, & Renn, 2010). We discuss integrative theories that address student development and student engagement and in particular theories and frameworks that examine a range of contexts that affect students emotionally and academically, in line with our discussions in this book of an agile PBL ecology for learning. Ultimately then, we discuss strategies and practices in student development and engagement in pursuit of developing a ‘way-of-being’ and of becoming an agile PBL university that is serious about its position in the overall ecology and recognises its associated responsibilities.

## Student Development

We have considered the literature on student development for guidance to understand what students experience when they enter and graduate from universities. Student development is ‘the ways that a student grows, progresses, or increases his or her developmental capabilities as a result of enrolment in an institution of higher education’ (Rodger, 1990, p. 27, as cited in Evans et al., 2010). It is a philosophy that is concerned with the development of the whole person, where interventions, programs and services are focused on encouraging learning and student growth. Citing Miller and Prince (1976, as cited in Evans et al., 2010), Evans et al. explain that most of the student development programs and services in higher education apply human development concepts, particularly in the North American higher education sector. A central view shared by most human development theories is that every student can be expert in increasingly complex developmental tasks and strive to be self-directed and autonomous. Similar to an agile PBL ecology for learning, it is also underpinned by concepts from human development – where Bronfenbrenner’s bioecological model of human development (Bronfenbrenner & Morris, 2006) was mostly used.

## *Student Identity*

One of many human development concepts that are important to agile PBL ecology for learning and our central premise underlying agile PBL teaching, learning and assessment is students' formation of their identities during their undergraduate experience. Inherent in agile PBL's becoming or way-of-being is a student's sense of identity. The seminal work on student identity by Chickering (1969) is crucial here. He introduced seven vectors of development that contribute to the formation of identity, based on a psychosocial perspective. The term vector is used here to depict the direction and magnitude of development, expressing that the progression of development is not linear but full of twists and turns during a student's journey in higher education. This progression of development is applicable to adult, mature students and traditional high-school leavers, as well as to face-to-face or virtual and online learning environments. However, it is based on the recognition of the interconnectedness presented in an agile PBL ecology for learning.

In the updated theory by Chickering and Reisser (1993), the seven vectors present a more contemporary and comprehensive picture of the psychosocial development of a student during their time at university:

- **Developing competence**

Competence is expressed as a three-tined pitchfork, the three tines being intellectual competence, physical skills and interpersonal competence. Intellectual competence involves acquisition of knowledge and skills related to the disciplinary or professional academic subject matter, as well as development of intellectual, cultural and aesthetic sophistication and critical thinking and reasoning ability. Physical competence comes from participation in athletic, recreational activities, artistic and manual activities and wellness programs. Interpersonal competence includes communication, leadership and collaborative skills. The handle, if the tines are doing their work as imagined, comes from students' sense of confidence that they can cope and achieve goals successfully.

- **Managing emotions**

During their time in higher education, students develop the ability to recognise and accept emotions, how to express them appropriately and how to control them. They will also learn to act on those feelings in a responsible manner. This vector includes a range of feelings, including anxiety, depression, anger, shame, guilt, caring, optimism and inspiration. This is sometimes referred to as emotional intelligence (Bar-On & Parker, 2000; Boyatzis, Stubbs, & Taylor, 2002; Gross & Thompson, 2006).

- **Moving through autonomy towards interdependence**

This vector is about students developing increased independence from a need for a constant supply of reassurance or approval from others to 'instrumental independence' (Evans et al., 2010, p. 68), which is characterised by self-direction, problem-solving and mobility. As they move through their programs, students learn the importance of interdependence, of being interconnected with others.

- Developing mature interpersonal relationships

This vector is about the development of intercultural and interpersonal tolerance, respect of differences and appreciation of commonalities. It includes the capacity to build and sustain rich and healthy relationships with others.

- Establishing identity

This vector is an extension of the vector about developing mature interpersonal relationships. Student identity development also includes ‘comfort with body and appearance, comfort with gender and sexual orientation, a sense of one’s social and cultural heritage, a clear self-concept and comfort with one’s roles and lifestyle, a secure sense of self in light of feedback from significant others, self-acceptance and self-esteem, and personal stability and integration’ (Evans et al., 2010, p. 68).

- Developing purpose

The sixth vector concerns students developing clear career goals, making meaningful contributions to specific personal interests and establishing strong interpersonal commitments. This includes making purposive, intentional decisions in the face of opposition or barriers.

- Developing integrity

The last vector is a three-sequential, overlapping stage of student identity that involves humanising values, personalising values and congruence. First, students progress from a usually rather rigid and moralistic view of others to development of a more humanised value system where interests of others are viewed and balanced with their own interests. Next, a personalised value system is formed, acknowledging and respecting beliefs of others. Over time, these values and actions become more salient as their self-interests are balanced by a sense of social responsibility.

Chickering and Reisser’s (1993) seven vectors serve to remind us that one of the many responsibilities, and indeed the purpose of universities as creators and implementers of educational environments, is to develop and support the development of student identities, as well as disciplinary or professional declarative knowledge as students move in, move through and move out of a university for learning and move into a future supercomplex society. It is important to keep in mind that while this implies a neatly packaged block of ‘time at university’, we do not consider it to be a fenced-off block of time; instead, time at university in an agile PBL ecology for learning is seamlessly linked to learning environments inside and outside the university, formal and informal learning and curricular and co-curricular activities and thus forms a continuum, rather than a separate experience. However, this does not mean that the formal educational environment is not important and contributes in crucial ways to developing lifelong learners. Indeed, it is Chickering and Reisser’s proposition that the educational environment is the most powerful influencing factor on student development, even if it was written before the ‘digital revolution’:

- Clear and specific institutional objectives to make the values of the institutions evident to students and staff, which then leads to greater consistency in policies, programs and practices.
- Meaningful opportunities for involvement and significant participation in campus life and consequently more satisfaction with the university experience.
- Extensive and varied student-faculty relationships facilitating development.
- A relevant curriculum that is sensitive to individual differences, offering diverse perspectives and helping students make sense of what they are learning.
- Teaching strategies should include active learning, student-faculty interaction, timely feedback, high expectations and respect for individual learning differences to affect cognitive development in the form of active thinking and integration of ideas, encouraging interdependence, cooperation and interpersonal sensitivity.
- Peer and student communities provide significant interactions to encourage development along all seven vectors. Communities can be formal or informal groups. To have maximum positive benefit, the community should interact regularly, offer opportunities for collaboration, include people of diverse backgrounds, be small enough so that no one is left out and serve as a reference group. The student-to-student communities and interactions are so important that Chickering and Reisser (1993, p. 392) claimed that ‘a student’s most important teacher is often another student’.
- Faculty and student services staff working collaboratively, which is necessary to provide developmental programs and services for students.

### *Adapting to Changes Throughout a Student’s Learning Journey*

Schlossberg (Goodman, Schlossberg, & Anderson, 2006, 1981, 2008), a human development theorist with specialisation in counselling, observed that every individual, young or old, continually experiences transitions during their lifetime – where life stage is more important than chronological age of the individual. These transitions do not occur sequentially nor does everyone experience transitions in a similar manner, but such changes often result in new roles, relationships, routines and assumptions. She also noted that adapting to transitions is often complicated, and students have to be supported to adjust to transition changes, from entry to a program and an institution through to graduation.

Transition is defined as ‘any event or non-event that results in changed relationships, routines, assumptions, and roles’ (Goodman et al., 2006, p. 33). An individual’s reactions to transitions depend on the type of transition, the context in which it occurs and its impact on their lives.

- Types of transition

Transitions can be predicted, which is known as anticipated transition. Such transitions are usually major life events such as entering university, graduating from a university or starting a first job. Unanticipated transitions are often

disruptive events that occur unexpectedly, such as falling really ill during studies, a serious car accident or surgery. Non-event transitions are the expected events that fail to occur, such as not getting into a preferred program of studies and not getting admission to the desired university. The individual's perception of the transition plays a more important role than the transition itself, that is, the transition only exists if the transition is defined by the person experiencing it (Schlossberg, 1981, p. 5).

- Context

Context of the transition refers to the relationship of the individual to the transition and setting in which the transition occurs (Goodman et al., 2006, p. 40). The transition may be related to the self, friends, family, work, health or finances/economic well-being.

- Impact

For an individual undergoing transition, it is not the event or non-event that matters, but its impact – the degree to which the transition changes one's daily life (Goodman et al., 2006, p. 37), in terms of relationships, routines, assumptions and roles.

### *Stages of Transition*

Transition is a process that takes time and has no end point. Essentially, the individual moves from a preoccupation with the transition to an integration of the transition. Schlossberg described the transition process or cycle as a process over time that includes moving in, moving through and moving out (Goodman et al., 2006; Schlossberg, 1997, 2008; Schlossberg et al., 1989). Each of these three phases has their own issues and challenges.

The move-in phase is when individuals move into a new situation, leaving their known contexts behind. In the higher education context, we identify this phase with groups of students moving into a university or higher education context to pursue a degree, also known as commencing students. In this phase, students start the process of 'learning the ropes' (Schlossberg, 1997, p. 94). They need to be familiar with the rules, regulations, norms and expectations of the new environments, including the university in general, and the programs and/or courses of studies. Institutions are encouraged to devote a great deal of time to orientation, a process designed to help individuals know what is expected of them (Goodman et al., 2006), and many institutions do so, that is, in the form of an institution-wide or faculty-wide orientation for first year and commencing students. Again, we need to keep in mind that the idea of a neatly packaged time frame for a degree is eroding and that for a considerable number of students, doing a degree is increasingly becoming a fragmented experience, whereby they move in and move out of their studies at different stages of their lives.

After moving in to a new experience, once the students know the ropes, the moving-through or ‘in-between’ (Goodman et al., 2006, p. 50) phase begins. Students begin the process of adjustment, balancing and managing their day-to-day life that includes work and studying, family, university life and so on (i.e. it spans the four systems of an agile PBL ecology for learning). The moving through can be described as a ‘hang-in-there’ phase (Schlossberg, 1997, p. 96). This is a phase where students face many tasks, issues and challenges, such as the ones posited by Chickering and Reisser (1993). Therefore, students in this phase require continuing support to sustain their commitment, goals, confidence, motivation and persistence in learning and staying on in the institution.

The last phase, moving out, is a process associated with passing or exiting the familiar university or higher education environment (graduation) and beginning a move into some new setting such as starting postgraduate studies or work. According to Schlossberg (Goodman et al., 2006), students at the moving-out phase experience feelings of grief, and they might be fearful of the unknowns because they are leaving behind familiar surroundings, people and structures that they have grown accustomed to. However, this only applies if these two phases are conceptualised as separated by rigid boundaries. Within an agile PBL ecology for learning, the ‘exiting’ phase is imagined to be much more drawn out as the world outside the university (macro-system) is a seamless part of the ecology. Thus, the boundaries between the micro- and meso-systems on the one hand and the macro-system on the other are significantly blurred, thereby reducing the feeling of grief, traditionally associated with this phase.

## **Student Engagement: Connecting Students to ‘Becoming’**

The two student development concepts show that students’ learning journeys when they enter university to gain their degrees are not a simple matter of just acquiring academic or subject matter knowledge or just doing a degree to get a ‘job’, even if this is often an important reason for obtaining a degree. However, in an agile PBL ecology for learning, these students learn the skills, competencies, attributes and values, in tandem with declarative professional and/or disciplinary knowledge, so that they learn a ‘way-of-being’ and become an individual of ‘potential’ – their personal and professional/disciplinary identities – as they interact and navigate the social settings in the university and beyond, progressing through their university studies as contributing members of society (Hinchliffe & Jolly, 2011; Holmes, 2013; Lairio, Puukari, & Kouva, 2013).

Much like the ‘liminal space’ in Meyer and Land’s (2005, p. 375) threshold concept, it refers to a transitional space students encounter when they move in and out of learning. It is a metaphor to describe ‘the conceptual transformations students undergo, or find difficulty and anxiety in undergoing, particularly in relation to notions of being ‘stuck’ (Meyer & Land, 2005, p. 377). Students go through a process of epistemological transformation, which ultimately leads to a state of

“becoming”: becoming disciplinary experts, and perhaps, most importantly becoming more fully themselves’ (Timmermans, 2010, p. 16). The interconnected and multiple layers and contexts where students are situated in the agile PBL ecology for learning mean that there are many liminal spaces that students encounter and support needs to be provided to them. This does not just relate to curricular or subject matter support – as in the curricular – teaching, learning and assessing. As Chickering and Reisser (1993) noted, the learning and developing trajectories of university students can be nebulous and learning can be ubiquitous, and they bleed into contexts outside the formal curricular spaces. In a student’s learning journey, these liminal spaces are therefore naturally found in the transitional stages in their university progression, starting when they first move into the university through to when they move out beyond their university life upon graduation, again keeping in mind that the boundaries between these stages are porous.

The liquidising element between the curricular and non-curricular boundaries is what the students ‘do’ or ‘engage’ with, in relation to other people, tools and systems in the university environment (micro- and exo-systems) and outside of the university (macro-system), and what matters most. A term commonly used to refer to what students do is student engagement, which is commonly used to describe the effort and time that students invest in meaningful educational experiences (Kuh, 2003, 2004, 2009) and is measured in the National Survey of Student Engagement (NSSE) in the United States. Similar versions of NSSE are known as the Australasia Survey of Student Engagement (AUSSE) in Australia and New Zealand and, in China, the National Survey of Student Engagement – China (NSSE-C). At the same time and more so in recent years, British and European versions of student engagement have also emerged. They focus more on the qualitative essence of learning from students’ perspectives, for example, in the form of interests and emotions, while the American version focused on the quantitative behavioural and cognitive aspects of learning, in the form of time and effort (Zepke, 2013).

Within an agile PBL ecology for learning, teaching and assessing, a way-of-being and becoming is not just a matter of students being engaged with the explicitly stated skills, competencies and knowledge, but they are in ‘a transitional process of boundary crossing’ (Hager & Hodkinson, 2009, p. 635). Students encounter liminal spaces and engage with troublesome knowledge or threshold concepts (Meyer & Land, 2005) throughout their learning journeys as they transit to a way-of-being. Students are also engaged in forming their personal and professional or disciplinary identities during undergraduate studies, which again will change when they move beyond university. In many workplaces beyond the university, employers highly value students who (1) have values referring to personal ethics, awareness of social and cultural diversity and ability to recognise and act on opportunities; (2) have a creative intellect and the ability to adapt and broaden thinking and reflect on learning and development; (3) perform in a way that displays the ability to self-check and revise their work; and (4) engage in a way that is ‘outward looking’ (Hinchliffe & Jolly, 2011, pp. 575–581). However, they tend to rely on universities to ‘deliver’ graduates with those attributes and qualities. Within an agile PBL context, we argue instead that employers should be part of the learning process and thus take a certain



level of responsibility to develop those qualities in learners, thereby blurring the rigid boundaries between ‘the university’ and ‘the real world’. Moreover, engaging students in agile PBL is not just about performance-based economic outcomes, where skills and functional performance are the primary focus. Student engagement encompasses engaging students in their sense of being and becoming, not only engaging them cognitively and behaviourally but also emotionally and affectively (Solomonides, 2012; Trowler & Trowler, 2010; Wimpenny & Savin-Baden, 2013). It is not a matter of either-or; it is both.

To us, student engagement is what students do – cognitively, behaviourally and emotionally – which matters in their learning and developing towards a way-of-being or becoming, both for their current educational purposes and for their future learning. Our educational goal and purpose is to support them through our teaching, learning, assessing and the business of running a university. Student engagement from our perspective must be conducted and embedded in the different contexts of the university and beyond. In other words, it must be cognisant of the different systems in the agile PBL ecology for learning and the relationships between them. Thus, this does not just apply in the curricular spaces where agile PBL learning, teaching and assessment occur but also in non-curricular spaces, because learning, developing and knowing are liquid and cross boundaries within the university contexts and beyond (Hager & Hodkinson, 2009; Savin-Baden, 2014).

Student engagement must be present in all the phases of the transition process, crossing boundaries between curricular/academic and non-curricular/professional, to enable and empower students in their journeys of learning and developing. A ‘mattering institution’ attuned to student engagement – cognitively, behaviourally, emotionally – will enable students to traverse smoothly and signal to them that they ‘matter’ (Schlossberg, 1989). Students would then experience a great sense of belonging and not feel alienation and disjunction as they move through the transitions. The sense of feeling that they matter (Barron & Corbin, 2011; Hager & Hodkinson, 2009; Holmes, 2013; Trowler & Trowler, 2010; Wimpenny & Savin-Baden, 2013) can only fuel students to be more engaged in their learning and developing, resulting in a high sense of loyalty and in return in high retention and progression outcomes desired by institutions (Chickering, 2006; Chickering & Kuh, 2005; Coates & Ransom, 2011; Kuh et al., 2005; Pascarella et al., 2010; Pascarella & Terenzini, 2005; Schlossberg et al., 1989).

## **Strategies and Practices for Student Engagement**

This section deals with the strategies and practices for a more holistic, whole-of-university approach to student engagement.

### ***Moving-In Practices***

Agile PBL practitioners need to recognise that students moving in have just moved out of a learning experience or environment that may have been rather traditional and totally different. Many of the frustrations experienced by students in the move-in phase are about adapting to and coping with PBL, especially when they have moved from a very different educational environment. Therefore, we need to respond by guiding students to be ready to invest the time, energy and emotions required for a successful transition. Students in the move-in phase need to be familiar with the rules, regulations, norms and expectations of the new, PBL environment. Orientation is the most common practice in higher education to ease commencing students into the university environment. However, it is regarded to be especially crucial to prepare students for a PBL (and an agile PBL) environment, whether it is a program or a single course/unit (Brouwer & Kruithof, 2010; Hung, Harpole Bailey, & Jonassen, 2003; Moust, Van Berkel, & Schmidt, 2005; Uden & Beaumont, 2006). This preparation or orientation is so important at this move-in stage that the longevity and sustainability of an agile PBL learning and teaching program can be at risk if you fail to do it effectively (Moust et al., 2005). A critical component of the orientation program must be about clarifying the reasons and benefits for an agile PBL approach to future learning. This is because students need to understand why a PBL educational approach is taken in terms of the theoretical ideas, underlying principles and philosophy behind agile PBL (Brouwer & Kruithof, 2010; Moust et al., 2005). Involving students' support systems such as parents, guardians, spouses, life partners, children from the meso-system and employers and alumni graduates from the macro-system in some engagement activities at this stage can help to create a 'bridge' for students between the curriculum and the future by stressing the benefits of agile PBL as a way-of-being and becoming. Research has shown that persons in the meso-system still have prevailing influence on students even when they invest time, effort and emotions in the immediate micro-system of a PBL university (Kek & Huijser, 2011; Kek, Darmawan, & Chen, 2007).

### ***Moving-Through Practices***

In this phase, students are in what is described as 'hang-in-there' mode. An agile PBL university needs to recognise that this is a phase where students face many tasks, issues and challenges and that they need continuing support post-orientation. The purpose of responses in this phase is so that these students can sustain their commitment, confidence, motivation and persistence. Bearing in mind social forms of support are the most effective mechanisms in this transition stage, it is important to purposively consider engaging students as partners in the development of non-curricular as is for curricular activities (Healey, Flint, & Harrington, 2014).

Some form of student-peer or students-supporting-students communities can be established such as a buddy system (Brouwer & Kruithof, 2010). Another powerful student learning community that can be developed is some form of peer-assisted learning (PAL), also known as supplemental instruction, which was first conceptualised in the University of Minnesota in the United States. According to Kimmins (2014, p. 109), student-peer learning communities do not function like they do with academic tutors or mentors. Rather, the PAL student leaders support students, usually low-achieving or at-risk students, by engaging them in disciplinary learning through group participation with their peers and improving learning skills such as thinking and reasoning, independence and reflection.

However, we argue that these student learning communities should also be widened and extended beyond ‘moving-in’ students where learning communities are commonly found to ‘moving-through’ students where such student learning communities are few in existence. We propose that these student-peer learning communities serve as an inclusive student engagement response that can lead every student in the university to sustain their confidence, commitment and persistence. For example, the Meet-Up Student Community (MUSC), a variant of PAL, a non-disciplinary-specific student-peer learning community that focuses on generic learning skills to support students regardless of their disciplines and stages of their learning journey, is being trialled at the University of Southern Queensland (USQ), a regional, online university in Australia. MUSC is one of the responses embedded in the Student Personalised Academic Road to Success (SPARS) program at USQ, described as a case study in this chapter.

We realise that the student-peer learning communities can be established at every transition phase, but we consider that such a response makes more impact for students due to the psychosocial demands that they experience at this ‘hang-in-there’ stage. Another reason is that in most universities, a large amount of attention and resources are already being placed in orientation programs for commencing students and using student-peer-assisted learning during the first year experience. But not many universities would consider responses for moving-through students. Again, it is best if such student-peer learning communities are integrated into the non-curricular activities and also at the curricular program level. Such student-peer support will only further facilitate the micro-environments where the student development and engagement are already churning. Of course in an agile PBL ecology for learning, peer learning is integrated in forms of authentic faculty-student and student-student interactions through authentic problems and assessments, collaborative and group-based learning, integrative iterative teaching and learning processes, which include peer feedback and reflections on learning and development.

### ***Moving-Out Practices***

Moving out is a process associated with the passing or exiting from a familiar university or higher education environment (towards graduation) and beginning a move into some new settings postgraduation such as starting postgraduate studies or a

new job. An agile PBL university must recognise and respect that students during this phase might still experience feelings of grief and might be fearful of the unknowns because they are leaving behind familiar surroundings, people and structures that they have grown accustomed to, even if this transition is significantly reduced in an agile PBL context, as the transition process is continuously being managed and is embedded in the curriculum – teaching, learning and assessment. Again, in an agile PBL ecology for learning, the boundaries between transitions and systems are significantly blurred, thereby reducing the potentially negative impacts of the transitions.

Nevertheless, the responses during the moving-out phase are more about recognition and celebration to ease students moving out into the future as seamlessly as possible. Ideally, this occurs in such a way that students themselves do not even know and feel that they are transiting into unfamiliar territories because they have been prepared from the outset. They are (or should be) change ready! The key here is to help these students frame their completing year or semesters in the context of easing them into unfamiliar but exciting future possibilities and environments that are in the macro-system. Of course, these should already be integrated in the curricular environments, as discussed in earlier chapters, through practices such as interconnecting employers in the authentic curriculum design, authentic problems or cases, assessments for learning and/or one of the information sources or experts that students can turn to for information. Where possible and relevant, it is important to interconnect and integrate future employers with students in authentic work experience such as service learning, work-integrated learning and internships, just to name a few. An agile PBL curriculum and pedagogy from the outset *is* the support for this transition phase, enabling and empowering students to move into the world beyond university, while all the while drawing from the world beyond university.

### ***Strategic Institutional Conditions for Student Success***

Kuh et al. (2005) shared six mattering institutional conditions that foster student engagement and persistence. These six conditions are drawn from a study of 20 diverse 4-year colleges and universities in the United States that have higher than predicted student success (graduation rates) and through the National Survey of Student Engagement (NSSE) have demonstrated to be using effective practices for fostering student success among students from diverse backgrounds, abilities and aspirations (Pascarella et al., 2010).

- A ‘living’ mission and ‘lived’ educational philosophy

This is about having clearly articulated educational purposes and aspirations and having a coherent and well-understood philosophy that guides ‘how we do things here’ (Kuh et al., 2005, p. 25). The institution’s focus on student success is consistent with institutional values, traditions and educational purposes and goes to great lengths in making its mission, values and aspirations transparent

and understandable to all stakeholders and has a steadfast focus on students and their success.

- An unshakeable focus on student learning

Effective institutions' learning environments are characterised by four common themes: valuing student learning, experimenting with engaging pedagogies, demonstrating a cool passion for talent development and making time for students (Kuh et al., 2005, p. 65). Student learning and personal development are a priority; faculty and professional staff who are committed to student learning are recruited and retained; faculty and professional staff make time for students; active and collaborative learning approaches are employed; students are challenged to raise their aspirations; timely and apt feedback are provided; and they work with the students they have, ignoring the adage to recruit the best and brightest. The important message with this condition is that powerful learning environments and significant outcomes can be achieved no matter what the institution's resources or students' preparation. That is, both institution and students can succeed despite the odds.

- Environments adapted for educational enrichment

Effective institutions are those that have created a 'sense of place' (Kuh et al., 2005, p. 93) for students. This condition demands that resources and people are linked to address issues that affect the quality of life on and off the campus and to alter and shape the environment to create spaces and settings where teaching and learning can flourish. This is similar to our interconnection principle. Effective institutions connect to the surrounding communities situated outside the institutions' environment and adapt the physical structures to a 'human scale' sending messages to students' feelings of well-being, belonging and identity. This is a crucial characteristic of an agile PBL ecology for learning.

- Clear pathways to student success

This condition recognises that many students who enter universities often come without clear direction; they are unlikely to know what they want, nor do they necessarily have the strategies to succeed in universities. This is particularly true for students who are first in their families to attend higher education. Recognising that students need coherence in learning towards student success, effective educational practices are those that have created pathways clearly marked to show them what to expect and what success looks and feels like. That is, institutions create structures and practices that help students bring meaning to their university experiences. For example, they create guideposts such as first year seminars, advising sessions and celebrations such as graduations, while institutional publications accurately describe what students say they experience and intentionally tell students about the resources and services available to help them succeed.

- Improvement-oriented ethos

Educationally effective institutions are in a 'perpetual learning mode – monitoring where they are, what they are doing, where they want to go, and how to maintain momentum toward positive change' (Kuh et al., 2005, p.133). There is a 'can-do' ethic that permeates these institutions, mirroring the learning organ-

isations. The issue of sustainability and continuous improvements will be discussed in Chap. 8. Educationally effective institutions are confident in questioning whether their performance matches what they are and their potential, are inclined towards innovation and systematically collect information about various aspects of student performance and use this to inform policy and decision-making. Most importantly, efforts to improve and innovate are geared towards a desire to be best at what they do with the students they have.

- Shared responsibility for educational quality and student success

The message here is that no single unit or office can on its own enhance the overall quality of large numbers of students. Everyone is needed to make the students feel that they matter. Senior administrators and faculty staff of such institutions ‘walk their talk’ by modelling behaviour that speaks of a focus on students and illustrates learning-centred priorities.

### A Case Study of Crossing Boundaries in a University Ecology for Learning: Student Personalised Academic Road to Success Initiative

As part of a larger university-wide project known as the Connected Student Learning Project at the University of Southern Queensland, a regional, online university in Australia, a maturing integrative student engagement framework known as the Student Personalised Academic Road to Success (SPARS) was conceptualised (shown in Fig. 6.1). Conceptualised in 2012, it integrated the academic learning

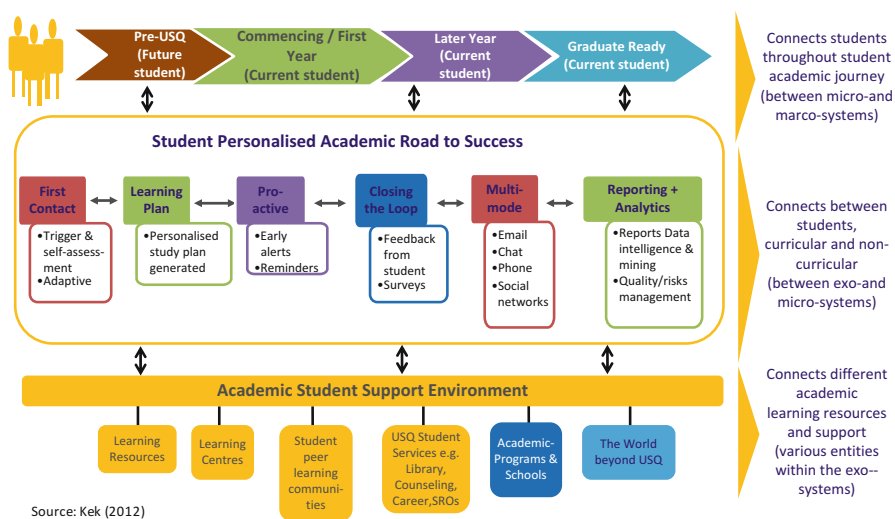


Fig. 6.1 Student Personalised Academic Road to Success (SPARS)

support, with the psychological, social, administrative and career domains of knowledge. It was an inter-institutional collaborative project involving academic staff, academic developers, librarians, student administration staff, psychological counsellors and career development advisors. The framework was conceptualised to signal to students that they matter because the concept of SPARS and the resultant online tool, Academic Success Planner (ASP), were a result of the university listening to their students' voices of wanting an integrated, seamless student learning experience. Right down to the name of the online tool, 'Academic Success Planner' was suggested by the students. The over-arching idea was to create a one-stop, online space for student learning and development.

SPARS (Kek, 2012) was conceptualised as a response to widening student participation in higher education with wide-ranging abilities and aspirations. It was underpinned by human development theories and concepts and conceptualised to enable the university to shape and create meaningful learning environments to better interconnect students to cross between curricular and non-curricular boundaries seamlessly and enable them to achieve student success, from when they move in and move through to when they move on from the university. In short, the framework was designed to fully engage across an agile ecology for learning.

The primary objective of SPARS was to create a comprehensive student learning support that enable students to be more fully engaged in their learning by fostering confidence, commitment and persistence among students and, secondarily, to achieve high institutional student success in the form of high retention rates. According to Kek (2012, p. 1), SPARS '... facilitates student academic success and experiences by *connecting and formalising* essential informal academic learning support, non-academic student support, administrative support and strategic quality enhancement processes into *a single support point* ... to increase student retention/progression as well as to enhance students' experiences throughout their journey in the university'.

Student support programs based on the SPARS framework, when fully operational, would perform the following key functions:

- Providing an adaptive online system that triages students to the relevant support and resources, based on the students' self-identified learning needs, where and when they need it.
- Generating and immediately delivering to students a personalised plan or portfolio, targeting their self-identified needs, for their information or for them to take action. The plan or portfolio should comprise a suite of resources and support integrating relevant academic and nonacademic student support.
- Integrating proactive measures such as an early alert system to feedforward to academic/faculty and administrative staff.
- Integrating assessment to close the loop on student support.
- Integrating multichannel modes of communication to engage with students.

- Incorporating quality enhancement and improvement processes by leveraging data analytics collected from the person-environment interactions, for reporting purposes and to inform decision-making.

In the case of SPARS, the university entities (support, resources and persons) outside the students' immediate micro-system, supporting students in their respective siloed spaces, are now *interconnected* and *integrated* into the students' formal and informal micro-systems, in a seamless manner. They are those found in the exo-systems of the agile ecology for learning.

The persons in the university units (exo-systems) can be considered the legitimate peripheral participants (Lave & Wenger, 1991) who support and facilitate student learning and development, through the creation and sustainment of their confidence, commitment and persistence, from entry to graduation, and are interconnected to the students' micro-system to create formal and informal learning opportunities. They were staff from student services, counselling, career development, library and learning and teaching services. SPARS also interconnects these persons and university units with the academic staff who teaches into the students' micro-system and their general work environments at the exo-level where they perform non-teaching tasks, such as monitoring their students' overall academic development. As such, not only the persons are interconnected, the systems or tools used in these contexts are also being integrated – the university's core customer relationship management system that incorporates assessment and quality improvement processes used by teachers and administrative staff and the learning management systems used by students and teachers for learning, teaching and assessing.

In summary, SPARS is an adaptive, personalised, online academic student support system that generates personalised academic learning support to every undergraduate student at all stages of the transition cycle and is adaptive to their learning demands, when and where they need it. It is still very much in its infancy, and it is too early to say that the initiative has been impactful in promoting student success and retention. Only time will tell. However, in a Report of the Review of the Demand-Driven Funding System in Australia by Kemp and Norton (2014), the initiative is considered to be a promising, innovative response to improve the overall quality of the student experience. The report was a review of 'the extent to which the demand driven funding arrangements impacting the higher education sector in Australia are increasing participation, supporting students from low socio-economic status backgrounds and rural and regional communities and meeting the skills needed in the (current) economy' (Kemp & Norton, 2014, p. iii). What is important is this case study demonstrates how the different layers of an agile PBL ecology for learning cross boundaries are connected.

## Conclusion

In an agile PBL ecology, it is not just the micro-environment, in which students invest considerable time, effort and emotions as part of their learning and development that is important. The macro- and exo-environments situated outside the



classrooms are as important as the teaching staff in the courses and programs in enabling an agile PBL way-of-being and becoming. This is because these environments combined to form proximal and distal effects that influence students through their interactions with others, tools and systems in the different environments as they cross boundaries in the university and beyond. Furthermore, we must recognise that university students' learning journeys during their time at university are rather messy and include formation of their identities, a sense of being and becoming, inside and outside their immediate micro-environment. Therefore, the different environments in a university play an important role in students achieving success because of the amount of interactions and interchanges that students are engaged in, not just with their learning but with identity formation – personal and professional/academic disciplinary – when they move in, move through and move on from the university. This means that universities must be agile too – responsive and open to diverse and widening student participation, in shaping and creating mattering environments that authentically engage students cognitively, behaviourally and emotionally – and give them a sense that they genuinely matter.

## References

- Bar-On, R., & Parker, D. A. (2000). *Bar-On emotional quotient inventory: Youth version, technical manual*. North Tonawanda, NY: Multi-Health Systems.
- Barron, P., & Corbin, L. (2011). Student engagement: Rhetoric and reality. *Higher Education Research and Development*, 31(6), 759–772. doi:10.1080/07294360.2012.655711.
- Boyatzis, R. E., Stubbs, E. C., & Taylor, S. N. (2002). Learning cognitive and emotional intelligence competencies through graduate management education. *Academy of Management Journal on Learning and Education*, 1(2), 150–162.
- Bronfenbrenner, U., & Morris, P. A. (2006). The bioecological model of human development. In W. Damon & R. M. Lerner (Eds.), *Handbook of child psychology* (6th ed., pp. 793–828). Hoboken, NJ: Wiley.
- Brouwer, E., & Kruithof, M. (2010). Learning how to learn, teaching how to teach. In H. van Berkel, A. Scherpbier, H. Hillen, & C. van der Vleuten (Eds.), *Lessons from problem-based learning* (pp. 107–116). Oxford: Oxford University Press.
- Chickering, A. W. (1969). *Education and identity*. San Francisco: Jossey-Bass.
- Chickering, A. W. (2006). Every student can learn -if .... *About Campus*, 11(2), 9–15.
- Chickering, A. W., & Kuh, G. D. (2005). *Promoting student success: Creating conditions so every student can learn* (Occasional Paper No. 3). Bloomington, IN: Indiana University Centre for Postsecondary Research.
- Chickering, A. W., & Reisser, L. (1993). *Education and identity* (2nd ed.). San Francisco: Jossey-Bass.
- Coates, H., & Ransom, L. (2011). *Dropout DNA and the genetics of effective support* (AUSSE Research Briefing, Vol. 11, pp. 1–17). Melbourne, Australia: Australian Council for Educational Research (ACER).
- Evans, N. J., Forney, D. S., Guido, F. M., Patton, L. D., & Renn, K. A. (2010). *Student development in college: Theory, research and practice* (2nd ed.). San Francisco: Jossey-Bass.
- Goodman, J., Schlossberg, N. K., & Anderson, M. L. (2006). *Counselling adults in transition: Linking practice with theory* (3rd ed.). New York: Springer.
- Gross, J., & Thompson, R. (2006). *Emotion regulation: Conceptual foundations, Handbook of emotional regulation*. New York: Guilford Press.

- Hager, P., & Hodkinson, P. (2009). Moving beyond the metaphor of transfer of learning. *British Educational Research Journal*, 35(4), 619–638.
- Healey, M., Flint, A., & Harrington, K. (2014). *Engagement through partnership: Students as partners in learning and teaching in higher education* (pp. 1–76). York, UK: The Higher Education Academy.
- Hinchliffe, G. W., & Jolly, A. (2011). Graduate identity and employability. *British Educational Research Journal*, 37(4), 563–584. doi:10.1080/01411926.2010.482200.
- Holmes, L. (2013). Competing perspectives on graduate employability: Possession, position or process? *Studies in Higher Education*, 38(4), 538–552. doi:10.1080/03075079.2011.587140.
- Hung, W., Harpole Bailey, J., & Jonassen, D. H. (2003). Exploring the tensions of problem-based learning: Insights from research. *New Directions for Teaching and Learning*, 2003(95), 13–23.
- Kek, M. Y. C. A. (2012). *Integrated student learning journey initiative (ISLJI) Final Paper: The integrated student learning journey – Student Personalised Academic Road to Success (SPARS): A framework for the provision of adaptive and student-directed, on-line, on-demand, integrated study support to students*. Paper submitted to the Director, Learning and Teaching Support, Office of Pro-Vice Chancellor (Learning, Teaching and Quality), University of Southern Queensland.
- Kek, M. Y. C. A., Darmawan, I. G. N., & Chen, Y. S. (2007). Inter-relationships of individual characteristics, family, learning environments, learning approaches, and student outcomes in a Malaysian private university. *International Education Journal*, 8(2), 318–338.
- Kek, M., & Huijser, H. (2011). Exploring the combined relationships of student and teacher factors on learning approaches and self-directed learning readiness at a Malaysian university. *Studies in Higher Education*, 36(2), 185–208. doi:10.1080/03075070903519210.
- Kemp, D., & Norton, A. (2014). *Review of the demand driven funding system*. <http://www.education.gov.au/report-review-demand-driven-funding-system>
- Kimmins, L. R. (2014). Meet-up for success: The story of a peer led program’s journey. *Journal of Peer Learning*, 6(1), 103–117.
- Kuh, G. D. (2003). What are we learning about student engagement from NSSE. *Change*, 35, 24–32.
- Kuh, G. D. (2004). *The National Survey of Student Engagement: Conceptual framework and overview of psychometric properties*. [http://nsse.iub.edu/nsse\\_2001/pdf/framework-2001.pdf](http://nsse.iub.edu/nsse_2001/pdf/framework-2001.pdf)
- Kuh, G. D. (2009). The national survey of student engagement: Conceptual and empirical foundations. *New Directions for Institutional Research*, 2009(141), 5–20.
- Kuh, G. D., Kinzie, J., Schuh, J. H., Whitt, E. J., & Associates. (2005). *Student success in college*. San Francisco: Jossey-Bass/Wiley.
- Lairio, M., Puukari, S., & Kouva, A. (2013). Studying at university as part of student life and identity construction. *Scandinavian Journal of Educational Research*, 57(2), 115–131. doi:10.1080/00313831.2011.621973.
- Lave, J., & Wenger, E. (1991). *Situated learning: Legitimate peripheral participation*. Cambridge, UK: Cambridge University Press.
- Meyer, J. H. F., & Land, R. (2005). Threshold concepts and troublesome knowledge (2): Epistemological considerations and a conceptual framework for teaching and learning. *Higher Education*, 49(3), 373–388.
- Moust, J. H. C., Van Berkel, H. J. M., & Schmidt, H. G. (2005). Signs of erosion: Reflections on three decades of problem-based learning at Maastricht University. *Higher Education*, 50(4), 665–683.
- Pascarella, E. T., Seifert, T. A., & Blaich, C. (2010). How effective are the NSSE benchmarks in predicting important educational outcomes? *Change*, 42, 16–22.
- Pascarella, E. T., & Terenzini, P. T. (2005). *How college affects students: A third decade of research*. San Francisco: Jossey-Bass.
- Savin-Baden, M. (2014). Using problem-based learning: New constellations for the 21st century. *Journal on Excellence in College Teaching*, 25(3&4), 197–219.
- Schlossberg, N. K. (1981). A model for analyzing human adaptation to transition. *The Counseling Psychologist*, 9(2), 2–18.

- Schlossberg, N. K. (1989). Marginality and mattering: Key issues in building community. *New Directions for Student Services*, 48, 5–15.
- Schlossberg, N. K. (1997). A model of worklife transition. In R. Feller & G. Walz (Eds.), *Career transitions in turbulent times* (pp. 93–104). Greensboro, NC: ERIC Counselling and Student Services Clearinghouse.
- Schlossberg, N. K. (2008). *Overwhelmed: Coping with life's ups and downs* (2nd ed.). Lanham, MD: M. Evans and Company.
- Schlossberg, N. K., Lynch, A. Q., & Chickering, A. W. (1989). *Improving higher education environments for adults: Responsive programs and services from entry to departure*. San Francisco: Jossey-Bass.
- Solomonides, I. (2012). A critique of the nexus between student engagement and lifelong learning. *International Journal of Continuing Education and Lifelong Learning*, 5(1), 65–81.
- Timmermans, J. A. (2010). Changing our minds: The development potential of threshold concepts. In J. H. F. Meyer, R. Land, & C. Baillie (Eds.), *Threshold concepts and transformational learning* (pp. 3–19). Rotterdam, The Netherlands: Sense Publishers.
- Trowler, V., & Trowler, P. (2010). *Student engagement evidence summary*. York, UK: The Higher Education Academy.
- Uden, L., & Beaumont, C. (2006). *Technology and problem-based learning*. Hershey, PA: Information Science Pub.
- Wimpenny, K., & Savin-Baden, M. (2013). Alienation, agency and authenticity: A synthesis of the literature on student engagement. *Teaching in Higher Education*, 18(3), 311–326.
- Zepke, N. (2013). Student engagement: A complex business supporting the first year experience in tertiary experience. *The International Journal of the First Year in Higher Education*, 4(2), 1–14.