

Social Innovation, Resilience and the Higher Degree Research experience.

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Abstract

This paper explores the construct of resilience as evidenced in a case study focused on Higher Degree Research (HDR) students as they undertake their studies. A three dimensional framework for resilience is used as a lens to better understand the conditions that develop resilience for this group of students and how personal and institutional resources can support them. This process is termed resilience education. The paper asserts that resilient individuals are resource builders who are better able to adapt and deal with changing circumstances.

Introduction

The Bradley Review of Higher Education (Bradley, Noonan, Nugent & Scales, 2008) is a significant report that has become a driver of change in Australian higher education. The Bradley Review drove a new era of higher education expansion and positioned higher education as an important societal contributor through its labour force development. In 2009, the Australian Government responded to the Bradley Review with an increased investment in universities, promoting increasing participation in higher education to foster the two tenets of the Bradley's objective – to uphold social justice and endorse education as a means to grow the Australian economy (Australian Government, 2009). Higher education when treated as a social innovation enables individual and collective growth of the economy and prosperity of the country. We theorize that the development of resilience supports social innovation, and in the case study presented here contributes to HDR students' capacity building, thus empowering groups, building communities and challenging cultures. The lived experiences of HDR students as they complete their studies is used in this paper to demonstrate how students cope with adversity and control their own lives, skills critical to support any social innovation.

HDR completions are an important part of meeting both the Bradley objectives and the Australian government targets. They are a fundamental component of higher education and

“contribute to the creation, application, dissemination, and preservation of knowledge that benefits society” (Komprens, Beck & Brockman, 2004, p. 21). Two recent reviews of the research education experience in Australia, both initiated by the Department of Innovation, Industry, Science and Research (Palmer, 2009 and Council of Australian Postgraduate Associations, 2012), have identified problems with the current system of research supervision in Australian universities. The 2012 review considered ‘disabling’ factors leading to HDR students’ frustration, isolation, and disengagement at the institutional, disciplinary and/or supervisory level impacting on HDR candidates’ satisfaction with their research education experience (Council of Australian Postgraduate Associations, 2012). The consequences of student attrition include a waste of student energy, hope, and money; the dissipation of faculty time and effort; a waste of resources at the departmental and institutional levels; losses to the university associated with the recruitment and provision of necessary research infrastructure and supervision ; reduction in the earnings of universities through the Australian Federal Government’s Research Training Scheme; and a loss of productivity (Nerad & Miller, 1996; Jiranek, 2010).

Recent figures from the Department of Education, Employment and Workplace Relations (DEEWR, <http://www.highereducationstatistics.deewr.gov.au>) show that there were 58,832 HDR students enrolled in Australian universities in 2011. Of these, 22,231 were studying part-time, 29,731 were female and 7,134 were international students. DEEWR figures for 2011 also show that 8,014 HDR students completed their study. Of these, 2,334 were international students, 3,992 were female, and 3,270 were studying part-time.

Statistics in Australia and internationally consistently demonstrate completion rates of about 50% for HDR students. Completion rates vary across different universities, different disciplines, for full-time and part-time candidates, and for candidates with scholarships (Sinclair, 2004).

Universities have implemented various measures to try to address poor or untimely completion rates. These measures typically include things like “financial support, academic preparation, professional development and mentoring relationships” (Holley & Caldwell, 2012, p. 243). Despite these kinds of measures, statistics show that completion rates have not changed significantly over the last 50 years (Brockman, Colbert & Hass, 2011; Golde, 2000). Perhaps it is time to consider HDR support from a different perspective.

This paper explores the construct of resilience and its relevance to HDR students. Moore, Westley, Tjornbo & Holroyd (2011, p. 91) suggest that “*Social innovation is an important component of being resilient - new ideas keep a society adaptable, flexible and able to learn. Thus, the theory of resilience provides a meaningful lens to provide a better understanding of the conditions that enable innovation to emerge and succeed*”. We posit that resilience is a useful lens for exploring HDR study. By using the results of a case study of the experiences and coping mechanisms of HDR students during their candidature, we explore their personal adaptability, flexibility and ability to learn through that lens. Resilient individuals who collectively create and manage their lives and their environment we argue are better equipped to cope in a changing world of complex systems and subsystems. We contend that to successfully negotiate the HDR terrain necessitates resilience. This requires students to have knowledge, demonstrate skills, mobilise and orchestrate resources; and use networks to manage everyday activities which build social resilience.

Resilience

Before introducing the resilience framework used to analyse the HDR experiences, it is necessary to define what is meant by the term resilience. There are a number of cognate terms such as mental health promotion, social and emotional well-being and emotional literacy that have been used to describe resilience. The language commonly describes the ability to successfully cope following adversity and stressful situations (Knight, 2007).

Another term used recently in the literature to describe coping in adverse situations is ‘Buoyancy’. This term introduced by Martin & Marsh (2009), is developed from the perspective that most people do not have to deal with significant adversity (which they equate with resilience), but all will at some time need to deal with demands and circumstances that challenge and pressure them to adapt and remain in control and on-top of things (buoyant) in their life pursuits. If these challenges are not met they have the potential to escalate into traumatic situations depending upon the individual’s skills, resources and networks. However in this paper we prefer the term resilience because it is a normative construct based on personal judgements about adverse situations, with responses of individuals related to the context, their skills and resources at their disposal.

Hence we subscribe to a definition of resilience that acknowledges both the social and ecological elements that impact on the development of individual resilience and believe the

development of resilience includes the interaction between individuals and their environment.

Ungar (2008, p.225) notes

In the context of exposure to significant adversity, resilience is both the capacity of individuals to navigate their way to the psychological, social, cultural, and physical resources that sustain their well-being, and their capacity individually and collectively to negotiate for these resources to be provided and experienced in culturally meaningful ways.

Knight (2007, p. 543) identifies that “*resilience is associated with optimism and suggests we can encounter change and adversity but still find hope*”. Resilience is viewed as a strengths-based approach that promotes enabling factors to build positive individual traits consistent with theorizing in positive psychology (Bandura, 2006).

Conceptual framework: Resilience as a three dimensional construct

The aim of the framework presented in this paper is to analyse resilience from the point of view of enabling and sustaining a social innovation. In this case study, the framework investigates the experiences of a group of HDR students as they complete their studies. A three-dimensional construct for resilience education was developed by Knight (2007) and proposed as a meta-resilience framework that could be applied in different contexts. The three-dimensional construct situates resilience as a state, as a condition, and as a practice.

Resilience as a state indicates a set of personal characteristics associated with healthy development which manifest as emotional competence, social competence and a futures orientation for an identified target group. Resilience as a condition requires the recognition and acknowledgment of risk and protective factors that exist for that same target group. Resilience as a practice focuses on practical strategies that can be applied to develop and enhance resilience for the target group. This is done by mitigating the identified risk factors and building the identified protective factors in explicit ways. The three-dimensional construct then, is about resilience education. It promotes the fact that resilience is not a pre-determined, static quality and can be developed through appropriate intervention and support. The three-dimensional construct has been used here as a lens through which to analyse the experiences of HDR students.

Methodology

In late 2012 and early 2013 research was conducted by Samantha Hardy and Judith Herrmann into the experiences of HDR students and their supervisors at a regional Australian university. The research aimed to explore experiences of conflict in the student/supervisor relationship during the candidature. In-depth interviews (45-90 minutes) were conducted with 22 HDR students and 24 supervisors. The interviews were conducted by two academics from the same university: one an experienced supervisor and the other a current PhD candidate. The interviews were conducted using the “responsive interviewing” technique (Rubin & Rubin, 2005). The interview transcripts were coded based on existing literature around conflict in the HDR student/supervisor relationship, and also based on grounded theory.

While the research was focused on conflict in the student/supervisor relationship, significant data was identified that related to the construct of resilience in the HDR context. Given that Ungar’s definition of resilience (2008, p.225) refers to a person’s capacity to navigate adversity, this is not surprising, as conflict in the student/supervisor relationship during the candidature is certainly experienced as adversity by students and supervisors alike.

Analysis

Resilience as a state

Resilience as a state addresses the question ‘What qualities/attributes/personal traits/coping strategies does a resilient Higher Research Degree student have?’ Studies suggest there is evidence that psychological wellbeing leads to academic success (Griffiths, Sharkey & Furlong, 2009; Howell, 2009; Martin & Marsh, 2006; and van der Westhuizen, de Beer & Bekwa, 2011). We looked for ways the categories of attributes outlined by Knight (2007) - emotional competence, social competence and a futures orientation - manifested for Higher Research Degree students in this study. Students who were interviewed in the research included those who demonstrated high levels of resilience and also those who were struggling. Their comments revealed a number of factors, both personal and contextual, that contributed to increased resilience or that failed to support students in building resilience. Given the focus of the research on conflict, the majority of the comments tend to identify failures rather than successes. Some of these findings are discussed below.

Emotional competence

HDR students who are coping well with their studies (progressing according to expected completion deadlines, managing typical conflicts with their supervisors, and effectively dealing with the normal stressors of candidature) typically demonstrate a number of attributes.

Resilient students are confident in their status and abilities as a HDR student, feel that they are in control of their higher degree study, are capable of working autonomously and have a strong identity as a researcher in their field. They are confident about their research topic and also their methodology. For example, STU006 demonstrated resilience when describing a disagreement with one of his supervisors: *“I knew what I wanted... and I had the confidence to say ‘Well I don’t need that person’. I can gather my self-confidence and go ‘Like no, no, I had enough good things here than my work, I can live without it’ and I had the support from the other supervisors...”*.

Resilient students are also realistic about the fact that completing a PhD is a big commitment that involves difficulties and have the capacity and flexibility to adapt and the dedication to work through those difficulties. For example, STU008 commented: *“I mean I do understand that sometimes it’s hard to work with other people, but if you’ve made a commitment then you have to kind of try and see it through, don’t you?”*

Resilient students take active steps for self-care and set boundaries to protect their own wellbeing. One PhD student, explaining difficulties she was experiencing with her supervisors and also personal problems that were impacting on her ability to progress her PhD, said that *“sometimes I feel quite fragile about it all and so I look after myself to make sure that I survive”* (STU001, mature age PhD student). Another student talks about being very cautious and protective about separating her work and family life and not letting one impact on the other: *“when I’m here, I’m 100% here, but when I’m not, I’m not and that’s it. And my supervisors know about that as well and they respect it so that’s good”* (STU009).

Social competence

HDR students have a relationship with their supervisors that are built on mutual respect, trust and open communication. STU004 explained that a good supervisory relationship was based on *“respect for each other’s intelligence and capabilities”*. Resilient students are not completely subservient to their supervisor. Mature aged students tended to demonstrate this more than younger students. For example, STU009 explains: *“I’m over 40 and I don’t take*

the relationship as being oh, my goodness, there is this Professor that I have to be completely deferent to, and I don't take it that way."

It is important that the supervisor trusts the student's ability and judgment, and provides positive as well as negative feedback. STU008 notes that *"When I have done well, [my supervisors] are always quick to acknowledge it... I think that always helps too when you can see that [your supervisors] look in a balanced way at your work... they actually respect you as a person and as somebody who is capable of doing that work rather than as somebody who is just a novice"*. Students feel supported when their supervisors convey *"confidence that it can be done"* (STU004). STU004 explains his good relationship with his supervisor as based on the fact that *"he's got great faith in me"*.

Resilient students consider the process of disagreement and discussion as part of the learning process. For example, STU107 describes how if he disagrees with something his supervisor has said *"I basically can go to him and [say] 'Look, I think that you're wrong because of this and this and this' and he's like 'okay, go and do it.' And sometimes I come back going 'Yes, you were right' and sometimes I come back going 'No, this works better' and I guess he seems to see that as part of the learning process."*

Resilient students do not take negative feedback personally. STU008 explains that it helps to be not too emotionally attached to your work: *"Like if they say 'That was crap'... or 'This bit needs work', I'm usually quite 'Okay, yeah, I kind of knew that anyway and I appreciate that you said it' 'cause I've always been the type of person that I don't want you to tell me it's fantastic when I know that it's not my best... I don't need you to sugar coat something, you just tell me – tell it like it is and I can handle it from there, you know. So maybe not being too attached to what you produce..."* STU004 also says that it helps not to be *"really precious about your own ideas"*.

Resilient students are not afraid to ask for support or guidance where it is needed; however they are not overly dependent on their supervisor and become more independent throughout the candidature. STU003 describes the relationship as *a "nurturing relationship...parental almost type of relationship [but one in which] you get to a certain point where you let them go"*.

They have a network of friends, family and peers with whom they can discuss challenges during their candidature (e.g. other HDR students, postdocs, research team, school staff) and also provide support for others based on their own experiences (e.g. newer HDR students). STU009 described how she shared her learning about defending her work (see above) with other HDR students in her area.

Futures oriented

Resilient students have a clear sense of purpose in working towards finishing their research project. They have a plan for what they hope to achieve post-doctorate and are actively working towards it. For example, STU112 explains: *“I don’t know what the future holds but I will try as much as possible to make it happen for my benefit... that’s how I would like to work going forward...supporting my supervisor and he in turn will support me.”*

Resilient students are engaged in their project and feel that it is worthwhile and making a significant contribution to the field and their own future. STU004 describes her engagement with her research: *“I’m doing the PhD purely for the enjoyment of it. I mean I do want to get a job at the end of it, but ... I’m doing it ‘cause I really enjoy the research...”*

Resilient students are constantly engaged in problem-solving and critical thinking to manage challenges in the research and also to continuously improve their work. They are flexible and can adapt when things do not go to plan – where life circumstances create difficulties (perhaps requiring a deferment or change to part-time), where research outcomes are not what was expected, or where they are required to change supervisor or research topic. For example, STU108 is a PhD student with a chronic illness. She explains that for her there have always been *“low level ongoing difficulties and it’s very hard to anticipate what they will be and perhaps you can plan – like I’ve got a plan to completion, but it’s really hard to prepare for the little hiccups that come along”*. She explains that her supervisors are important when those hiccups come along, not to fix them but to simply acknowledge them and the difficulty she experiences. Students also recognized the need to sometimes take a break from their study. STU003 explained that she deferred her candidature for six months in order to *“build [her] confidence and enthusiasm back up again and come back”*.

Resilience as a condition

While manifestations of resilience (resilience as a ‘state’) indicate an individuals’ potential for resilience, the level of resilience is determined by both personal and environmental factors and students will be more or less resilient at different times (Rutter, 1993; Henderson and Milstein, 1996, Knight, 2007; Howe, Smajdor & Stockl, 2012).

Many students noted that it was typical for beginning HDR students to feel vulnerable and have lower levels of confidence than they usually might: “...*you start off in a PhD, you’re very vulnerable at that stage I think... You don’t have much confidence...*” (STU006)

Applying the construct of resilience as a ‘condition’ suggests that recognising risk factors and enhancing protective factors has potential to support coping mechanisms for HDR students by using a strengths based approach. We looked at the evidence provided in the study from the perspective of minimizing risks and enhancing protective factors.

Minimise risk

Understanding of risk factors

There are a range of well-recognised risk factors for HDR students during the candidature, which are likely to have a negative impact on their resilience. Two of the main risk factors include isolation and lack of clear expectations. Universities need to take steps to attempt to minimize these risks for students.

Isolation

Unless a student is part of a doctoral cohort, they are at risk of isolation (Palmer, 2009). Isolation is a factor that can impact students’ resilience as it reduces the opportunities for social support and the development of social competence. International students are particularly at risk, and tend to have lower resilience at the start of their candidature based on their need to adjust to different Australian social, cultural and academic environments (Taranuraksakul & Hall, 2011; Samani et al, 2012). Studies have shown that the number and quality of relationships an international student has with locals is positively related to his or her resilience (Adrian-Taylor et al., 2007). External students are also at risk due to isolation, and also the potential misunderstandings and difficulties in communication with supervisors because of distance (Sinclair, 2004).

Initiatives such as cohort models, postgraduate student social networks and efforts to include students in the broader activities of their school are useful steps to minimize the risk of isolation.

Lack of clear expectations

Resilient students take initiative in clarifying expectations when they are not clear. For example, STU112 describes a situation in which *“there [were] some expectations that on my part I [did] not really understand [my supervisor] but I make it my business to go back and ask him, ‘Did you mean this?’ ... and so he explained to me.”* However, not all students have this level of confidence, particularly at the beginning of their candidature. STU003 explains that when she started her PhD she *“just didn’t know what the expectations were”* and that her expectations of herself were *“so huge”*. She thinks that in hindsight she probably could have completed the PhD a lot faster if things had been clearer. Other students confirmed that a structure and explicit expectations about what work needs to be produced when and regular scheduled meetings, etc. are helpful (e.g. STU008).

STU102 describes how supervisors who are very clear about their expectations from the outset give students a sense of confidence: *“He said something that I was really impressed with which was he liked to meet once a week, that he had very clear goals and tasks and I’m thinking wow fantastic, ‘cause all the things I’d heard about that, you know, you want to avoid anything to do with not being clear, miscommunication, you know, non-aligned expectations and stuff like that and guidance. So I had a lot of faith in him and I was very impressed with his attitude about supervision.”*

Initiatives such as postgraduate student induction workshops and training for supervisors (both of which include sessions on clarifying and managing expectations) and the use of pre-candidature forms in which students and supervisors must write down their expectations for how they will work together, are useful risk minimization steps.

Enhance protective factors

As well as taking steps to minimize risks to students’ resilience, universities can take steps to enhance protective factors.

Protective factors might include: provision of resources and support services to support students to develop and maintain resilience (such as access to student advisors, methods to avoid isolation - emphasis on collegiality and student support groups/cohort model) and flexibility for students experiencing difficulties.

Student advisors / mentors

STU102 *"I went and got help one day from a woman [who worked at the university skills program]...She was very, very helpful....I've since regained my confidence in how to go about doing these things and just be professional about it again... If something's going wrong, it's not about whinging or complaining, it's about finding out what you need to do..."*

Emphasis on collegiality / cohorts

Resilient students feel part of the academy, and are involved in collegial activities in their school or research centre. STU003 describes how her school has changed to make events like the confirmation seminar collegial rather than combative, and how they are now more *"like a round table discussion where people can lend their experience and give some [advice]"*. Similarly, STU004 describes how in her discipline HDR students and lecturers get together once a week for morning tea and this keeps morale up among the HDR students and *"keeps the friendliness going... so you always feel comfortable"*.

They present at seminars and conferences and feel worthy of contributing. They are keen to share their work with others. STU106 describes an atmosphere of *"everybody helping one another"* and in which *"we have lab meetings every week and someone presents and we all share ideas ... you know I've always wanted to be part of a team where everybody works together... you have your post docs who help the PhD students, who help the Honours students so everybody kind of helps each other"*

Flexibility for students experiencing difficulty

STU108 describes times in which her chronic illness has made her unable to do things in time, but that she had never been *"intimidated or made to feel uncomfortable"* because her health is not good. She says she has *"never felt that I've received anything but an empathetic response"* from her supervisors.

Resilience as a practice

Resilience as a construct is extended with an application to practice and a promotion of resiliency whereby individuals employ specific strategies when they experience adversity, supported by institutional interventions. A balance between the capacity to learn and adapt during experiences, and the ability to self-organise when set-backs occur or circumstances change has been crucial for building resilience (Gilson & Duysters, 2008; Gunderson & Holling, 2002).

Applying resilience as a ‘practice’ for HDR students, involves exploring practical ways students can be supported to build resilient qualities that enhance their academic success. Practice entails individual agency by students interacting in situations given the protective and risk factors shaped by broader contextual and social forces. As outlined above, for the students in this study, a number of targeted programs and support systems were in place. The strategies included counseling, using student advisors, communicating with other HDR candidates, participating in conflict resolution workshops actively participating in students’ social networks, finding mentors and forming respectful relationships with supervisors. The activities signify that there is a role for HDR supervisors and institutional support services to provide support to students as the skills developed support individuals developing protective factors that help them become more resilient to adapt and cope with the demands of their study.

Conclusion

This paper has explored the application of a framework for resilience education – resilience as a state, a condition and a practice. The experiences of HDR students were analysed using the framework. Our view of resilience affirms the agency of resilient individuals to deal with adversities that arise during their studies. When circumstances change and set-backs occur, the individual uses personal resources and draws on protective institutional resources to make new connections in adapting to the new conditions that potentially enhance success. In recognising that resilient individuals are resource builders we advocate institutions revisit their role in providing programs and initiatives that support students as they undertake their studies.

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