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PROMOTING SYSTEMIC CHANGE IN EDUCATIONAL INSTITUTIONS THROUGH META-COMPETENCIES - TO DEVELOP TRANSFORMATIVE QUALITIES OF BEING

Monique Potts
monique.potts@uts.edu.au
Bem Le Hunte

Abstract
Education systems in Australia are currently in a state of flux and disruption, with student mental health and engagement at crisis levels. This contribution examines how systems awareness and self-awareness in education cannot be separated from the rest of the curricula for students living with the impact of global systems changes, including COVID-19 and climate disruption. Moreover, in this context, educators are struggling to keep students engaged and provide the skills and competencies needed to navigate uncertain and unsustainable futures. Addressing this challenge, our study examines a proposed set of meta-competencies (or systemic competencies) required for a systems reboot within our educational institutions – including agency, adaptability, creativity, compassion, interbeing, self-awareness and reflexivity – described elsewhere as a *Curriculum for Being.* The findings of this study have demonstrated systemic meta-competencies which served to build student agency for these times of transition – providing social and emotional learning that helps students develop awareness of self in relation to others and systems. This study analyses the application of these meta-competencies for transformative resilience or *transilience* in a secondary school setting. Using participatory action research methodologies and awareness-based systems change, this research proposes interventions for a much-flawed current educational paradigm. The interventions described were co-designed, tested and iterated with students in an extended pilot program, with evidence demonstrating that agency, self-awareness and systems awareness can combine to engage students in profound ways to create a new generation of systemic changemakers.

Keywords
education, transformation, resilience, school, young people, climate change

"You cannot understand a system until you try to change it"
Kurt Lewin (1942)

1 | Introduction

Education is a dynamic, adaptive system that sits within a larger social, political and economic system, which does not favor our youth's well-being. Indeed, today's educational institutions are experiencing a crisis in student well-being that cannot be ignored (Brennan et al., 2021; OECD, 2017; Schwartz et al., 2021). Students are bringing their issues into the classroom because learning does not happen in a vacuum, and this article begins by outlining the many challenges outside the classroom that are impacting learning within the walls of our institutions today, arguing for new meta-competencies to be taught, in keeping with the demands of our time. A holistic, systemic approach to learning must take into account what students learn (epistemology), who they are (ontology), and the anxiety around uncertain futures that young people today are experiencing (Barnett, 2012; Hathaway, 2011). This paper explores a novel approach to

developing transformative resilience and a *Curriculum for Being* within secondary school systems to better prepare young people for these uncertain futures.

2 | Contemporary Context in Educational Systems

As an introduction to this study, it is essential to understand something of the socio-cultural context in which it is embedded. While this study is based on an Australian context, it mirrors some of the global challenges experienced in education systems. It proposes interventions that may be valuable in other countries and contexts. We begin with a brief analysis of the current state of mental health for young people in Australia, provide a foundation of our theoretical approach to understanding education systems as learning ecologies and propose a new relational model of transformative resilience – *transilience* – with a framework of associated meta-competencies.

2.1 | Young People and Mental Health in Australia

At the beginning of the twenty-first century, the mental health indicators of young people in Australia and globally are declining (Brennan et al., 2021; World Health Organisation [WHO], 2021). The experience of the current generation of young people growing up in Australia is significantly different and, in some respects, more complex than that of previous generations (Landstedt et al., 2017; Sweeting et al., 2010; Uhlhaas et al., 2021). Medical experts in youth mental health have described young people as the *canaries in the coal mine of society* due to the disproportionately negative impact on their mental health of rapid social, economic, and cultural changes (Uhlhaas et al., 2021). The challenging current reality is that one in four young Australians aged 15 to 24 years old are experiencing psychological stress and mental health challenges (Australian Bureau of Statistics, 2018; Brennan et al., 2021). The most common mental health challenges for young Australians include anxiety and depression.

Research has identified trends around this decline in mental health based on particular socio-cultural determinants, including family pressures, a decrease in social connections, and the impact of increased technology and social media use (Caprara, G.V. & Rutter, M., 1995; Sweeting et al., 2010). Other studies have focused on the social and cultural aspects of young people's lives such as an increase in materialism and individualism (Burroughs & Rindfleisch, 2002; Sweeting et al., 2010), a decline in traditional religion and beliefs (Voas & Crockett, 2005), a decrease in social connectedness (Twenge, 2000) and the pervasive impact of media and pressures around social identity (Monro & Huon, 2005; Sweeting et al., 2010). These concerns are in addition to traditional adolescent challenges of self-image and forming identity, social connection, family dynamics, and pressures of study and work (Brennan et al., 2021).

As well as these socio-cultural factors negatively impacting young people's mental health, in recent years, we have experienced a series of unanticipated *peak resilience* events. Since 2019, Australia has undergone unprecedented climate-induced natural disasters, including droughts, bushfires, floods, and the COVID-19 pandemic, with extended lockdowns in many parts of the country. Research has found that young people have been disproportionately impacted in terms of their mental health by these natural disasters (Australia Institute for Disaster Resilience [AIDR], 2020) and COVID-19, in comparison to the general population (Headspace, 2020; Li et al., 2021). Young people are likely to find it more challenging to cope with the ongoing uncertainty created by unexpected events as their coping skills are still developing, according to Fields & Prinz (1997).

Moreover, when children and young people experience mental health challenges, it can negatively impact their future life opportunities and longer-term physical and psychological health. It has the potential to derail pathways into adulthood through lower attendance at educational institutions, poorer results, and unemployment, as well as an increased risk of substance abuse and increased likelihood of self-harm and suicide (Brennan et al., 2021; Erskine et al., 2015). For this reason, early intervention is critical for young people to ensure they have equal opportunities and receive the treatment and support they need. Unfortunately, most young people experiencing psychological distress and mental illness remain undiagnosed and untreated (Brennan et al., 2021; Kessler et al., 2007). Therefore, insights from a systems thinking perspective within educational institutions may provide a potential intervention

point to support mental health and resilience and prepare our young for an increasingly uncertain environment.

2.2 | Educational Institutions as Learning Ecologies

Schools are environments where many young people spend most of their time and can be understood as complex adaptive systems and learning ecologies that have the potential to significantly influence a young person's mental health and future skills and competencies. There are many valuable models of understanding and approaching change within education systems, including learning organisations, learning communities, learning ecosystems and others (Ison, 1999; D. W. Orr, 1990; C. O. Scharmer, 2016; Senge, 2001). In this study, we consider education systems as *learning ecologies* and approach these with a methodology of awareness-based systems change as discussed further in *Section 3. Scholarly Approaches and Methodology*. Learning ecologies are complex systems of relational engagement that enable learning and changes in both behaviour and values, where the act of learning is an ecological phenomenon that "*brings forth new meanings and understandings of the world*" (Jackson & Barnett, 2019, p. 1). The very act of learning transforms us and the world around us" (Barnett & Jackson, 2019, p. 1). Within the learning ecologies of schools and universities where this study is situated, we observe constant micro-adaptations or calibrations, which are well described by Nora Bateson's concept of *symmathesy* (Bateson, 2016). The term 'symmathesy' refers to learning together where our boundaries are constantly shifting and interacting as we engage with *interfaces for learning* (Bateson, 2016). The etymology of the word symmathesy combines the Greek prefix 'sym' meaning together, with the word 'mathesi' meaning learning (Bateson, 2016), reflecting our ability to learn together in healthy and unhealthy learning environments. In this study, we explore the ability of learners to develop greater self-awareness and systems awareness to promote transformative resilience and agency within these nested learning ecologies.

2.3 | Extending the Concept of Resilience

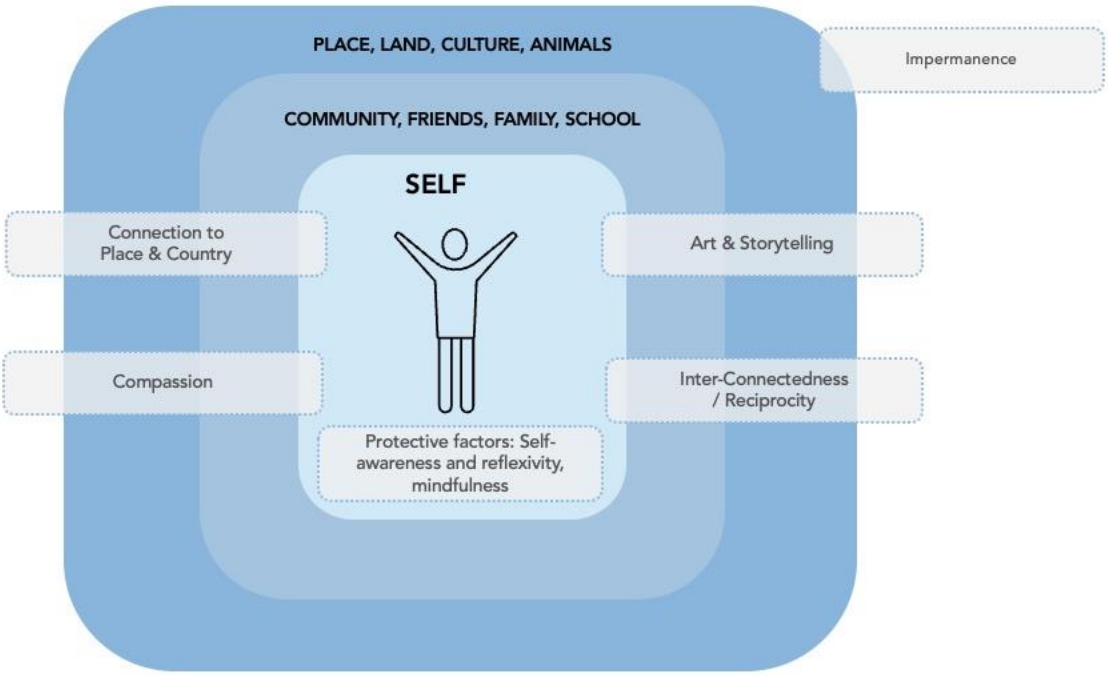
While the increasing prevalence of psychological distress and mental illness in young people is well documented, the relationship between complex social conditions and mental health for young people remains underdeveloped (Eckersley, 2015; Landstedt et al., 2017). Applying a social determinants view of health requires a detailed analysis of the complex, emergent system of social and cultural factors impacting young people's lives, mental health, and resilience (Eckersley, 2015). For young people, these social determinants of mental health may include the domains of family, friends, school, work, social media, social relationships, physical health and activities, time outdoors and in nature and many more factors.

Given the importance of supporting the inner world of the learner alongside the outer world in a systemic way, this study reveals a range of meta-competencies that are required to move beyond a traditional model of resilience, which determines a young person's ability to 'bounce back' or adapt to adverse circumstances based on their ability to meet normative social milestones of completing secondary school, going to university, getting a job, etc. Instead, we propose a new term – *transilience* – the idea that resilience and transformation of the learner must go hand in hand. In this context, transformation involves students understanding their role in a system and their interconnectedness with each other within their immediate environment and the world beyond. Transilience is defined as an active process of developing both individual and collective skills and competencies, which enable a sense of agency to transform both internal and external environments to *define oneself as healthy* despite increasingly challenging, hostile and complex environments.

An expanded dynamic and transformative perspective of resilience as *transilience* draws on diverse worldviews' wisdom and knowledge systems. In the case of this research, Buddhist philosophy and psychology and First Nations wisdom and knowledge systems of Aboriginal and Torres Strait Islander peoples. This integration of non-dualistic worldviews challenges the western understanding of resilience as an individual trait required to deal with adverse environments or contexts. Instead, looking through a relational and transformative lens, learning for greater resilience can occur across the three levels of self, community or place (Exhibit 1). This premise of a dynamic, relational model of resilience

aligns with the work of Ungar et al. (2011) and recognises the unique context of each young person, community and place in determining what learning experiences might work best to help develop transilience. Key concepts or competencies related to resilience from Buddhism and First Nations wisdom include - impermanence, interdependence, mindfulness, compassion, self-awareness, connection to place and country, art and storytelling and reciprocity. In this research, these competencies are integrated with a western psychological perspective of resilience as they contribute to a richer model of the dynamic, multi-faceted relationship between a young person and their environment.

Exhibit 1. Relational Model of Transilience Integrating Buddhist and First Nations Worldviews



From this relational perspective, a young person's health and well-being are deeply embedded in the health and well-being of their communities, cultures, and land. In *decentering* (Ungar, 2011) a young person as the point of focus for an individual pathology or mental illness, we simultaneously *re-center* the importance of healing and reintegration of all levels to support a young person's health and well-being. Through the consideration of interconnectedness and symmathesy, we can also see that change at any one of these levels (self, community, and land/culture) can flow through to influence young people's mental health and well-being. A relational framework of transilience acknowledges that many young people's response of increasing anxiety, depression and other states of psychological distress as an *appropriate* contextual response to challenging uncertain external environments (Ojala, 2016; Pihkala, 2020; Verlie, 2021).

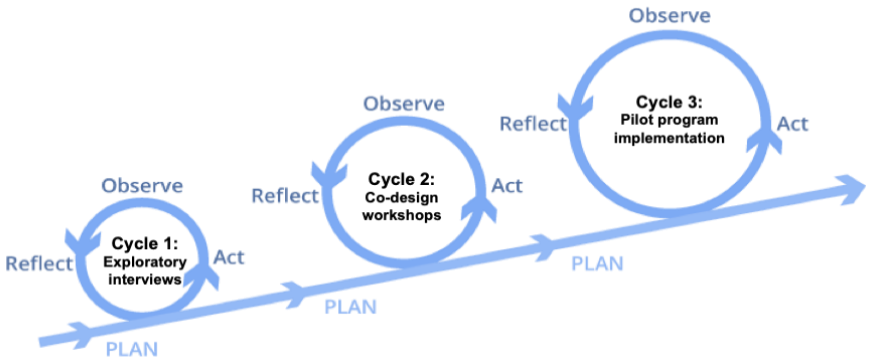
3 | Scholarly Approaches and Methodology

This research utilises Participatory Action Research (PAR) and Awareness Based Systems Change (ABSC) to explore, analyse, and intervene in the complex education systems in secondary schools. It is pragmatic in engaging with the current education systems within their existing paradigms of operation

while simultaneously planting the seeds for "fundamentally different forms of thinking, actions, systems and structures" about the role and paradigm of education systems (Fazey et al., 2018, p. 55). Aligned with the premise of PAR of Hilary Bradbury and Peter Reason (2008), this participatory process seeks to develop practical knowledge by bringing together action, reflection, theory and practice to help address issues of pressing concern.

This research was undertaken as part of a PhD study with iterative research cycles, including exploratory interviews, co-design workshops and pilot program implementation as per Exhibit 2. The first cycle involved semi-structured interviews with educators and youth workers, informing the second cycle of co-design workshops with students and teachers to design a pilot program. The reflections and observations from the co-design workshops informed the planning and design of the pilot program, which contributed to a final process of reflection, analysis, and evaluation, forming a framework of meta-competencies for transilience.

Exhibit 2 -Iterative participatory action research cycles



The framework of meta-competencies for transilience was integrated into the design of learning experiences and activities for the *Resilience 2030 pilot program*, which ran in a Sydney secondary school for nine months in 2021. This pilot program provided a unique opportunity to explore and analyse the framework of meta-competencies, which were integrated into a series of experiential learning modules. Each learning module focused on developing specific meta-competencies through pedagogies summarised in Exhibit 3.

Exhibit 3: Overview of Resilience 2030 Pilot Program

Module name and purpose	**Key meta-competencies**	**Primary pedagogies and practices**
Module 0 - Co-design workshops with teachers and students A series of 1-2 hour workshops to explore the context and priorities for resilience and well-being in the school setting.	Agency, self-awareness, and reflexivity	Systems mapping using rich pictures, empathy interviews and mapping, and visual storytelling.
Module 1 – Place-based Learning workshop An experiential learning day held off-site in a local community venue where students learned about the history and connection with their local	Interbeing, self-awareness, and reflexivity	Yoga, mindfulness, deep listening (Dadirri), forest walking, craft, journaling,

environment and explored themes of belonging and interconnectedness.		augmented reality historical site tour.
Module 2 – Self-awareness, agency and personal resilience An incursion held at school focusing on self-awareness, self-care, self-compassion and promoting help-seeking behavior for mental health. Co-hosted by youth mental health organisation batyr.	Agency/autonomy, self-awareness and reflexivity, compassion	Menta health spectrum, visual mapping of emotions in the body, self-compassion exercise (Recognise, Accept, Inquire, Nurture - RAIN), games, resilience wheel.
Module 3 – Storytelling and perspective One day excursion hosted at university focused on storytelling and embodied practices, developing empathy and insight about their own and others' stories. Understand that any situation can be viewed through several different perspectives depending on one's worldview and life experiences.	Creativity, compassion	Drama games, storytelling triads, constellation storytelling, empathy interviews.
Module 4 – Systems thinking Developing an understanding of complexity and system thinking, learning 'soft systems' methods to map, understand and intervene in systems. Support experiences of personal, collective agency through designing intervention/s and safe-to-fail experiments within these systems.	Agency/autonomy Interbeing	Systems mapping and rich pictures, empathy interviews and mapping, ideation methods (15 whys, crazy 8s), experiment canvas.
Module 5 – Futures thinking Exploring emerging practices such as futures thinking and transition design and learning methods. Activities of designing and prototyping assets to visualise future scenarios.	Adaptability Creativity	Life design (Odyssey mapping), speculative futures storytelling, values cards, backcasting, multi-level perspective model.
Module 5 - Project-based learning Small teams project work where students identify challenges around resilience and well-being for younger students based on their own lived experiences. Students design and implement a learning experience for younger students to improve their well-being and resilience.	Compassion, agency	Applying methods of human-centered design, systems thinking, and futures thinking (as detailed above).

The pilot program was run in a selective girls' high school in Sydney for nine months, from April to November 2021. This PAR involved fourteen Year 10 students (15-16 years of age, the equivalent of High School Sophomore year in the US) and a small team of teachers. The following analysis provides a summary of the key findings related to each of the meta-competencies from the pilot program. Evidence was collected and triangulated from various data sources during the PAR, including researcher observation, workshop artefacts and recordings, post-workshop surveys, pre and post-pilot surveys, group interviews, and student journals.

A second methodology informing this research is Awareness Based Systems Change (ABSC) developed by Otto Scharmer and the Presencing Institute, which draws on and extends the work of Kurt Lewin in social field theory by bringing a deeper awareness of the *social field of inquiry* as "the sum total and quality of relationships collectively enacted" (Dutra, 2020; Scharmer et al., 2021). Lewin's (1942) model of field theory holds that our environment and the dynamics of relationships within our environment influence our behaviour. Awareness-based systems change research seeks to improve understanding of the social field or context of a complex adaptive system in order to learn from it and transform it by making the participants within a system sense and see the system they are within (Pomeroy, 2021; Scharmer & Kaufer, 2015; Scharmer et al., 2021). This methodology extends Lewin's assertion that you cannot understand a system without changing it. Moreover, two further conditions are added: you cannot change a system unless you transform consciousness, and you cannot transform consciousness unless you can make a system sense and see itself (Scharmer & Kaufer, 2015). Thus adding a new dimension to our understanding of complex social systems by observing a system complemented with a view of the collective experiences of those within the system, which is usually invisible. These invisible dimensions are referred to as the soil or source conditions that "give rise to patterns of thinking, conversing, and organising, which in turn produce practical results" (Scharmer et al., 2021, p. 3). According to this methodology, a change in the level of self-awareness and intrapersonal consciousness gives rise to an improved quality of relating, which then produces visible and practical results across the system. In developing meta-competencies for transilience, this study is designed to influence the source conditions to improve the quality of relating and finally produce practical results or outcomes to improve education systems and, hence, the well-being of young people and educators.

4 | Meta-competencies for Transilience

This chapter outlines the meta-competencies our study revealed that create the conditions for transformative resilience. The term meta-competency refers to a *way of being* in the world that demonstrates "higher order, overarching qualities and abilities of a conceptual, interpersonal and person/professional nature" (Bogo et al., 2013, p. 260). After explaining the relevance of these meta-competencies to young people's mental health and transilience below, we go on to analyse their application within a secondary school system and related findings.

4.1| Agency

Agency in this study is understood as the ability to act and influence change within one's environment or "the socio-culturally mediated capacity to act" (Ahearn, 2001, p. 112). Student agency is seen as a vital meta-competency because it empowers students to think of themselves as agents and realise the responsibilities that come with this agency. Without agency, students feel they can do nothing about the challenges that surround them and can feel helpless. In a society that is increasingly volatile, uncertain, complex and ambiguous (VUCA) agency provides a young person with a sense that they can influence change (Bennis & Nanus, 1985). According to Deakin Crick et al. (2015, p. 151), agency cannot be taught or given but rather is an "emergent property of the recursive interaction between self and context."

In the context of uncertain futures and climate disruption outlined earlier, individual and collective agency and autonomy are critical for young people to maintain a sense of well-being and resilience (Delbosc & Vella-Brodrick, 2015; Melendro et al., 2020). Agency in this research is closely related to the concept of autonomy, which is generically described as a state of being independent or self-governing. Autonomy for young people might refer to cognitive, behavioural or emotional aspects of independence (Spear & Kulbok, 2004). Here, we refer to Sessa and Steinberg's (1991, p. 42) definition of autonomy as a sense of self-reliance, a belief one has control over one's life and "subjective feelings of being able to make decisions without excessive social validation." Adolescence is necessary for developing independence and autonomy (Bernal Romero et al., 2020; Melendro et al., 2020; Spear & Kulbok, 2004). Learning environments that promote a sense of agency and autonomy can play a preventative role for young people at risk, according to Rutter (2012), who calls for these skills to be taught through experiential learning (rather than didactic instruction).

4.2 | Adaptability

Adaptability, like resilience, is not a static trait but a complex, dynamic meta-competency "that individuals can acquire and practice" (Liem & Martin, 2015, p. 96). Adaptability is defined here as the capacity to modify or adjust one's behaviour in responding to new or changed circumstances (Martin et al., 2013; VandenBos, 2007). Our systemic challenges are non-linear, and the world's challenges are multi-causal and interconnected. Being adaptable helps them to tackle changing and uncertain futures. Adaptability can be developed through experiential learning to support young people in developing transilience. Young people with stronger adaptability generally demonstrate greater buoyancy and resilience when there are changes in their environment (Martin et al., 2013). Adapting to changing circumstances is important during adolescence, given it is a time of significant change as a young person develops their identity and personality.

Adaptability has been found to support young people's academic and personal development, including psychosocial well-being, motivation and engagement with learning (Holliman et al., 2021; Martin et al., 2013, 2021). Students with higher levels of adaptability experience more positive academic and non-academic outcomes, a finding reinforced during the COVID-19 lockdowns when students had to adjust rapidly to changed and novel circumstances in the move to online learning (Martin et al., 2021). Studies have found young people used particular coping strategies during COVID-19 that helped them adapt to these changed circumstances, including staying connected with friends digitally, keeping a daily routine, staying busy, being involved in hobbies, watching videos or playing games, relaxing and exercising (Brennan et al., 2021).

4.3 | Creativity

Multiple sources have identified creativity as a critical future-focused meta-competency (Deakin Crick et al., 2015; Hennessey, 1996; Le Hunte, 2020; OECD, 2019). This study defines it as an ability to express oneself through creative and artistic avenues to create something new and of value. Creativity is identified as one of the core meta-competencies for developing transilience. In systems terminology, creativity creates positive feedback loops. The more creative ideas a learner comes up with, the more creative they feel, which allows them to produce better and bolder ideas. This meta-competency can be seen as an antidote to the negative feedback loops that maintain the status quo of poor outcomes and uncreative solutions in our systems. Creativity helps students to consider original ideas that can break past the *stuckness* of our current solutions (Gardner, 2011). Creativity and resilience are both associated with adaptability and flexibility, with Csikszentmihalyi (1997) proposing that creative personalities may have an inherent ability to engage with complexity and, hence, have a higher tolerance for ambiguity. Creativity is also associated with divergent thinking, self-awareness and problem-solving (Metzl & Morrell, 2008).

Integrating creativity into learning can increase a young person's confidence and self-efficacy as they develop an ability to shape and influence their environment and situation through creative acts and creative intelligence (Simonton, 2000; Spendlove, 2008). Engaging in creative practice and collaborations has been found to promote resilience at both individual and collective levels (Carr & Vandiver, 2001). The use of art therapy encourages understanding of ambiguity and complexity, promotes expressiveness and playfulness and, therefore, resilience through divergent thinking (Metzl & Morrell, 2008). Art and creative practice allow for a more complex perspective, acknowledging and integrating *non-rational* and unconscious modalities for revising meaning structures. Moreover, creative practice welcomes emotion alongside other kinds of knowing, such as intuition, affective learning, spirituality and somatic experiences (Spendlove, 2008).

4.4 | Compassion

Compassion is an essential meta-competency for students to better understand their contribution and the impact they can have in an interconnected world. Compassion is defined here as an ability to put oneself

in another's shoes *and* be willing to take action to improve their circumstances. Compassion and self-compassion have been found to positively impact young people's resilience and well-being (Bluth et al., 2018; Breines & Chen, 2012; Neff & McGehee, 2010). Self-compassion refers to "the ability to hold one's feelings of suffering with a sense of warmth, connection and concern" (Neff & McGehee, 2010, p. 226). It can be practiced through mindfulness or by maintaining a balanced perspective and understanding that suffering is a common experience of humanity (Bluth et al., 2018; Neff & McGehee, 2010). Studies have shown that young people with greater self-compassion also demonstrate greater resilience and curiosity and experience less depression, anxiety and stress (Bluth et al., 2018). Benefits for young people of self-compassion include "greater ability in perspective-taking and more emotional stability and calmness" (Kramlich & Beck, 2021, p. 28).

Self-compassion is seen as a springboard for developing empathy and compassion for others (Kramlich & Beck, 2021). Empathy and compassion have become the focus of neuroscience research, where meditation has been demonstrated to increase experiences of compassion in young people (Singer & Klimecki, 2014). Compassion is a more active or pro-social form of empathy, which extends this capacity to other emotional states together with a motivation to act or help (Singer & Klimecki, 2014). With education and learning, students who have greater self-compassion have been found to respond productively to failure and be self-motivated to make changes needed to improve their results, as well as being able to cope more positively with complex life events (Bluth et al., 2018; Breines & Chen, 2012). Meditation and mindful self-compassion programs for young people have been shown to have positive results on mental health and provide a buffer against stressors and mental health challenges (Bluth et al., 2018).

4.5 | Interbeing

Buddhist scholar Thich Nhat Hahn (2001) created the phrase *interbeing* to explain a highly dynamic, relational way of being in and understanding the world. He refers to an individual's connection with their environment as a continual state of being in touch with reality and change. Interbeing is defined here as a relational experience of feeling connected with all living beings and nature. This idea of *interbeing* is reflected in the Buddhist Mahayana philosophy of *dependent arising*, which posits that every material and non-material entity arises from a complex series of causes and conditions that are in a constant state of motion (Kumar, 2002; Kwee, 2013). This interdependence extends to the natural world, where we have a mutually dependent relationship with all other living beings. Many Indigenous and First Nations peoples have a sophisticated understanding of *interbeing* and interdependence with the land and living systems, which is often related to a custodial responsibility to care for the land (Graham, 1999; Yunkaporta, 2019). In many cultures, a series of rites of passage designed for transformative learning were developed for young people to explore this interconnected relationship with the land and each other and grow into adulthood (Groff, 1996; Lertzman, 2002). These threshold experiences for young people develop resilience, with many lessons being learned through connection with land, animals, and spirits described by Abrams as the *more-than-human world* (Abram, 2013; Lertzman, 2002).

Drawing on Buddhist and Indigenous ways of knowing, the concept of *interbeing* helps students understand that their individual resilience relates to the well-being of the whole – including human and non-human others. This interconnected whole reflects a more robust relational concept of transformative resilience. However, within the Western education system, awareness and cultivation of a sense of *interbeing*, or interconnectedness, has been largely relegated to the field of religious education (Armon, 2021). The importance of connection and belonging for supporting resilience and well-being for young people is well documented by both educators (Dewey, 1963; Kolb & Kolb, 2005; D. Orr, 2013; Taylor, 2001) and psychologists (Masten, 2009; Rutter, 1999; Ungar, 2011). Many transformative education scholars call for pedagogies that foster a sense of *interbeing* and interconnectedness to help students recognise the complex ecological systems we are part of to help them thrive in uncertain futures (Hampson & Rich-Tolsma, 2015; Hathaway, 2011; D. Orr, 2013).

4.6 | Self-awareness and Reflexivity

Systems display an ability to self-organise and self-regulate, but with learners, this self-regulation level is impossible without self-awareness, which is aided by constant reflection. In this study, self-awareness is defined as the ability to reflect on our thoughts and feelings and understand how they affect our behaviours and attitudes. This meta-competency helps students understand the importance of building transformative resilience through reflexive practice. In the context of this study, self-awareness is considered to have two key elements: firstly, an ability to notice, observe and understand one's own mind through witnessing thoughts, emotions, sensory responses and intuitive insights. Secondly, to become more aware of how these thoughts influence how we engage with our external environment such as people, places, experiences, or events. From a Buddhist perspective, self-awareness might be described as a *many-layered phenomenon* involving awareness of sensory phenomena at a surface level and our emotional responses to more profound levels of contemplation around our nature and life's purpose (MacKenzie, 2008). At a surface level, this awareness of self constantly scans and integrates our environment for physical, emotional, cognitive and intuitive inputs while responding to this through constant micro-adjustments. At a deeper or more contemplative level, self-awareness can involve more significant ongoing internal narrative processes considering what we value, what kind of person we see ourselves as and what makes life meaningful (Bermúdez, 2000; MacKenzie, 2008). These more sophisticated, reflexive modes of self-awareness and narratives of self are created and recreated daily and inform how we understand ourselves and how we choose to respond and react to the environment and people around us (Flanagan, 1996). Our external environment, or conventional reality, becomes increasingly challenging and complex due to increased uncertainty and climate disruption, so our ability to *respond* rather than *react* to these external factors becomes increasingly essential.

5 | Findings

The following findings provide insights into the experiences of students participating in the research concerning their development of each of the meta-competencies for transilience. During the period of the pilot program, students experienced a sudden transition to lockdowns and remote schooling during the COVID-19 pandemic, and these findings include reflections from students on how the skills and competencies developed during the pilot contributed to their sense of resilience during this time.

7.1 | Developing Agency

The learning experiences in the *Resilience 2030* pilot helped foster agency at both an individual and collective level. The student-led project-based learning effectively gave students a voice and agency within the school system as they developed and implemented learning experiences for younger students to improve their resilience and well-being. The feedback from students expressed an increased sense of agency through the project work, validating their own experiences and being able to use their own experiences to help others. An example of one team's project was designing a Minecraft game with a 'choose your own adventure' format focusing on stories of connection and belonging. Students used their own stories to create the choices and interfaces that helped younger students explore possible strategies as they played the game together. As one student reflected, "Designing the project was very inspiring, as I was able to use all these ideas and experiences of mine to potentially help others." Similarly, another said, "I really enjoyed creating and designing the project, as it gave us complete creative freedom and allowed us to use our own experiences to help others." The student teams presented their project work to the school's Well-being Committee and senior leadership. They received positive feedback from the teachers and the junior students participating in the learning experiences. This collective agency and self-efficacy were also evident as students expressed more confidence in contributing to and changing things in the school system that they felt were not working well. One student commented on a change in their perception of resilience and problems in the school, saying, "You can come up with solutions. There are things you can do. You don't just have to sit and take it." Another student explained that she felt more confident about proposing changes within the school after doing the pilot program, saying, "This program is really helpful because we're striving to come up with solutions, to change things to take the culture of

our school and make it better. Because things aren't stagnant. It doesn't always have to stay this way. We can change things."

7.2 | Developing Adaptability

Adaptability as a meta-competency came into its own during the COVID-19 pandemic when students endured two extended lockdowns during the pilot program, where all learning moved online. During this time, students had restricted movement and could not leave their homes except for essential reasons. In the final post-pilot interviews, students reflected on how the program had helped them adapt during the lockdowns. Several students felt that they were more adaptable and resilient due to their learning experiences in the pilot. As one student reflected, "When I was stressed during lockdown, I would actually think to myself, I remember what we did in resilience, where we kind of found all the causes of lack of well-being.… Because I knew why I was stressed. It helped me work through it (and) become less stressed." The futures thinking workshops and activities also developed this ability to adapt to changing circumstances. During the workshop, students were invited to design three different potential five-year plans for their future selves. This kind of activity supported students in considering alternative future scenarios developing adaptability, as evidenced in this comment from a student: "It made me think about the future in different ways and taught me how to approach it from different angles. It made me less worried about the future and showed me that there are different ways to get to where I want." Overall, this adaptability contributed to greater resilience and well-being for students participating in the pilot both during and after the pilot.

7.3 | Developing Creativity

While all the pilot program modules strongly focused on promoting creativity, the module focused on storytelling and perspective, held in a studio space at the university, seemed to provide a great deal of creative inspiration for the students and demonstrated the connection between creativity, resilience and well-being. During the storytelling workshop, students were invited to share some of their own life stories, which were recreated using constellation storytelling practices, where the students nominated others to play people's roles in their stories and create a dialogue between these characters. Creativity and storytelling supported these young people in developing transformative resilience, which became evident when we met after the COVID-19 lockdowns as the students reflected on the power of stories to feel more resilient and see things from different perspectives. One student reflected on her experience during the lockdown as she thought about the storytelling concept of the hero's journey, saying, "It definitely did help me (through) that lockdown (and) even just throughout normal days, where I wasn't feeling the best. I would just try to not focus on the present moment as much (and) try to convince myself that in the end, it would all be worth it…it would all end up being ok." Another student mentioned, "Stories that follow the 'heroes' journey always (have) a gift at the end no matter how hard you're struggling."

7.4 | Developing Compassion

The pilot program included activities and practices focused on self-compassion and compassion for others. During the self-awareness workshop, students learned various techniques, including RAIN (Recognise, Accept, Inquire, Nurture), which is used to recognise difficult emotions while developing self-compassion. One student reflected on this increased empathy and compassion, saying, "I've just become more aware of how my friends and peers and people in my cohort are feeling and how I might be able to alleviate some of their stress and maybe help them become more resilient." Other activities, such as the constellation storytelling, created a more significant experience of empathy and compassion in realising that everyone sees situations from their own perspective; as one student commented, "We were able to think more about the different perspectives involved in the same story. It also promoted empathy as we had to step into the shoes of different people." This empathy and compassion carried through to the students' relationships and friendships within the cohort, which was discussed in the final group interviews as students reflected on the benefits of knowing each other's *back stories* from the deeper connections created in the pilot program. As one student articulated, "You get their backstory…it's like

the key, (it) unlock(s) the backstory, how they came to be whoever they are right now." In the final post-pilot survey, one student reflected on the value of this greater connection and empathy, saying, "I've learned a lot about what it means to be connected to others and how we can enrich our own experiences to become more aware of what's around us and be more empathetic towards each other and to learn from this process every day that we have."

7.5 | Developing Interbeing

The co-designing, delivering and evaluating of the place-based learning workshop provided several insights regarding learning conditions to promote a sense of interbeing. The location of the workshop, being held away from the school in a natural, community-based setting, immediately signaled to the students that this learning experience would be different, and many students expressed an immediate sense of calm and relief upon arriving. The setup of the space was also crucial in creating sensory engagement through the sounds of music playing, the scent of fragrant oils, the furnishing of rugs and cushions, the tasty morning tea and the fresh air and space looking over bushland. Offering opportunities for students to shift from a cognitive experience of learning to learning through sensory engagement was a core design principle of the workshop. The embodied practices, such as yoga, mindfulness, deep listening and the nature immersion walk, allowed students to connect with their bodies, breathing and senses. These experiences emphasised the validity of knowing through *being* in our bodies and senses. The students seemed almost surprised by what they learned, as one student commented about the nature walk, "Lots of noises, birds and the wind and so many things around us. It was somehow different to normal; we are not used to being in very much peace. But since we were being quiet, you're able to connect with your surroundings."

7.6 | Developing Self-awareness and Reflexivity

Self-awareness and reflexivity as meta-competencies were integrated into all experiential learning modules. Students were often encouraged to reflect during the workshops on what they had noticed, what surprised them and what they were still curious about. At the end of each workshop, students were encouraged to journal and reflect on their experiences and what they had learned. This increased opportunity for reflection and becoming more aware of thoughts and feelings permitted students to focus on their own mental and emotional needs rather than those of others, as one student noted, "so busy trying to please other people that I do not consider how I feel or what I want and with disregard to my mental and emotional health." Journaling and mindfulness were two practices that students responded positively towards, with some students integrating these into their daily practices, particularly during the COVID lockdowns. Some students mentioned these practices were helpful for them in managing stress and developing resilience, as reflected by this comment: "I started using the mindfulness practice because sometimes at night, like I think of a lot of things, and it's really hard to fall asleep. So, I try calming myself down before I go to sleep. And it actually helped me sleep better." Another used journaling to reduce stress: "I started doing a bit of journaling…because they told us that one method, that you could reduce stress by writing down what worries you or stresses you out." Another student used journaling practices they learned in the pilot and adapted them for their own purpose during lockdowns to help reduce stress, commenting, "Instead of just writing down what worries or stresses me out, I kind of just wrote an account of everything I did in the day to help me reflect and see if there's anything I can do better or any way I could reduce my stress or workload."

6 | Conclusion and Closing Remarks

These six meta-competencies, agency, adaptability, creativity, compassion, interbeing and self-awareness, have shown the potential for developing transformative resilience or transilience for young people in a secondary school setting. In developing these meta-competencies, learners have shown greater self-awareness and social and emotional capacity to deal with change and uncertainty and an increasing awareness of their collective agency within educational and broader socio-cultural systems. While this shift in focus to a Curriculum for Being (not just knowing) seems at odds with the foundations of traditional

western education systems, the integration of these meta-competencies, as demonstrated in this paper, shows they are not incompatible and that a systemic understanding of resilience helps prepare students for unknown futures, while also helping to reduce stress and anxiety.

7 | References

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