Transitioning into higher education: Ditching the institutional focus on risk-analysis

Nan Bahr[a] and P. J. Cook[b]*

[a]*Office of Deputy Vice Chancellor (Students), Southern Cross University, Gold Coast, Australia;* [b]*Office of Deputy Vice Chancellor (Students), Southern Cross University, Gold Coast, Australia*

*Corresponding author Dr Peter J. Cook peter.cook@scu.edu.au

Professor Nan Bahr, is Deputy Vice Chancellor (Students) for Southern Cross University, and a Professor of Education. In that role she is responsible for the oversight and coordination of a wide range of support services to address student learning and personal needs. Her fields of research interest are higher education, teacher education, adolescent development and responsive high impact pedagogies, educational uses for technology. Nan is well published with a national and international profile for her work. She has had extensive experience as a leader for educational reform cross institutionally and across the schooling and higher education sectors.

Dr Peter J. Cook, is Associate Deputy Vice Chancellor (Students) for Southern Cross University, and a Lecturer in Arts in the School of Education. He has the institutional responsibility for the Transitions program, which provides an evidentiary base for initiatives that enhance the student experience as they move toward, into, through and beyond the university journey. His fields of interest are in arts-based educational research, with significant expertise in Dance and online pedagogy. He is also publishing in the areas of student engagement and experience, and transitions to higher education. Peter is an award-winning teacher and educational leader in all school sectors as well as in tertiary education.

Transitioning into higher education: Ditching the institutional focus on risk-analysis

This paper reflects on the efficacy of approaches to learning support for commencing university students that rely on risk markers to identify those who might benefit from a range of interventions. We argue that a focus on support for the development of greater self-regulation for all students is more equitable, scalable, and sustainable than popular targeted intervention models. That is that a self-regulatory foundation and goal-set for student learning and personal support services will more equitably address the effective transition into university, retention, and long-term academic achievement. The paper presents a new perspective for effective transitions by aligning the elements of an innovative model with the levels for the development of self-regulation. This approach prompts consideration for a significant redirection of institutional student support action, particularly as aimed at the effective transitioning of commencing students into their university courses.

Keywords: higher education; transitions; student experience; student success; risk markers

Subject classification code: FOR 130103

Introduction

This position paper presents an argument for rejecting risk identification approaches for student support initiatives in higher education institutions. There is no time like the present for raising our concern. We have noticed that in the public discourse and in university strategic plans, *Transitions* has become one of the key focus areas for institutions to address improved student engagement, experience, and ultimately, course completion (for example, Queensland University of Technology, 2020; Southern Cross University, 2020). The fundamental goal is to support students as they transition toward, into, through, and beyond their academic courses as fully engaged members of their university communities. This goal reflects the view that effective transitioning is the

first requirement for academic success and beyond to an impactful career. Further, the converse is ineffective transitioning which, fuels student attrition, and separation from their engagement in their study program at university. In a national context, there has been significant growth in government and community interest and expectations regarding student experience, engagement, and course completion rates (Australian Government, 2018).

An increasingly common perspective for improvement of transitioning, and hence retention for students, is what we are calling the suite of risk identification and response approaches. That is risk analysis for identification and intervention for students at risk of discontinuing their studies. Risk analysis is where institutions identify a suite of predictive data for early identification and intervention to support their students with behaviour and profiles to suggest they are most likely to disengage from university. This risk perspective is a position that has quite a pedigree in the body of research for effective student support (for example, Ortiz-Lozano, Rua-Vieites, Bilbao-Calabuig, & Casadesús-Fa, 2020). However, we boldly reject a risk perspective and, in this paper, will outline the key reasons why and what we should be doing instead to encourage and support our students. But first, let's review the contemporary position for risk-based student support.

Identifying risk

Keithia Wilson and colleagues (Tower, Walker, Wilson, Watson, & Tronoff, 2015; Wilson, 2009) have led significant research into the signs of risk and approaches for early intervention. This has been an influential contemporary Australian voice advocating for the risk-based approach. Tower et al. (2015) described six warning signs for nursing students at risk. These signs for commencing students were:

(1) The student did not attend orientation,

(2) The student is first in family,

(3) The student has not accessed the learning management system,

(4) The student has not attended classes,

(5) Student failed/did not submit their first assessment item,

(6) Overall subject failure

Ticking any three boxes would ring alarm bells for academics concerned for the student's opportunity for success. Various approaches would be activated for them, including, but not limited to, tailor-made support, mentoring, and advice. A veritable cottage industry has been established in many institutions for the collection of data and its forensic examination to pinpoint the students in most need. These learning analytics systems have been crafted to mine the data of the learning management system and student enrolment decisions and to capture indices for academic engagement and success. This data, combined with national data, unit evaluation surveys, unit success rates, and alignment to continuing enrolments, all add to the picture to verify the target and later the success of the intervention.

There is no denying that this system works for some students in the short term. We are not debating that these markers indeed identify students at risk of separating from their studies. Students are saved and verifiably so. However, the whole process requires a behemoth of effort and cost, and we argue, is not effective at scale. The reach is limited to a relatively small number of students. The outliers, those that leave who don't fit the risk profile, are also represented in the attrition data.

Further, there is an obsessive and almost singular focus on transitions into the first year rather than on transitions through and beyond a student's university program. Given the scope of this paper, we, unfortunately, perpetuate this problem but recognise

that the approach we are advocating is applicable at any transition point. So, at any transition point, we boldly reject this risk perspective as an unsustainable, un-scalable, and patchy supportive base mechanism for transitioning students, and especially for first-year commencing students. We acknowledge that this is a rather brave and significant move given the calibre of the researchers and their work that we are contesting.

The case for rejecting a risk identification and intervention approach

The fundamental problem, as we see it, is the interventionist framework. In this approach, there is a focus on identifying and then delivering a learning *ambulance* service to students who line up against the seven signs of risk. There are two questionable aspects to this. First, why wait until there is a crisis of risk to provide support? Second, how does this support work equitably at scale if, for example, we have an institution with ~40,000 students? We need an alternative, which we will discuss. As a foundation, though, we propose a new look at the working components for effective transitioning in general.

Supportive elements for effective transition

We propose that all effective transitions share some common features, as depicted in Figure 1.

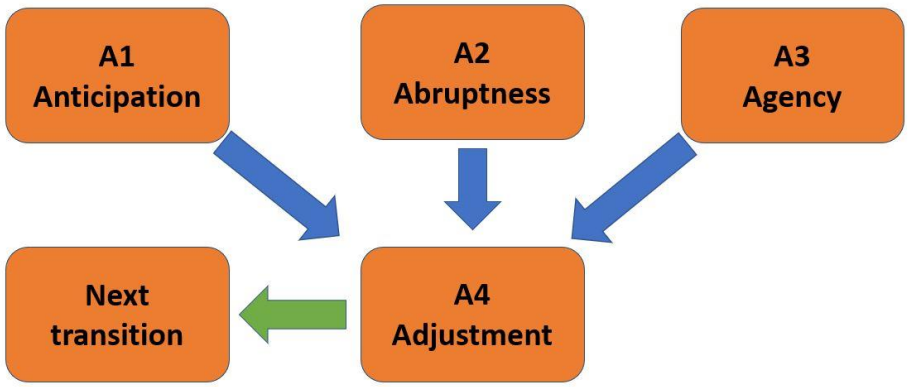

Figure 1. Transitions model.

We have found a gap in the literature concerning the provision of a general model for transitions of any kind, that is, for any life transition, not just into higher education. Reports on unique transitional moments dominate the transitions field. For example, there is a significant body of research concerning the transition from school into work, (for example, Medvide, Kozan, Blustein, & Kenny, 2019) and so forth. Each of these are atomised views on a specific transition period or moment, and there are few attempts at unifying models. The recent work of Bridges and Bridges (2019) is an attempt at addressing this gap and has already been accepted as an important contribution to the discourse around transitions. However, this book is more of a personal coaching resource for people coping with transitions, rather than a model for the elements of transition that can be objectively targeted to reduce the incidence of disruption. Figure 1 depicts our own proposed construct for the relationship between four targetable elements for the assurance of more effective transitions. Three of these

feeds the fourth, as shown, in combination but not in any way necessarily sequentially. The elements are anticipation, abruptness, agency, and adjustment.

A^1 Anticipation

The start point for any transition is the anticipatory set. How much does a person know about their possible experiences? What can they expect? A student needs to arrive at their new transition well equipped with valid and realistic expectations. This is not just declarative knowledge about the next step in their course. It encompasses considerations for emotional, social, and effort expectations. Anticipatory sets are fuelled by the provision of clear, plain-speaking information resources, opportunities for the first-hand experience of potent aspects of what is ahead, vicarious observations, and engagement with people who are in or through the next step, and so forth.

A^2 Abruptness

An effective transition is smooth. Smooth transitions only occur when the engagement with the next stage of a student's academic journey has been carefully sequenced with an eye to the following mantra: *Just in time; Just for me*. We tend to provide an avalanche of information to students that is un-sequenced, un-curated, and not at all tailored to their personal needs. That is, we make transitions more abrupt than they need to be. We need to consider the profile of our student cohort and carefully manage information flow, so the student has enough insight to take control of their efforts with sufficient detail for them to understand what they need without becoming overwhelmed.

A^3 Agency

Agency is about taking control of a situation for oneself with a sense of capacity to influence the outcomes personally. The literature often refers to this agency as the effect

of an internal locus of control (for example, Wu, Griffin, & Parker, 2015). That is, a person with an internal locus of control believes that they will either be rewarded, or fail, as a result of their efforts. They accept that they are capable and sufficiently adept at applying or acquiring the skills needed to do well. They do not believe that their success is beyond their control; this would be an external locus of control.

A student with a sense of agency is much more likely to analyse the demands of their assessment. They are more likely to ask for targeted support and to engage and critically reflect on feedback. That is, they are most likely to take charge of their learning and hence be much more successful. At transition points in their journey, we can assist by providing students with options and choices both for critical aspects of their course of study, as well as for their engagement with mechanisms for gaining support.

A^4 Adjustment

Adjustment is primarily an identity step. A person who is about to complete a stage and enter into a new transition needs to identify positively with their stage of development. Students who do not have a professional identity, for example, will not transition well into work-integrated learning. Adjustment is facilitated by the creation of milestones and rites of passage.

Self-regulation

The central idea for all stages of this model for transitions is self-regulation. Zimmerman (1989) introduced the concept and term, self-regulation, and we have contributed some of our own work to the field (Effeney, Carroll, & Bahr, 2013). Self-regulation, as a theory, a concept, and a goal, is gaining prominence in support of the educational practice. For example, it is the underpinning theory of the extremely

popular work of Dweck (2016) on the impact of growth mindsets in education as a positive framing for achievement, and so forth.

Schunk, a colleague and co-author/editor with Zimmerman (2011), gives the best and most concise definition available for self-regulation:

> Self-regulated learning (or self-regulation) refers to the process whereby learners personally activate and sustain cognitions, affects, and behaviors (sic) that are systematically oriented toward the attainment of learning goals (p. 49).

There are a few points to highlight in this: the notion of control of a systematic process; and goal-driven personal behaviour (agency). The self-regulated learner applies a systematic process that they manage themselves for the attainment of the goals they have set. It is personal, and it is framed in a process. It is not applied to them, nor is it product-focused.

By extension, self-regulation cannot be achieved through support interventions based on risk metrics and markers. Risk-based interventions tend to reinforce an external locus of control and dependency. It would be possible to construct an intervention approach that built agency and mastery. However, the fact that a student has been identified as at risk of failure despite their own efforts is an initial handicap. If we wish students to transition effectively toward, into, through and beyond their university degree program, we argue that the ambulance approach for commencing students with risk profiles and behaviour is weak. It helps them with the product of their effort but is too late to assist with the process. Therefore, it does not sufficiently address the development of a self-regulated learner. Given the individual intensity of the support required, it is also prohibitive at scale and so inequitable. There is ample advice in the literature for the construction of self-regulated learners led by the work of Schunk and Zimmerman (1997) and Zimmerman (2000) and reviewed by DiBenedetto (2011).

Self-regulation, as a concept, is based on a constructivist paradigm and epistemological perspective. That is, understanding is based on an individually negotiated social learning model for the development of competence. For broad guidance, though, Schunk and Zimmerman (1997) describe four general levels for the development of self-regulation. The premise is that each individual learns self-regulation within a social context. Of interest here, is that by extension, self-regulation cannot be learned in isolation from vicarious and shared learning contexts. These four levels are observation, emulation, self-control, and self-regulation.

Description of the observation level emanates from the work of Bandura's (1986) social cognitive theory, which reinforces the influential importance of vicarious observation for an individual's behaviour. A person learns how to behave by watching others. Observation helps them to see the practical application of specific behaviour to a task. This approach shortcuts any requirement to imagine and establish productive behaviour systems for themselves. For commencing university students, we can assume that they would all benefit from opportunities to experience effective behavioural systems for academic achievement vicariously. Mentoring, workshops, resources, and interactive learning modules might help by enabling the next level of self-regulation, emulation.

Emulation is where a person enacts the behaviours they have seen, but as yet are not working with agency. That is, they are doing what they have seen without a full comprehension of the way the process can be applied systematically to achieve goals. They are effectively just copying what they have seen with a very surface level transactional perspective on the relationship between the behaviour and the desired outcome. This factor matures as the next level; self-control is attained.

With self-control, there is a degree of deliberate and purposeful behaviour aimed at a goal. However, self-control is not quite the same as self-regulation. Self-control is about keeping oneself to a task and behavioural approach. Whereas, self-regulation is the systematic management of oneself for a complex array of connected tasks that together point to a personal goal. So, self-control might be sticking to a process for the development of assignment submission. Self-regulation is more about the systematic application of a suite of behaviours to address multiple or complex task suites. For example, self-regulation would be invoked to design a semester work plan and consistent approach for completing various assignments across several units of study. Therefore, self-control is necessary but insufficient by itself for the profile of a self-regulated learner. Our interventionist and risk-based model for supporting students tend to fade somewhere between support for self-control and full self-regulation. Yet self-regulation is the gold standard for a self-determining and influential professional at the point of university graduation.

A singular examination of self-regulation alone reveals it to be both a capability and a disposition. A self-regulated student understands that their success is dependent on the application of appropriate effort. This effort has both a direction and an intensity. That is, the self-regulated student has the knowledge and understandings required to do the right things to succeed, combined with a commitment to diligent task completion. They know what to do, when, and they actively organise their lives so that their study tasks are completed efficiently and well.

How to promote self-regulation?

A student typically does not naturally morph into a more self-regulated learner over time. Many commencing students in degree programs have been actively created as

highly dependent learners through the approaches to support and guidance that they have experienced before arriving at university. And we continue many of these practices in our supportive interventions. Overwhelmingly, they have been provided support for the products of their efforts rather than the processes. This occurs through supportive practices such as marking draft assignments, correcting grammar, and providing comprehensive summative feedback on assignment products without attention to formative guidance.

Please note, there is no insinuation that the mentioned supportive practices don't have a place. Still, without a focus on the process, we are encouraging attention to performance goals rather than mastery goals. Performance goals attend to the outcome of effort, compared with mastery goals which attend to the underlying skills and processes applied for achievement. And then, having reinforced attention to performance goals, we have moved onto the next assessment, disconnected perhaps in form and content, addressing discrete learning outcomes, and typically unauthentic and/or framed as an assessment of learning rather than assessment for learning. In this way, we continually fortify an escalating dependence model of support.

If we are to support self-regulation effectively, we need to focus on developing the self-regulated processes required for academic success. We need to focus on the development of agency and more in-depth attention to competence with the processes for academic success. We need to explicitly teach, demonstrate, practice, and assess these processes, rather than simply rewarding the products. The risk assessment approach, with the Tower et al. (2015) risk markers, for example, will not reveal the students who lack these process skills. So, therefore, and happily much more equitably, we advocate for an overall redesign of approaches to assessment and learning support to account more for process capability development.

Failing forward: the other problem with risk identification-based interventions

As we've discussed, most comprehensive universities collect student data, monitor their performance, and provide *just in time* support for students characterised as being academically at risk. As a result, universities know a lot about students who leave their studies. The risk intervention approach hosts activities that identify the students at risk and provides supports to try and save them. Academics call the identified students, write to them, interview them, and offer a range of services and information with a singular purpose to retain them in their course through to completion. The real problem is that all this activity is too late and of the wrong type of supports to mitigate the causes for student attrition effectively, the lack of effective self-regulation. Anecdotally students who leave university say:

- They are overwhelmed;
- They are failing;
- They have left their assignments too late; and
- They have assessment due date clashes.

In these situations, the student has reached the point of no return, and our interventions and support mechanisms often create a situation which we are calling, *failing forward*. Given the late identification of these students, corrective and supportive activity tends to revolve around opportunities for assignment resubmission, delay of assessment due-dates, resits for examinations and so forth. There are policy settings that specifically allow students who fail a first-year unit to have access to supplementary assessment opportunities. But the clock doesn't stop, while they rework their past assessment items the new semester has begun. If they are allowed to progress, they

often find themselves in more advanced courses without the pre-requisite skills, processes and knowledge to succeed. There is an accumulation of work demand. Students who are struggling become burdened beyond their more successful peers while they try to manage this overload. In this way, we set them up to fail. We create a failing forward scenario, and it is pervasive.

Fundamentally, our supports, if based on an interventionist risk identification model, are useless because they leave the process too late. We are not the first to identify this issue (for example, Singell & Waddell, 2010). However, we may well be the first to reject them entirely. We need to be much more proactive and target the development of agency to improve the success at transitioning to and through university. Interventionist risk-based approaches are inequitable as they are necessarily intense in their effort to rescue already burdened students, and therefore they are not scalable. Neither are they sustainable because they are activated too late to help with self-regulation skill and process development.

We need to work proactively. This proactivity needs to be aimed at developing self-regulation for all students. Academics should ensure that courseware and assessment are designed to demonstrate and practise students in unpacking complex tasks. There needs to be a consideration for including assignments that privilege demonstration that students understand what they have been asked to do, and their plan for the steps in the process. Support professionals will give advice on the kind of study skills that might be useful for a student to prepare for particular sorts of assessments; to manage their time; to organise their thoughts; and, to curate, resources to enhance their capabilities to achieve. They might provide advice on where to find resources to help students to be self-regulated and self-determinant in their learning and development with written expression. The approach will necessarily be all proactively designing

teaching and assessment in ways that develop students to become self-managing and self-regulated in their learning and through that development to be successful through their efforts.

Transitions Model for Self-Regulation

There are important alignments between our transitions model and Schunk and Zimmerman's (1997) four levels of self-regulation. We propose that a mapping of Schunk and Zimmerman's levels to our model determine the types of actions that might have a positive impact on student transition. Three of the four elements of our transitions model align easily. These are anticipation, agency, and adjustment. We have depicted the relationships in Figure 2. As shown, we consider that the student is able to directly influence the elements of anticipation (A1), agency (A3) and (A4) adjustment as they develop through the four levels to self-regulation. Abruptness (A2) however, depends more, perhaps even only, upon the actions of the institution to gently induct students to their course. That is, none of the four levels of the Schunk and Zimmerman model for self-regulation, feature for influencing the abruptness dimension of the transitions model. Figure 2 cross-references and maps the elements of the transition model to the levels for self-regulation.

Enabling anticipation through observation and emulation

Figure 2 shows that student action can directly influence anticipation (A1). The institution can also share in this by enabling students to engage and observe (level 1) the university, other students, and their course at the earliest opportunity; and, by providing simple and straightforward plain-English student guides (available in a variety of engaging modes), tours, and events. Institutions may also enable students to emulate (level 2) their future student experience through opportunities for attendance at

preparatory courses, pre-arrival online modules, and so forth. The effectiveness of these activities would rely on the quality and relevance of the institution's work to provide information and experiences, as well as the prospective students' applied energy and engagement. Therefore, student and institutional action together work for observation (level 1), and emulation (level 2) to support anticipation (A1).

Enabling agency and adjustment through self-control and self-regulation

Agency (A3) is directly influenced through the application of self-control, (level 3) and this self-control combined with self-regulation (level 4) competence influences agency and therefore adjustment (A4), enabling and better positioning for the transition. Agency is enabled by the institution in the provision of simply navigated reasonable choice for each student's engagement and experience. There is no self-control if there are no options. The institution needs to provide these. There is no agency if there is no choice. Once again, the institution must enable this. By extension then, there's no agency (or adjustment) without self-control and self-regulation, and the student is responsible for applying these.

Mitigating against abruptness

Abruptness (A3) doesn't align to the levels of self-regulation development as it does not typically fall within a student's control. The extent to which commencing at university is experienced as an unpleasant jolt, depends a little on the anticipatory (A1) set, but predominantly on the efforts of the institution to ensure they have aligned anticipation with expectation. The institution will need to consider and act upon, evidence concerning the previous success of their induction program. They will need to compose measures that highlight and connect ongoing student academic achievement, for example, with their efforts to smooth the abruptness of commencement gently. We

suggest examination and analysis of data sets that show trends in these relationships. This does not naturally extend to the identification of risk markers for targeted intervention. The aim, though, to reduce the negative impact of sudden and overwhelming changes for all commencing students.

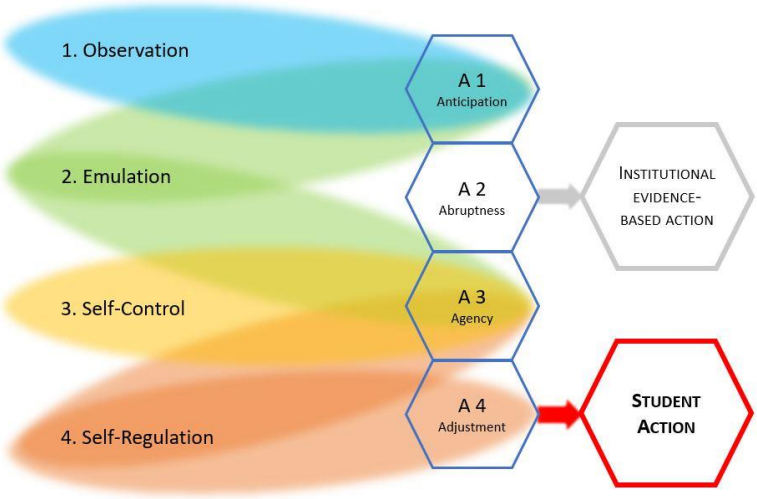

Figure 2: Transitions model for self-regulation

Therefore, we note that observation (level 1) aligns to the element of Anticipation (A1). Emulation (level 2) enables students to practice engaging with the environment and experiences prior to and early in their course and so also aligns with Anticipation (A1). Observation and emulation combine with self-control (level 3) to provide Agency (A3). Self-control allows for the student to be instrumental in their outcomes through informed decision and action. Finally, adjustment (A4), effective transition, is evident when a student can elicit skills in self-regulation (level 4). The missing element in the cross-reference, Abruptness (A3), is attended to by the institution. These experiences and opportunities need to be built into the experience of all commencing students, further pointing to the inadequacy of risk-based intervention systems for supporting students transitioning into their university study.

Conclusion

In this paper, we have presented two main arguments. First, we have denounced risk-based interventions to support students as they transition into university study. We have argued by highlighting the reasons for likely inequity, un-scalability, and un-sustainability of these types of interventions. Further, we have noted that by the time a student at risk is identified, it is typically too late to help them develop in their academic processes. As a result, the learning analytics, and risk marker alerts as bases for directing learning support are not effective. They instead support a failing forward context for each student due to the burden of escalated expectations for the completion of assessment products. This, in turn, compounds the emphasis on the importance of the product rather than the process for academic success.

Second, we have argued for a self-regulatory focus for supporting the transition to university, based upon Schunk and Zimmerman's (1997) concept of self-regulation. We recommend student learning support approaches that focus on building self-regulation capability with robust academic processes, rather than the products, underpinning academic achievement. A self-regulatory approach is diametrically oppositional to the risk intervention model. The risk intervention model is triggered after a student has already exhibited signs of potential failure. Intervention tends to be targeted at working intensively with students to assist them with the necessary conceptual skills for literacy and numeracy. This occurs while simultaneously supporting them for the improvement of their assessment products; a self-regulatory approach changes this focus to a more process orientated suite of supports. We have also examined the alignment between the Schuck and Zimmerman levels for self-regulation development and our model for effective transitions. In doing so, we have

demonstrated that self-regulation can be attended to through the actions of students and institutions through the transitions process.

In conclusion, we propose that a proactive approach to supporting students through transition points is required. This needs to de-centre the focus on students at risk. In so doing, we argue that we will be activating more effective programs for supporting student transition to university. We advocate for a holistic institutional orientation toward actively preparing all students to be self-regulatory and to undertake their assessments from a process perspective. This fundamentally changes the types of things academics and institutions should do to support students as they are inducted into their academic courses.

References

Australian Government. (2018). *Higher Education Standards Panel final report: Improving retention, completion and success in higher education*. Canberra, Australia Retrieved from https://docs.education.gov.au/node/50816

Bandura, A. (1986). *Social foundations of thought and action: A social cognitive theory*. Englewood Cliff, NJ: Princeton Hall.

Bridges, W., & Bridges, S. (2019). *Transitions: Making sense of life's changes*. London, UK: Hachette.

DiBenedetto, M. K. (2011, April 11). *Barry J. Zimmerman: An educator with passion for developing self-regulation of learning through social learning.* Paper presented at the American Educational Research Association, New Orleans, Louisiana.

Dweck, C. (2016). What having a "growth mindset" actually means. *Harvard Business Review*, *13*, 213-226.

Effeney, G., Carroll, A., & Bahr, N. (2013). Self-Regulated Learning: Key strategies and their sources in a sample of adolescent males. *Australian Journal of Educational & Developmental Psychology*, *13*, 58-74.

Medvide, M. B., Kozan, S., Blustein, D. L., & Kenny, M. E. (2019). School to Work Transition of Non-college Bound Youth: An Integration of the Life Design Paradigm and the Psychology of Working Theory. In *Handbook of Innovative Career Counselling* (pp. 157-172). Cham, Switzerland: Springer.

Ortiz-Lozano, J. M., Rua-Vieites, A., Bilbao-Calabuig, P., & Casadesús-Fa, M. (2020). University student retention: Best time and data to identify undergraduate students at risk of dropout. *Innovations in Education and Teaching International, 57*(1), 74-85.

Queensland University of Technology. (2020). Blueprint 6. Retrieved from https://cms.qut.edu.au/__data/assets/pdf_file/0006/894066/qut-blueprint-6-final.pdf

Schunk, D. H., & Zimmerman, B. J. (1997). Social origins of self-regulatory competence. *Educational psychologist, 32*(4), 195-208.
Singell, L. D., & Waddell, G. R. (2010). Modeling retention at a large public university: Can at-risk students be identified early enough to treat? *Research in Higher Education, 51*(6), 546-572.
Southern Cross University. (2020). Strategic plan: The new Southern Cross 2020-2026. Retrieved from https://www.scu.edu.au/media/scueduau/about/documents/Southern-Cross-University-Strategic-Plan-2020-2026.pdf
Tower, M., Walker, R., Wilson, K., Watson, B., & Tronoff, G. (2015). Engaging, supporting and retaining academic at-risk students in a Bachelor of Nursing: Setting risk markers, interventions and outcomes. *Student Success, 6*(1), 121.
Wilson, K. (2009). *Success in first year: The impact of institutional, programmatic and personal interventions on an effective and sustainable first-year student experience*. Paper presented at the First Year in Higher Education Conference, Brisbane, Australia.
Wu, C.-H., Griffin, M. A., & Parker, S. K. (2015). Developing agency through good work: Longitudinal effects of job autonomy and skill utilization on locus of control. *Journal of Vocational Behavior, 89*, 102-108.
Zimmerman, B. J. (1989). A social cognitive view of self-regulated academic learning. *Journal of Educational Psychology, 81*(3), 329.
Zimmerman, B. J. (2000). Attaining self-regulation: A social cognitive perspective. In *Handbook of self-regulation* (pp. 13-39): Elsevier.
Zimmerman, B. J., & Schunk, D. H. (2011). *Handbook of self-regulation of learning and performance*: Routledge/Taylor & Francis Group.