

**Towards an understanding of resilience and
experiential learning for young people in the
context of uncertain futures and climate
disruption**

by Monique Elizabeth Potts

Thesis submitted in fulfilment of the requirements for
the degree of

Doctor of Philosophy

Under the supervision of Bem Le Hunte and Katie Ross

University of Technology Sydney
TD School

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Certificate of original authorship

I, Monique Potts declare that this thesis, is submitted in fulfilment of the requirements for the award of Doctor of Philosophy, in the TD School at the University of Technology Sydney.

This thesis is wholly my own work unless otherwise referenced or acknowledged. In addition, I certify that all information sources and literature used are indicated in the thesis.

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Never give up

No matter what is going on

Never give up

Develop the heart

Too much energy in your country is spent on developing the mind instead of the heart

Develop the heart

Be compassionate

Not just to your friends but to everyone

Be compassionate

Work for peace in your heart and in the world work for peace and I say again

Never give up

No matter what is happening

No matter what is going on around you

Never give up

His Holiness the 14th Dalai Lama

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Abstract

Young people in Australia are experiencing increasing challenges with their mental health and wellbeing. At least half are worried about the future, with the environment and climate change as primary concerns, and more than one in four experience significant psychological distress. The mental health of young people has been disproportionately impacted in recent years by ‘peak resilience’ events such as COVID-19, climate-induced natural disasters as well as the pace and scale of changes within our socio-cultural environment. This generation of young people has been described as the ‘canaries in the coalmine’ of a rapidly changing society as they grapple with the impact of social media, the changing future of work, loss of connection and belonging, confusion around image and identity and crumbling institutions. My research seeks to better understand the lived experience of young people in this context of increased uncertainty and climate disruption and proposes a paradigm shift in education to better prepare them for their future. My research methodologies combine participatory action research and awareness-based systems change, including interviews with educators and youth workers and a co-design process and pilot program in a secondary school in Sydney, Australia.

The findings of my research inform a framework of relational meta-competencies designed to support resilience, which include adaptability, agency, compassion, creativity, interbeing and self-awareness. These relational meta-competencies were found to enable resilience in response to adverse experiences or circumstances, including the COVID-19 lockdowns, by strengthening relationships to self, community and nature. My research articulates a conceptual model of resilience as a conscious, active, dynamic process of interchange between a young person and their environment. This conceptual model of resilience and framework of relational meta-competencies draws on diverse disciplinary knowledges as well as taking inspiration from relational knowledge systems of Buddhism and the wisdom of First Nations Elders and scholars. A pilot program co-designed and delivered over a nine-month period with teachers and students explored the potential for developing resilience

through a series of experiential learning modules focused on place-based learning, self-awareness and personal agency, storytelling and perspective, systems thinking and futures thinking. Evidence from my research demonstrates the benefits to students taking part in the pilot program as well as a change within the school system. The co-design process and pilot program offer a case study for a new paradigm of learning for uncertainty to promote greater resilience and wellbeing of young people.

Keywords: Resilience, experiential learning, schools, mental health, wellbeing, climate change, systems change

Chapter 1: Thesis Introduction

1.1 Chapter introduction

In this introductory chapter, I provide an overview of my research, starting with the background and context, research questions, and outlining key terms. I then address the significance of and motivation for this research. Lastly, I describe the structure of the thesis, outline critical assumptions, and summarise the unique contribution to knowledge of this research.

1.2 Key terms and concepts

Here, I provide an overview of selected terms used in this thesis. Further discussion and analysis of these terms also occur within the thesis.

The term *young people* is used within this thesis to refer to people aged between 15 to 24 years of age, and where studies use a different definition, I clarify that within my reference to the research.

The term *mental health* within this thesis adopts the standard World Health Organisation definition as “A state of mental well-being that enables people to cope with the stresses of life, realise their abilities, learn well and work well, and contribute to their communities” (World Health Organisation [WHO], 2022). Mental health is more than an absence of mental illness and takes place in a continuum of experiences that change over time (World Health Organisation [WHO], 2022). While the terms 'mental health' and 'wellbeing' are increasingly used interchangeably, in this research, *wellbeing* refers to a more proactive definition of social and emotional wellbeing where young people feel they can be themselves and thrive in their lives and communities (Australian Research Alliance for Children and Youth [ARACY], 2018). In some instances, in this thesis, the two terms are used together as 'mental health and wellbeing' to reflect not only an absence of mental illness but also conditions for a young person to be themselves and thrive within their environment.

The concept of *resilience* in this research relies on Ungar's (2004, p. 324) definition as "The outcome from negotiations between individuals and their environments for the resources to define themselves as healthy amidst conditions collectively viewed as adverse." Building on this definition of resilience as a dynamic interaction between a young person and their environment, I extend this concept to refer to relational *ways of being* in the world characterised by adaptability, agency, compassion, creativity, interbeing and self-awareness.

The term *peak resilience events* refer to unprecedented, large-scale events or situations that significantly challenge a population's physical and mental health and require high levels of resilience and stress tolerance, such as pandemics and natural disasters.

The term *meta-competency* refers to "A complex combination of knowledge, skills, understanding, values, attitudes" that can be applied across multiple domains and contexts (Deakin Crick, 2008a, p. 313) and "higher order, overarching qualities and abilities of a conceptual, interpersonal and person/professional nature" (Bogo et al., 2013, p. 260).

Specific terms related to Aboriginal and Torres Strait Islander knowledge systems and culture, such as Indigenous, Elders, Country, Culture, and Custodianship, are capitalised in accordance with First Nations vocabulary protocols (Australian Public Service Commission [APSC], 2022).

1.3 Background and context

The current generation of young people has been referred to by mental health experts as 'canaries in the coal mine of society' (Uhlhaas et al., 2021, p. 1) as they struggle to adjust to the social, economic, cultural and technological changes.¹ Young people are

¹ This historical metaphor refers to a practice originating with the coalminers of Wales in the late 1800s, where canaries accompanied miners down in their cages down into the pits. Being more sensitive to carbon monoxide, the canaries would become sick first, giving miners a chance to escape or put on protective respirators.

more sensitive to peak resilience events, and their mental health is disproportionately impacted by events such as COVID-19 and climate change-induced natural disasters (Li et al., 2021; Power et al., 2020; Uhlhaas et al., 2021; Verlie, 2021). Other significant issues contributing to young people's uncertainty and anxiety about the future include the impact of social media, changes to the future of work, loss of connection and belonging, and changes to traditional institutions such as religion and family (Brennan et al., 2021; Mission Australia, 2022; Potts, 2021b).

The mental health indicators of young people in Australia and globally have been in decline since the beginning of the twenty-first century. Globally, the World Health Organisation estimates that one in seven (14%) of 10-19-year-olds experience mental illness, with anxiety and depression being the most common challenges (World Health Organisation, 2021). In Australia, one in four young people aged 15 to 19 years old report experiencing psychological distress, with this rate growing from 18.6% in 2012 to 26.6% in 2021 (Brennan et al., 2021). Of these young people, twice as many females than males are experiencing psychological distress and Aboriginal and Torres Strait Island young people, gender-diverse young people, and young people with a disability are experiencing higher levels of psychological distress than their peers (Brennan et al., 2021; Mission Australia, 2022). Increasingly, concerns about the environment and climate change are contributing to anxiety and psychological distress for young people, reflected in a recent national survey of 15-19-year old's identifying the environment as the most critical issue, with one in four expressing that they were extremely or very concerned about climate change (Mission Australia, 2022).

Access to appropriate and timely support for young people with their mental health is becoming increasingly challenging, with many families and young people facing long waiting periods for appropriate care (Headspace, 2020b; McGorry et al., 2007; Uhlhaas et al., 2021). Adolescence and early adulthood are the peak period of vulnerability for mental health, with 75% of mental disorders emerging during this time, making it a critical time for intervention and support in terms of mental health and resilience (Kessler et al., 2007; Uhlhaas et al., 2021). New and novel approaches to support youth

mental health with a preventative focus are required to “redesign (the) current service systems to enable early intervention and address the specific needs of young people and families” (Uhlhaas et al., 2021, p. 1).

Schools are a place where many young people spend a significant amount of their time, providing a unique opportunity for programs focused on promoting mental health and resilience. A range of programs, primarily extra-curricular resilience and mental health programs have effectively promoted mental health (Noble & McGrath, 2014; Slemp et al., 2017). While some of these programs experience considerable uptake, there are issues with ongoing engagement for students and teachers within schools, including competing resource and curriculum demands, limited time and teacher buy-in (Slemp et al., 2017; White, 2016). There is a growing recognition in schools of the need for a more holistic, student-centred approach to learning that can develop social and emotional learning for mental health; however, the reality is that many students increasingly struggle to engage with education and learning due to stress and poor mental health (Australian Curriculum, Assessment and Reporting Authority [ACARA], 2022a; Brennan et al., 2021; Mission Australia, 2022).

In this research, I advocate for a paradigmatic shift within educational systems to meet the academic, psychological, and spiritual needs of current and future generations of young people in the context of uncertain futures and climate disruption. Engaging with current thinking around learning for uncertainty (Barnett, 2012), learning ecologies (Barnett & Jackson, 2019; Hathaway, 2011) and socio-ecological determinants of health, this research advocates for a shift to experiential learning to support student resilience within a secondary school system. A stronger focus on experiential learning for resilience provides young people with the capacity to "define themselves as healthy amidst circumstances collectively viewed as adverse" (Ungar, 2004, p. 324). Resilience is achieved through building relationships with self, others, and nature through developing meta-competencies of agency, adaptability, creativity, compassion, interbeing and self-awareness.

As a transdisciplinary thesis, undertaken in the TD (transdisciplinary) School within the University of Technology Sydney, my work explores, synthesises, and integrates knowledges across a range of disciplinary sources, including education, health, psychology, philosophy and ecology, in order to provide novel insights into the real-world challenges of declining mental health amongst young people in Australia. It is transformative in its ambition to advocate for a shift in the learning paradigm to acknowledge wellbeing and resilience as integral elements of a more relational focus of learning within secondary schools. This research explores and analyses secondary schools as complex adaptive systems and applies awareness-based systems change (ABSC) to 'sense' into the field or nature of the system and then design and implement an intervention to influence change in the quality of the relationships within this system (Lewin, 1942; Pomeroy, 2021; Scharmer et al., 2021). The pilot program developed as part of the PAR process stands as an example to show what this shift to a more relational and experiential learning model can look like and analyses the impact based on the qualitative evidence and data collected.

1.4 Research questions

The primary research question for this thesis is as follows:

How can experiential learning within a secondary school environment help develop greater resilience for young people in the context of uncertain futures and climate disruption?

The secondary research questions are as follows:

1. What are the key issues impacting the wellbeing and resilience of young people in Australia in the early 2020s?
2. What meta-competencies might support young people to develop greater resilience in this context, and what can we learn from other worldviews in exploring these?

3. What learning environments and experiences in secondary school can support young people to develop these meta-competencies?

1.5 Significance and timeliness

While undertaking my PhD over the past four years, several peak resilience events have had a significant detrimental impact on young people's health in Australia, including the COVID-19 pandemic and climate-induced natural disasters. During the COVID-19 pandemic in Australia, most young people experienced extended lockdowns (of periods of up to twelve weeks in major cities) and were unable to leave their homes. These lockdowns and the associated stress and uncertainty during this time had a negative impact on young people's mental health, with one survey of young Australians between 12-18 years of age finding that mental health had worsened generally during the pandemic and 50% of young people were experiencing serious psychological distress (Bell et al., 2023; Li et al., 2021). While young people's declining mental health was already of great concern before the COVID-19 pandemic, this event has exacerbated the existing challenges and continues to have a serious impact on young people's mental health and wellbeing (Bell et al., 2023; Meyer et al., 2023; Sicouri et al., 2023). Climate-induced natural disasters have also increasingly impacted young people's mental health and wellbeing during this time. In the summer of 2019/2020, the East Coast of Australia was devastated by the 'Black Summer' bushfires, followed by major floods in 2022 (Australia Institute for Disaster Resilience [AIDR], 2020; Stanley et al., 2021; Verlie, 2021). Young people are often on the front line as first responders during natural disasters and impacted by these events are increasingly experiencing eco-anxiety (Gunasiri et al., 2022; Hrabok et al., 2020; Stanley et al., 2021).

My research is timely and significant as it seeks to better understand the impact of these events and broader societal changes on young people's mental health and what meta-competencies might support them to develop greater resilience to cope with and learn from such challenging circumstances. In this thesis, I develop and validate a

framework of relational meta-competencies for learning in uncertainty to support young people engaging with these complex and VUCA (volatile, uncertain, complex and ambiguous) environments (Bennett & Lemoine, 2014). I reflect on some systemic changes might be needed to create educational environments where young people can engage with challenging circumstances to develop greater resilience.

1.6 Motivation and intention of research

A primary motivation for this study comes from my role as a professional with a longstanding interest in youth work, community work, education, mental health, as well as being a parent. My experience as a parent of two teenagers experiencing challenges with their mental health and struggling to complete secondary school has led me to believe that both education and health systems are generally under-resourced and ill-equipped to deal with the crisis of youth mental health that many young people and families are experiencing. My motivation and hope are that my research might influence change within these systems and offer a fresh approach to understanding our young people's changing educational and health needs.

As a university educator currently teaching innovation, complexity, creativity, systems thinking, and leadership, I see the potential of experiential learning modes to promote student agency and resilience. I have a long-standing interest in Buddhism, which I have studied and practised for over thirty years, and a deep interest in learning about Aboriginal and Torres Strait Islander worldviews and knowledge systems. This research allows me to bring together my professional and personal experience and knowledge to offer a new way to design and deliver learning in the context of uncertain futures.

1.7 Thesis structure

This thesis begins with a contextual inquiry or *sensing into the field* to better understand the socio-cultural context in which this inquiry is taking place. This contextual inquiry consists of two chapters: the first explores the field of young people, mental health, and resilience from multiple perspectives, and the second

delves into the changing role of learning within an increasingly uncertain world. The following chapter provides an overview of the methodologies and methods used in the research practice.

- Chapter 2: Sensing into the field – Exploring multiple perspectives on young people, mental health, and resilience
- Chapter 3: Sensing into the field – A paradigm shift in learning and education for uncertainty
- Chapter 4: Methodologies and scholarly processes

Next, Chapters 5-7 document and examine the three cycles of participatory action research (PAR). PAR Cycle 1 consists of interviews with youth workers and educators to understand the issues impacting wellbeing and resilience within the lives of young people in Australia in the early 2020s. PAR Cycle 2 involves a series of co-design modules with teachers and students at a secondary school, which extend the inquiry into issues impacting the wellbeing and resilience of young people. The analysis and insights from these first two rounds of PAR lead into PAR Cycle 3, consisting of designing and implementing a pilot program within a secondary school along with a framework of relational meta-competencies for resilience.

- Chapter 5: Participatory action research Cycle 1 – Exploratory interviews
- Chapter 6: Participatory action research Cycle 2 – Co-design modules with teachers and students
- Chapter 7: Participatory action research Cycle 3 – Pilot program design and implementation

The following six chapters, Chapters 8-13, are dedicated to each of the six relational meta-competencies – adaptability, agency, compassion, creativity, interbeing and self-awareness. Each meta-competency chapter introduces the relevance of the meta-competency, how it can be understood from Western and 'beyond-Western'

perspectives, what themes and pedagogies were identified as relevant for experiential learning, and a series of thick descriptions and analyses of the experiential learning.

- Chapter 8: Meta-competency – Adaptability
- Chapter 9: Meta-competency – Agency
- Chapter 10: Meta-competency – Compassion
- Chapter 11: Meta-competency – Creativity
- Chapter 12: Meta-competency – Interbeing
- Chapter 13: Meta-competency – Self-awareness

The final chapters consist of the findings and discussion that synthesise and integrate as a response to each of the research questions, and the last chapter articulates the contribution to knowledge and the next steps.

- Chapter 14: Findings and discussion
- Chapter 15: Contributions and next steps

Along with the chapters listed above, I have included two additional interludes that document my personal reflections from my lived experience as a parent concerning resilience, mental health, and wellbeing. These interludes are printed in italics to differentiate them and contain poetry, journal and personal reflections.

The use of tense in this thesis reflects the purpose of the writing. For example, past tense is applied when I refer to planning and implementing the PAR and pilot program. In the thick descriptions in the meta-competency chapters, the present tense aims to create a sense of immediacy and immersion for the reader.

1.8 Key assumptions and positionality of the researcher

One of the assumptions of this research is that education systems are complex adaptive systems that need to adapt and change to meet the needs of young people within broader economic, environmental, and socio-cultural systems. While the

current education system has, by and large, provided a strong base for academic learning for most young people within an industrial and post-industrial economy, this research makes the case that these needs are changing as young people struggle to respond to the rapid changes and uncertainty of our current times. It assumes that young people will need more than resilience and the ability to 'bounce back' to the existing status quo but will need greater resilience and agency both individually and collectively to transform themselves and broader systems, particularly environmental systems. My research assumes that a paradigm shift is required in the education systems to meet the needs of young people growing up with uncertain futures and the impact of climate disruption.

Within this broader contextual field of increasing uncertainty, each school, community, and cohort of young people will have their own experiences and challenges. The design of this research, including a process of co-design, assumes that the issues and needs of each school and community will have a unique configuration and that the design of any program or intervention needs to include the teachers, students, and ideally parents and community, in a PAR or co-design phase if it is to seek to understand and address their specific challenges and meet their needs.

At the outset, I believe there are several vital aspects to acknowledge regarding my positionality as a researcher. In my professional life, I draw on my experience from multiple roles in youth work, education, community work, public media, and digital innovation. In addition, as I mentioned above, from my personal life, I bring my experience as a mother of two teenagers, engaging with the mental health and secondary school systems. These life experiences contribute essential skills and capabilities in designing and implementing this research, particularly in the school-based pilot program. I bring extensive experience in reflexivity and self-awareness from almost thirty years of studying and practising Buddhism. I apply this reflexivity to identify and position myself in relation to the research and interrogate my own assumptions and biases as I discover them.

Another aspect of my positionality as a researcher, which is essential to acknowledge, is as a white Australian with a settler background in this country where sovereignty has never been ceded by the Aboriginal and Torres Strait Islander peoples. My ancestry is predominantly Irish and Scottish, with many of my ancestors travelling to Australia by boat, some as convicts and some as economic refugees, as colonialism impacted their own home countries and communities. As a young person at university studying social and political theory, I began to question and educate myself about the history of Australia (which I had not learned in school), learning about the frontier wars, the stolen generation of children and the impact of colonisation on Aboriginal people in Australia. I became a strong supporter of Aboriginal rights. I was actively engaged in community protests, including the 1988 Bicentenary protest, when I walked behind tens of thousands of Aboriginal and Torres Strait Islanders over Sydney Harbour Bridge. I am acutely aware of the history of cultural appropriation of Aboriginal art and other cultural knowledge in Australia and have done my best to avoid this in my work. I have tried to do this by referencing material with sensitivity and care and focusing primarily on the work of Aboriginal Elders and scholars I have engaged with in communities of learning and practice over several years. I have asked and been permitted to use the work of several of these scholars.

1.9 Unique contribution of this research

There are several unique contributions of this research that I wish to draw attention to, including a contemporary insight into themes impacting wellbeing and resilience for young people in Australia in the 2020s, a unique framework of relational meta-competencies for resilience and a pilot program that demonstrates how experiential learning to develop these meta-competencies is implemented in a secondary school environment. This research advocates for a path forward in shifting the education paradigm to a more relational and experiential learning pedagogy to support young people's mental health, wellbeing and relational resilience. It draws on various relational worldviews, including Buddhism and First Nations knowledge systems, to propose an innovative relational meta-competency framework for building resilience. This relational meta-competency framework is validated, tested and analysed through

a process of co-design with teachers and students and a pilot program conducted over nine months within a secondary school. Further details on the contribution of knowledge of this research and thesis are included in the final Chapter 15.

Chapter 2: Sensing into the field - Exploring multiple perspectives on young people, mental health, and resilience

2.1 Chapter introduction

In this first of two context chapters, I explore the subject of young people, mental health, and resilience from multiple perspectives to provide a rich and nuanced understanding of the context for this research. In the second context chapter, I examine the implications of this changing context for the role of education and learning, what future-focused meta-competencies are required and how the current education system is responding to this need for change. These chapters draw on various academic literature from different disciplines, industry reports, and diverse worldviews and knowledge systems to provide a transdisciplinary analysis and synthesis of contemporary thinking on these subjects. They do not claim to be comprehensive or definitive in their scope but rather accompany the findings of the exploratory interviews to provide a foundation for the PAR exploring resilience and experiential learning for young people. The term ‘sensing into the field’ refers to an exploration of the ‘social field’ which refers to a “relational quality that characterizes a social formation, which manifests in the way people interact, organize and make decisions.” (Pomeroy & Herrmann, 2023, p. 2)

In this chapter, I provide a snapshot of the growing challenges in mental health for young people in Australia in the early 2020s and the need to focus on developing resilience and wellbeing. I include an analysis of how young people respond to peak resilience events such as the COVID-19 pandemic and climate change. I then summarise the current theory on resilience within psychology and articulate the value of integrating relational worldviews of Buddhist and First Nations knowledge systems to inform a dynamic relational model of resilience. Informed by these multiple perspectives on resilience, I propose an integrated model of resilience, which reflects the dynamic relational interplay between a young person and their context or environment. The final element of this chapter is a personal reflection from my perspective as a mother on mental health and resilience in the form of a poem and journal entry.

2.2 Young people and mental health in Australia

The experience of the current generation of young people growing up in Australia today is significantly different and, in some respects, more complex than for previous generations (Landstedt et al., 2017; Sweeting et al., 2010; Uhlhaas et al., 2021). In this section, I refer to contemporary statistics regarding the increase in mental illness impacting Australian young people and provide a brief synthesis of literature related to the socio-cultural factors contributing to this increase in mental illness and decline in wellbeing. This research demonstrates the urgent need for early intervention and preventative programs to promote resilience and wellbeing for young people.

Youth mental health in Australia is at a crisis point, with a national survey of young people aged 16-24 in 2020-21 finding one in five (21.4%) or 4.2 million young people had experienced a mental illness in the last 12 months. The most prevalent mental illnesses included anxiety disorders (16.8%), affective disorders (7.5%) and substance abuse disorders (3.3%) (Australian Bureau of Statistics, 2020).

The causes of psychological distress or poor mental health identified by young people have a complex combination of contributing factors, including personal, interpersonal, and contextual factors. In a 2022 survey of 18,800 young people, the top personal issues impacting their mental health and wellbeing included school, relationships and COVID-19 (Mission Australia, 2022). Four out of ten young people (41%) in this survey referred to challenges relating to school, including academic pressure, high workload, challenges with teachers or learning difficulties impacting their mental health and wellbeing (Mission Australia, 2022).

Adolescence has been identified by youth mental health experts as a critical time for intervention and for the implementation of preventative strategies and programs to support mental health (McGorry et al., 2014; Sawyer et al., 2000; Uhlhaas et al., 2021). The first onset of mental illness usually takes place in childhood or adolescence, with 75% of mental illnesses emerging before the age of 25 years (Kessler et al., 2007;

McGorry & Mei, 2018). When young people experience mental health challenges, it can negatively impact their future life opportunities and longer-term physical and mental health. It has the potential to derail pathways into adulthood through lower attendance at school, 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 (McGorry & Mei, 2018; Sawyer et al., 2000; Uhlhaas et al., 2021). Unfortunately, this age group of 12-25 has the least access to services and most young people experiencing psychological distress and mental illness remain undiagnosed and untreated (Brennan et al., 2021; McGorry & Mei, 2018).

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 determinant of health lens to youth mental 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 include the experiences in their family, school, work, social media, social relationships, physical health and activities, time outdoors and in nature and many more factors (Eckersley, 2015). While each young person experiences a unique combination of these social determinants of health, contemporary trends have been identified in research that collectively reflect the broader impact over time for young people.

These patterns or trends relate to particular socio-cultural determinants such as changes in family structure, materialism and individualism, a decrease in social connections and the impact of increased technology and social media use (Caprara & Rutter, 1995; Sweeting et al., 2010). Studies have found that the role of family and educational factors may play a role in increasing psychological distress (Sweeting et al., 2010). Other research has identified particular socio-cultural changes as negatively impacting young people's lives and mental health including 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 socio-cultural factors and changes contribute to increased stress and anxiety for young people in addition to traditional adolescent challenges of self-image, forming identity, social connection, family dynamics, and pressures of study and work (Brennan et al., 2021). More research is needed to understand better the complex dynamics of socio-cultural change and psychological stress for young people to inform programs to prevent mental illness and promote wellbeing and resilience.

In addition to these socio-cultural factors negatively impacting young people's mental health in recent years, we have experienced a series of peak resilience events that require high levels of personal and collective resilience to navigate and cope with. Since 2019, Australia has experienced unprecedented climate-induced natural disasters, including droughts, bushfires and 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 both natural disasters (Australia Institute for Disaster Resilience [AIDR], 2020) and COVID-19 (Headspace, 2020b; Li et al., 2021) in comparison to the general population. Young people, whose coping skills are still developing, have found it more challenging to deal with mental distress and uncertainty in coping with unexpected events (Fields & Prinz, 1997; Li et al., 2021; Power et al., 2020). These challenges demonstrate the importance of preventative measures to build the resilience and wellbeing of young people to better prepare them for an environment with increasing uncertainty and challenges such as climate change.

2.3 The impact of COVID-19 on young people and mental health

The global COVID-19 pandemic represents an unexpected peak resilience event that resulted in significant mental health challenges for young people in Australia and internationally (Bell et al., 2023; Li et al., 2021; Power et al., 2020). During this research period, many cities and towns in Australia experienced extended lockdowns to prevent

the spread of the virus, during which students shifted to online learning and could not leave their homes. The COVID-19 pandemic impacted young people's lives in Australia in various ways, including social distancing, school closures, lockdowns and a move to online schooling. Changes found to impact young people's mental health included higher unemployment and loss of income (as many young people hold casual roles most impacted during the pandemic), stress and conflict in families during extended lockdowns, social isolation and increased loneliness, challenges with studying online and concentration and others (Li et al., 2021; Meyer et al., 2023). One survey of young Australians between 12-18 years of age found that mental health had worsened generally during the pandemic, and 50% of young people were experiencing serious psychological distress (Li et al., 2021). A survey by youth mental health service Headspace during COVID-19 in 2020 found that 40% of young respondents believed the pandemic had impacted their confidence to achieve future goals, and 51% felt their mental health had worsened during the pandemic (Headspace, 2020a). Young people reported increased experiences of loneliness, isolation, anxiety and depression (Headspace, 2020a). The longer-term impact of COVID-19 on Australian young people's lives cannot be underestimated, with the top three areas being negatively impacted identified as education (73%), participation in activities (68%) and mental health (53%) (Mission Australia, 2022).

Resilience and self-esteem were identified as important protective factors for young people during the COVID-19 pandemic, particularly for those with existing mental health issues (Corrigan et al., 2006; Meyer et al., 2023). As the COVID-19 pandemic occurred during the time of this research, I was able to observe and document the experiences and response of research participants to these adverse circumstances and see how they applied the skills and competencies developed through the pilot program during this time, as discussed in further the meta-competency chapters and Chapter

14.

2.4 Climate disruption and climate anxiety

Another significant change causing ongoing stress and anxiety for young people is the impact of climate change through extreme weather events and natural disasters, as well as the existential crisis climate change itself poses to life on Earth as we know it. Young people in Australia are increasingly experiencing eco-anxiety and solastalgia, which refers to the compounded psychological distress as a result of changes in their home environment (Albrecht et al., 2007; Stanley et al., 2021; Verlie, 2021). Young people are increasingly aware of and concerned about the impact of climate change and the urgency of action required to address these changes (Stanley et al., 2021; Verlie, 2021). Climate anxiety has been described as “a multifaceted and varied experience that can encompass distressing emotions and a broader existential unmooring” (Verlie, 2021, p. 50). Climate anxiety can be seen as a rational response to an overwhelming, intractable challenge that can intersect with and contribute to mental illness in young people (Verlie, 2021).

The levels of eco-anxiety experienced by young people have been exacerbated by climate-induced disasters in Australia in recent years, including the Black Summer bushfires experienced during the summer of 2019/20, followed by major floods across the East Coast during 2022 (Australia Institute for Disaster Resilience [AIDR], 2020; Mission Australia, 2022). The Black Summer bushfires were described as 'unprecedented' in scale and ferocity. Over a few months along the east coast of Australia, there were 26 lives lost, 2,448 homes destroyed, 5.5 million hectares burnt, and millions of animals killed (Australian Disaster Resilience Knowledge Hub, n.d.). Following these bushfires, a report commissioned by the Australian Institute for Disaster Resilience (2020), co-authored with young people, found that 78% of young people expressed a concern or extreme concern about climate change, and 83% perceived a connection between climate change and natural disasters such as the Black Summer bushfires. In the forward of this report, young co-authors call for recognition, education, and action to support them with the uncertainty of their futures:

Young people feel unprepared, under-educated, concerned and increasingly scared by the prospect of a disaster. We anticipate that we will experience personal impacts from natural hazards in the future, whether living in capital cities, regional centres, or rural areas. The 2020 bushfires demonstrated that you need not live in the bush to be affected by a bushfire. We are experiencing these persistent worries while having to contend with life, school, growing up and everything else that comes with being a young person in Australia...We know that on our current trajectory disasters will come thicker and faster. We want to know how to plan, prepare and protect ourselves and our communities in an increasingly unsafe world (Australia Institute for Disaster Resilience [AIDR], 2020, p. 7)

A lack of perceived agency to influence change has been found to contribute to eco-anxiety. Conversely, opportunities to experience a sense of agency have been found to improve eco-anxiety for young people (Trott, 2020; Williams & McEwen, 2021). A recurring theme in climate anxiety research with young people is frustration and powerlessness felt to influence change to improve the situation (Australia Institute for Disaster Resilience [AIDR], 2020; Mission Australia, 2022). The dire consequences of the climate situation are not lost on young people who continue to identify it as a primary concern and cause of anxiety and stress. However, most young people feel their voices are not being heard and that the government and those they perceive as able to influence change are not listening or acting quickly enough (Australia Institute for Disaster Resilience [AIDR], 2020; Mission Australia, 2022; Verlie, 2021). Reflecting this lack of agency, a national survey of young people found that 67% believed Australia was not doing enough to reduce carbon emissions and that their views were not being listened to by leaders in government (Australia Institute for Disaster Resilience [AIDR], 2020). This sentiment corresponds to research undertaken by Reachout and Student Edge (2019), which found that over 77% of young people felt their concerns about climate change were not being suitably addressed. Eco-anxiety is found to be closely connected with a range of emotions, such as grief, guilt, anger, and

despair. Validation of eco-anxiety within educational settings is essential to create safe spaces for young people to understand their emotional response to climate change (Ojala, 2016; Pihkala, 2020). A sense of powerlessness can lead to apathy and despair but can also act as a catalyst for taking action which can contribute to a greater sense of agency and constructive hope (Baker et al., 2021; Ojala & Bengtsson, 2019; Verlie, 2021).

Opportunities that provide young people with a sense of personal and collective agency, either formally through education and learning or informally through activism, can influence the level of climate anxiety they experience and help develop resilience (Baker et al., 2021; Ojala, 2016; Trott, 2020; Verlie, 2021; Williams & McEwen, 2021). The School Strike 4 Climate (SS4C) and other youth-led movements are examples of young people expressing agency and self-determination with climate change. In September 2019, over 300,000 students and their supporters protested in cities around Australia to call for urgent action to address climate change (ABC News, 2019). In another act of agency and defiance in 2021, eight teenagers and an octogenarian nun took the Australian Environment Minister to court seeking an injunction against the approval of a new coal mine, claiming the Minister had a duty of care to protect young people from the climate crisis. In a historic legal precedent, the judge found that the Minister did have a duty of care to young people to protect them from climate change (Morton, 2021). These actions demonstrate the potential of agency to improve not only young people's resilience but also to influence change within social and political systems.

Events described above, such as the COVID-19 pandemic and climate-induced natural disasters, have contributed to a decline in mental health and wellbeing for young Australians and reveal the need for learning environments to support resilience and agency. In the following sections, I briefly outline the history of contemporary Western psychological studies of young people and resilience, followed by a summary of what we might learn from other relational worldviews, such as Buddhism and First Nations knowledge systems. Finally, I propose a revised relational model of resilience as a way for young people to respond to increasingly challenging contexts such as

those outlined above. I argue that we can draw on a range of worldviews and knowledge systems to develop a broader notion of resilience as the dynamic relationships between a young person and their environment.

2.5 Young people and resilience - a Western psychology perspective

Research on resilience for children and young people emerged in the 1970s from the fields of social science and psychology, exploring why some children and young people had better outcomes than others despite experiencing the same risks or adverse circumstances (Garmezy, 1987; Rutter, 1979). Early studies on resilience involved longitudinal research with children and young people growing up from the 1970s to 1990s who were exposed to significant challenges in their environments, such as family conflict, low socio-economic status, overcrowding, parents' involvement in crime or experience of mental illness. Early research in 1964-65 by Rutter et al. (1976) compared children from the Isle of Wight with children from a low socio-economic neighbourhood in inner-city London and identified a series of risk and protective factors for resilience. They found that there was a cumulative effect of risk factors on the likelihood of children experiencing psychiatric disorders, as well as identifying protective factors supporting resilience, such as the closeness of the relationship between a child and parent (Rutter et al., 1976). Other seminal research by Garmezy, the founder of Project Competence, involved a longitudinal study over twenty years from the late 1970s with at-risk children who had a parent suffering from schizophrenia. This research sought to understand why some children were more resilient than others in terms of their competence and ability to adapt to challenging events and circumstances. In this and further studies, Garmezy and his colleagues identified specific protective factors that made children more 'stress-resistant', including gender, IQ, socio-economic status, parental competence, family stability and family cohesion (Garmezy et al., 1984). One of the critiques of these longitudinal studies to analyse resilience through identifying risk and protective factors is that most do not take into account the voice of children and young people and rely instead on reports of parents, teachers and peers to analyse their wellbeing and resilience (Luthar, 1991).

The definition of resilience from a Western psychological perspective, while still contested, has three core components that are agreed upon: the presence of adversity or risk, the influence of protective factors and a more positive outcome than expected (Stainton et al., 2019). Risk and protective factors identified as having the potential to impact a child or young person’s resilience can be considered on an individual, family, community, and global scale. An aggregated list of these protective and risk factors is visualised in Table 1, integrating the findings of Garmezy (1987, 1993; 1984), Haggerty et al. (1996), Masten (2009), Rutter (1987, 1990, 2003, 2007), Sanson et al. (2019) and Werner (2000). I have added an additional global level of risk and protective factors to reflect the rising impact of global adversities such as climate change and pandemics.

Table 1: Aggregated risk and protective factors of resilience for young people

Variables	Risk factors	Protective factors
Individual	<ul style="list-style-type: none"> - Low self-esteem - Impaired cognitive or physical development - Mental health problems - Limited self-efficacy or agency - Negative emotionality - Biological and genetic factors 	<ul style="list-style-type: none"> - Self-control - Self-confidence - Personal agency and autonomy - Executive functions (e.g., planning, time management) - Higher internal locus of control - Self-efficacy - Social expressiveness
Family	<ul style="list-style-type: none"> - Family conflict and marital discord - Carer with mental illness or substance abuse issues 	<ul style="list-style-type: none"> - Family cohesion and warmth - Parental involvement with child’s education

	<ul style="list-style-type: none"> - Low socio-economic status - Domestic violence, abuse, neglect - Grief or loss in the family - Family discipline and management challenges 	<ul style="list-style-type: none"> - Fair family discipline and good organisation - Higher socio-economic status
Community	<ul style="list-style-type: none"> - Violence in community - Lack of access to support services - Discrimination or racism - Isolation - Lack of access to employment opportunities - Unemployment - Inadequate/inappropriate education provision - High mobility and transience - Lack of role models or supportive adults 	<ul style="list-style-type: none"> - Effective schools - Supportive adults outside of immediate family (e.g., teacher, relative or mentor) - Connection to pro-social organisations (e.g., sporting clubs, church, or community groups) - Inclusion or belonging - Access to support services - Higher socio-economic status - Access to employment opportunities - Positive role models
Global	<ul style="list-style-type: none"> - Exposure to climate-induced natural disasters - Physical and mental health impact of climate events and global events 	<ul style="list-style-type: none"> - Education and awareness relating to climate change - A sense of personal and collective agency to influence change

<ul style="list-style-type: none"> (e.g., COVID-19 lockdowns) - Impact on housing, food security, family income - Family stress and trauma - Social, economic, and political instability - Environmental degradation 	<ul style="list-style-type: none"> - Intrapersonal skills (e.g., coping strategies, emotional self-regulation, adaptability) - Interpersonal skills (e.g., negotiation and conflict resolution, collaboration skills) - Social and civic engagement skills (e.g., volunteering, activism)
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While there is no clear algorithmic relationship between risk and protection, in general, the fewer risk factors and more protective factors in a young person's life the more likely they are to display what is considered 'resilient' behaviour and responses (Rutter, 2007). Masten (2009) noted that most risk factors can be cumulative as they often occur together. The concept of a 'risk trajectory' for children and young people explains how childhood risks can accumulate to reduce an individual's resilience in adulthood and even into the next generation (Rutter, 1990). Protective factors have been found to contribute to greater resilience for a young person and can be cumulative, meaning the more protective factors, the greater the resilience (Rutter, 1979; Werner, 2000).

The concept of 'positive adaptation' is closely aligned with studies of resilience and is defined by Luthar et al. (2003) as manifested competence or success in achieving the appropriate developmental tasks at different stages of life. Some of these development tasks for young people in a contemporary Australian context might include completing school, attending university, getting a job, having a romantic relationship, or moving out of home to live independently. Another major factor in positive adaptation is the absence of mental health issues or illness. Positive adaptation or resilience outcomes include academic competence, feelings of confidence and connectedness, a positive outlook such as energy, adaptability and idealism (Rutter, 1990)

Over time, models of resilience have shifted to focus more on the interaction between a young person and their environment, including socio-cultural context, as a measure of resilience. Some theorists, such as Ungar, call for a 'decentering' of the individual child or young person, stating, "By decentering the child, it becomes much clearer that, when growing up under adversity, the locus of change does not reside in either the child or the environment alone, but in the processes by which environments provide resources for use by the child" (Ungar, 2011, pp. 5–6). Understanding the social ecology and cultural context requires consultation with young people and communities to identify relevant protective and risk factors to design culturally relevant programs to support resilience and wellbeing (Ungar, 2011). Including young people in this contextual inquiry is essential as excluding them would be methodologically flawed given the importance of a young person's insight and interpretation of their own context (Ungar & Teram, 2005).

In a more dynamic relational view of resilience, a young person's relationship to their environment is complex and multi-faceted in constant flux. Ungar (2011) proposes that for a young person growing up in an adverse environment, the focus of change should not just be on the young person or the environment but on the processes by which the environment provides resources for the young person. Ungar's definition of resilience (2004, p. 324) integrates this self-perception, describing it as the "outcome from negotiations between individuals and their environments for the resources to define themselves as healthy amidst conditions collectively viewed as adverse."

Understanding how systems operate and how we interact with them is one of these potential resources for young people to help young people to define themselves as health with an awareness of the context they are in.

The need to better equip children and young people to adapt to change and develop resilience is being increasingly recognised in education policy at a national and state levels in Australia, however the recognition and integration of Social and Emotional Learning (SEL) and resilience as being core to the role of education is still limited and ad hoc (Noble & McGrath, 2014; Slemp et al., 2017). At a national level these concerns

have been recognised as a major focus by the Education Council (to which all state education ministers are signatories) in the vision document *Alice Springs (Mparntwe) Education Declaration on Education Goals for Young Australians* (2019). This declaration states a core strategic aim of education is for students to be ‘confident and creative individuals who are resilient and develop the skills and strategies they need to tackle current and future challenges’ and ‘able to recognise, adapt to, and manage change’ (Education Council, 2019, p. 6). The NSW Department of Education and Communities (DEC) has also developed a Wellbeing Framework for Schools, which recognises the changes in the school environment and world in which young people are growing up and commits to strengthening their cognitive, physical, social, emotional and spiritual development (NSW Department of Education, 2015).

Definitions of resilience have been evolving in the past twenty years from a focus on specific character traits such as ‘grit’ to embracing the importance of environment, context and culture in understanding resilience (Duckworth et al., 2007; Stainton et al., 2019; Ungar, 2015). In a more contemporary light, resilience or ‘positive adaption’ is seen as a complex interaction between a young person and the aspects of the environment that highlight resilience as a dynamic process as opposed to a trait (Metzl & Morrell, 2008; Stainton et al., 2019). The review above of the history of resilience research from the 1970s to the present shows a gradual shift from a focus on the individual young person to the young person's environment and then the interaction between the two. Even though the Western psychological definition of resilience has evolved towards a lens of complex interaction and adaption between young people and their context, there is still a mechanistic and normative aspect of positive adaptation that fails to recognise the complexity of issues such as climate change and the impact on young people's mental health and wellbeing. Issues such as climate change represent universal adverse circumstances that require strong relational meta-competencies for young people to recognise themselves as healthy within this context. This research aims to develop a more nuanced inquiry into the nature of relationships for young people within themselves, others, and nature. As such, there is much to be learned from considering young people and resilience from a systems perspective and from the perspective of relational worldviews such as

Buddhism and First Nations knowledge systems that recognise the interconnectedness of all life.

2.6 Young people and resilience – a systems perspective

Young people's lives and experiences are embedded within a series of nested complex adaptive systems, including their school, family and friends, community, and society. If we consider a young person's resilience or adaptive capacity from a developmental systems perspective, it is influenced by the dynamics of multiple interacting systems and the "capacity of these systems to adapt in response to threat" (Beames et al., 2021, p. 2; Masten, 2021). The resilience of any young person is dependent upon and influenced by the resilience of other systems (both internal and external) surrounding them, in particular the relationships within systems closest to them, such as their friends, family, school and community (Masten, 2021). The work of Bronfenbrenner's ecological systems theory (1979) was integral to developing this understanding of an individual as being embedded within a series of systems at different levels. These systems include microsystems such as families or schools, which interact and overlap within mesosystems (such as the relationship between family and school) and are influenced by broader exosystems (such as parents' social networks), all of which sit within a broader macrosystem of society, culture and belief systems (Masten, 2021; Shaw et al., 2016; Bronfenbrenner, 1979).

From a developmental systems perspective, Masten (2021, p. 116) defines resilience as "the capacity of a dynamic system to adapt successfully to challenges that threaten the function, survival, or development of the system." A young person's capacity to respond well to adverse circumstances can be considered from an individual resilience perspective along with the resilience or adaptive capacity of the systems closest to them (Masten, 2021; Shaw et al., 2016). For example, a school or family system's resilience will impact a young person's resilience or adaptive capacity within that system, just as the quality of the relationships within those systems will directly impact a young person's resilience. This was evident in the research findings that during the COVID-19 lockdowns, young people with higher levels of conflict and

violence within their families were more adversely impacted in terms of their physical and mental health (Every-Palmer et al., 2020; Humphreys et al., 2020).

Other relevant characteristics of complex adaptive systems that are important to be aware of in this multi-faceted understanding of resilience, according to Masten and Cicchetti (2016), include that living systems are self-organising with emergent capabilities and that resilience or the ability to adapt to changing circumstances depends on many interconnected systems. Cascading effects are also evident in interacting systems around a young person. As Masten (2021, p. 122) points out, "Changes in children, families, or community systems resulting from systems interactions have been described as developmental cascades when they alter the course of development." Interventions that build resilience in systems surrounding young people, such as their families or schools, would be expected to improve the resilience of young people interacting with those systems (Masten, 2021). In alignment with other socio-ecological systems theories of adaptation, Masten and Cicchetti (2016) found that a young person experiencing a major adverse event may respond by adapting and coming back to equilibrium through self-regulation or external co-regulatory systems, breaking down to a lower level of function or transformation (Folke et al., 2010; Masten, 2021).

Resilience thinking in socio-ecological systems illustrates the potential to integrate resilience, adaptation and transformation within complex adaptive systems (Folke et al., 2010). From a socio-ecological perspective, resilience is "the capacity of a system to absorb disturbance and reorganize while undergoing change to still retain essentially the same function, structure, identity, and feedbacks" (Walker et al., 2004, p. 4). Resilience is often considered the antithesis of transformability, which refers to the "capacity to create a fundamentally new system when ecological, economic, or social structures make the existing system untenable" (Walker et al., 2004, p. 5). However, according to Folke et al. (2010), resilience and transformation are not mutually exclusive and can occur at different levels within a multi-level system. For example, multiple small-level transformative interventions in a system can lead to greater overall resilience. Resilience thinking broadens and embraces experimentation and

transformations, “making use of crises as windows of opportunity, and recombining sources of experience and knowledge to navigate social–ecological transitions from a regime in one stability landscape to another” (Folke et al., 2010, p. 8). This broader systems perspective on resilience thinking demonstrates the potential for interventions to build resilience at multiple levels for a young person, from an intra-personal focus on social and emotional skills to systems-level interventions within a family, school or community. It also supports the potential for transformation while developing resilience within these systems. Next, I consider the perspective of relational worldviews for extending a systemic and relational model of resilience.

Critiques of resilience theory, particularly in the context of climate change and subsequent natural disasters, point to the potential for the concept of resilience to be used to shift the burden of responsibility for structural issues and the need for transformation from governments and business elites to individuals and communities impacted (DeVerteuil & Golubchikov, 2016; Tierney, 2015). Resilience can be interpreted within a neo-liberal ideology as justification for maintaining the current status quo that contributes to environmental damage and economic disparity (DeVerteuil & Golubchikov, 2016). Resilience can also be understood and interrogated as a ‘boundary object’ that enables communication between domains and disciplines that may enable dialogue and collaboration (DeVerteuil & Golubchikov, 2016).

2.7 Integrating relational worldviews to extend a model of resilience

In this research, I consider some alignments of the relational knowledge systems of Mahayana Buddhism and First Nations peoples' wisdom relating to young people and resilience. As explained in Chapter 1, I chose these perspectives because of my familiarity and connections to these relational knowledge systems. Buddhism, with its focus on understanding suffering and impermanence provides specific practices to engage with change and uncertainty to develop greater resilience. First Nations knowledge systems, and in particular Aboriginal and Torres Strait Islander knowledge systems, are relevant to young Australians to help understand our deep connection to Country and each other.

As asserted above, the Western psychological understanding of resilience can be enhanced and expanded by considering and integrating knowledge and wisdom from relational knowledge systems. This transdisciplinary approach draws on philosophical concepts and learning experiences from these relational worldviews that challenge and extend a Western psychological interpretation of resilience through integrating insights related to the dynamic nature of reality and impermanence, interdependence, compassion, mindfulness, reciprocity, and Custodianship and relationship to Country. In the following section, I articulate the relevance and connection of these relational worldviews for developing resilience for young people.

2.7.1 Insights from Buddhist philosophy and psychology

Buddhist psychology and philosophy provide a valuable extension to contemporary Western resilience concepts by integrating a solid focus on impermanence, self-awareness, interdependence, and compassion. While some of these competencies, such as self-awareness and empathy (related to compassion), are referenced by researchers as protective factors for resilience (Brendel et al., 2016), others, such as impermanence, interdependence and compassion (defined as an active form of empathy) are largely absent from a Western psychological perspective of resilience and can contribute to a broader dynamic relational framework of resilience (F. Varela et al., 2016).

While there are many schools of Buddhist thought and many historical and cultural interpretations of Buddhism, several core concepts are common across all schools. The interpretation presented here is primarily informed by Tibetan Mahayana Buddhism and does not claim to be a comprehensive or definitive version of all Buddhist thinking but rather an interpretation of key concepts relevant to developing greater resilience for young people. An interesting aspect of a Buddhist psychological approach, and perhaps one of the reasons for its popularity in the West, is its experiential nature. There is no notion of a creator or higher being. Every sentient being (including humans, animals, and beings in other unseen realms) possesses

innate 'Buddha-nature', which can be nurtured and developed throughout one's life. This position reflects a fundamental assumption in the evolutionary potential of each individual towards continued growth and enlightenment (Kumar, 2002). There is a strong focus on developing insight and self-awareness through meditation practice and a pragmatic approach to theory, in that, a practitioner is encouraged only to use what is valuable and meaningful for them and discard what is not (Kumar, 2002). Critical concepts of Buddhist practice briefly introduced here as relevant for developing resilience in young people include impermanence, mindfulness, interdependence, compassion, and non-duality. In subsequent chapters, I explain how these concepts promote resilience within the school pilot program.

The first concept from Buddhist philosophy identified here as having the potential to contribute to greater resilience for young people through increasing adaptability and flexibility is *impermanence*. Impermanence is a key concept underlying Buddhist philosophy and refers to the idea that all physical matter and non-physical experience are in a constant state of flux or change. This change depends on a complex web of causes and conditions. According to Buddhist psychology, as a result of the misconception of a fixed, separate self, we continually experience suffering as we fail to 'see' that our environment is constantly changing due to a complex system of causes and conditions, "as the natural order of interdependence and impermanence constantly manifests itself" (Kumar, 2002, p. 42). Reflection and meditation on impermanence and death are encouraged to become more aware of the constantly changing nature of their life and the world. This experiential practice is recommended to develop greater adaptability and flexibility to respond to inevitable changes in our environment, relationships and material possessions (Kabat-Zinn, 2003).

A second concept from Buddhist practice, which is already being used successfully in many schools to support student mental health, is *mindfulness*. Mindfulness is one of the key practices of Buddhism, which involves following the breath in the body with an attitude of present-focused and non-judgemental awareness (Kabat-Zinn, 2003). During this experience, different sensations, thoughts, or emotions arise in the mind, which are then observed to see how they constantly change over time. Regular

mindfulness or meditation practice has been found to improve self-awareness and self-regulation of thoughts and emotions (Weare, 2013) reduce stress anxiety and promote resilience and adaptability to uncertainty and changing circumstances (Brendel et al., 2016; Johnstone & Wilson-Prangley, 2021; Meiklejohn et al., 2012).

Next, we consider a Buddhist philosophical concept of *interdependence* or *interbeing* in all living systems. According to His Holiness the Dalai Lama (1992), Buddhism can be explained in terms of two points, "First, a deep understanding of the interdependence of all things and events and second, the practice of non-harming, of helping others, that is based on the understanding of the first." Interdependence extends to the natural world with a mutually dependent relationship with nature and all other living beings described as "an infinitely complex and interconnected web of causes and effects simultaneously shaping each other across multiple levels of analyses" (Kumar, 2002, p. 41). The practice of non-harm and loving-kindness to all sentient beings is integrated into meditation and seen as a practical approach within a complex interconnected system. Practices that explicitly focus on interdependence might involve visualising or imagining connections to all human and non-human entities and contemplating the nature of these interconnections. From a Buddhist perspective, no 'central control unit' exists, and the individual and world continuously create each other (Varela et al., 2016). By practising meditation and through analytical and reflective practices, one becomes more aware of interdependence, which then leads to a more compassionate and caring mindset.

Based on this understanding of interconnectedness, Buddhism strongly focuses on developing *compassion* for others, which has a strong potential for transformative resilience in connecting to others through our shared experience of suffering (Chodron, 2021). Compassion is an active form of empathy and is defined as active caring or being prepared to take action to reduce another's suffering. Teachings on compassion relate to a core teaching of the Buddha on the *Four Noble Truths*, which seeks to explain the nature of suffering, why we suffer, how we suffer and what we can do about it (Tsering, 2005). The basis of this philosophy is that all sentient beings (in Tibetan 'sem-chen' or mind possessors) want to be happy and not suffer. The cause of

suffering is said to come from the 'root delusion' of a separate sense of self or 'self-cherishing' which sees the 'self' as being separate from everything else rather than part of a dynamic, interdependent system (Chodron, 2021; Eppsteiner & Hanh, 1993).

These powerful relational insights from Buddhist philosophy and psychology of impermanence, mindfulness, interdependence, and compassion may be able to inform a more nuanced and dynamic model of resilience and my thesis seeks to explore whether integrating these insights into experiential learning will help young people develop resilience. Next, I explore insights from the relational worldviews and knowledge systems of First Nations peoples that can contribute to a relational model of resilience for young people.

2.7.2 Insights from First Nations knowledge systems

Firstly, I want to recognise the lived experience of resilience and survival many Indigenous and First Nation communities have had in response to a history of invasion, colonisation and economic, social and cultural oppression. In Australia, Aboriginal and Torres Strait Islander peoples, who have been the caretakers and Custodians of this land for over 60,000 years, have suffered and survived unspeakable hardships during the last two hundred and thirty-five years of European colonisation. Colonisation is not just a historical process, but a continual ongoing experience lived by Aboriginal Australians and all Australians (Jackson et al., 2013). Given this history, I am acutely aware of my positionality as a non-Indigenous settler in this country, seeking to understand Indigenous knowledge systems better and avoid further cultural appropriation. My approach as a researcher in engaging with First Nations and Aboriginal and Torres Strait Islander knowledge was informed by protocols, conversations and advice from UTS Jumbunna Institute for Indigenous Education and Research. This advice included recognising and highlighting the impact of ongoing colonisation, asking for advice on how to integrate Indigenous knowledge and perspectives from Elders respectfully, and acknowledging the value of Indigenous scholars in this field. I focus primarily on the work of influential Aboriginal and Torres Strait Islander scholars with whom I have had the privilege to connect with and learn

from.² Other First Nations knowledge systems referenced include findings from research undertaken with Cree and Dene Elders from the Manitoba region in Northern Canada, with a specific focus on developing resilience through learning for young people in these communities.

Over the past few years, I have been fortunate to meet, listen and learn from Aboriginal Elders and scholars such as Mary Graham, Tjanara Goreng Goreng, and Tyson Yunkaporta. During this time, I have learned a great deal; however, I feel I am still in the very early stages of understanding the highly relational and complex worldviews shared by these scholars and Elders. These experiences and interactions have helped me reflect on and deepen my relationship with Country, other people, animals, and plants. As I learn more, I realise how dramatically different this worldview is from the worldview I grew up with as a fourth-generation Irish Australian settler. I wonder about my ability to deeply understand and experience these ways of being in relationship to the country of my birth. The following observations and interpretations integrate elements of what I understand from reading and listening to these Elders and scholars. In doing this, I do not claim a complete understanding of this knowledge or worldview but rather express deep gratitude and resonance with this way of thinking and being. I wish to explore the potential for integrating it with more traditional Western perspectives on learning and resilience at a 'cultural interface' of these learning models, which Dr Martin Nakata from the Torres Strait describes as a 'dynamic overlap of knowledges' of different people (Nakata, 2007).

The first concept identified as having significant potential to contribute to a more dynamic relational understanding of resilience for young people is *interconnectedness*. Like Buddhist worldviews, many Indigenous and First Nations peoples have a

²As a non-Indigenous scholar, there are many sensitivities in knowing how to respectfully acknowledge or integrate this wisdom within our thinking, writing and teaching. In Australia, there is a long and traumatic history of dispossession and genocide along with cultural appropriation of knowledge, art and culture. As a researcher and educator, I try to practice *Dadirri* or deep listening, as Miriam-Rose Ungunmerr (1998) invited when listening to and learning from Aboriginal Elders and scholars.

sophisticated understanding of interconnectedness with the land and living systems, often related to a Custodial responsibility to care for the land (Graham, 1999; Yunkaporta, 2019). In his book 'Sand Talk, How Indigenous Thinking Can Save the World', Aboriginal academic and storyteller Tyson Yunkaporta (2019) encourages us to consider an Indigenous worldview that we live in a sentient cosmos where not only humans and animals are sentient but also trees, rocks, rivers and celestial bodies. Yunkaporta explains that it is these relational forces that hold creation together:

In our world, nothing can be known or even exist unless it is in relation to other things. Most importantly, those things that are connected are less important than the forces of connection between them. We exist to form these relationships, which make up the energy that holds creation together (Yunkaporta, 2019, p. 169).

Understanding and experiencing this interconnectedness is integral to young people's learning. Rites of passage in many cultures are designed for transformative learning experiences where young people explore this relationship with the land and each other and grow into adulthood through this engagement (Groff, 1996; Lertzman, 2002). These experiences for young people develop resilience, with many lessons learned through connection with land, animals, spirits and the *more-than-human world* (Abram, 2013; Lertzman, 2002).

The second key concept that can inform a relational understanding of resilience for young people in First Nations knowledge systems is *Custodianship and relationship to Country*. As Aboriginal Elder and academic Mary Graham (1999, p. 108) explains, "For Aboriginal people, the land is the great teacher; it not only teaches us how to relate to it but to each other." The land, according to Graham (1999, p. 2), "is a sacred entity, not property or real estate; it is the great mother of all humanity." Aboriginal Elder and academic Tjanara Goreng Goreng articulates the nature of our relationship to the earth:

Ngungynateea – the name we call Our Mother the Earth...is the name of this land, this continent and this country as she is our mother, she births us through her womb and forever watches over us, nurtures us and sustains our life as human beings (Goreng Goreng, 2018, p. 67).

This relationship with Country is of the utmost importance and informs all other relationships; as Graham (1999, p. 106) describes, "The two most important relationships in life are, firstly, those between land and people and, secondly, those amongst people themselves, the second being contingent on the first." This relational connection between place and Country is essential to building resilience and a sense of collective spiritual identity for children and young people, according to Graham (1999). These relationships carry with them a responsibility or custodial ethic of Stewarding that needs to be carefully maintained and nurtured (Goreng Goreng, 2018; Graham, 1999).

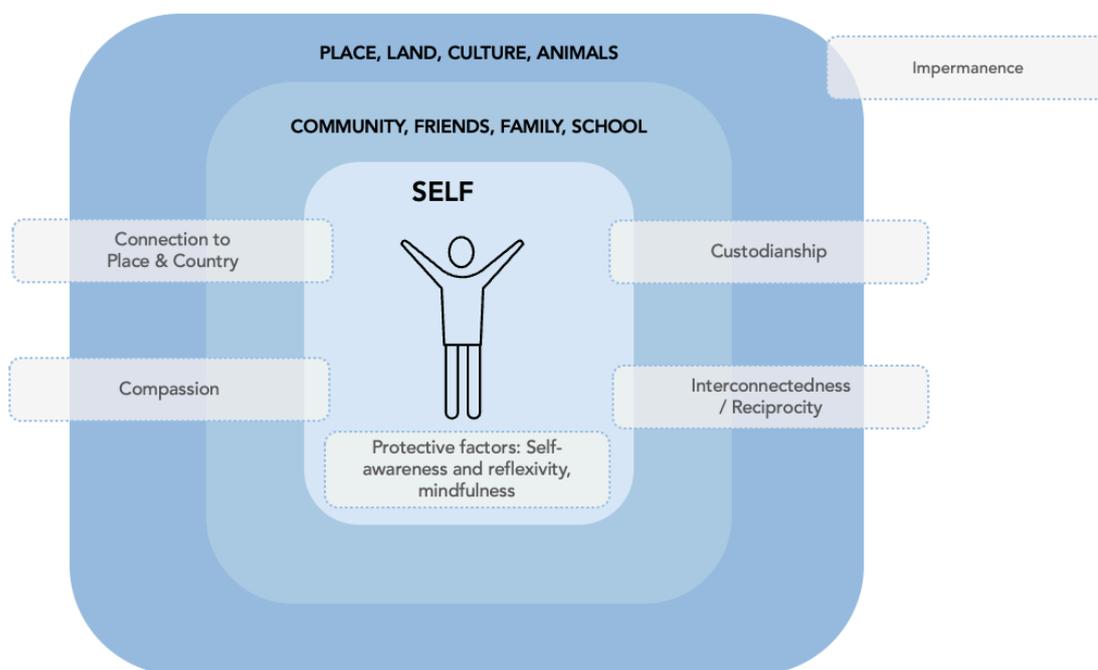
Finally, *reciprocity* in relationships between people, community and land is integral to this interconnected way of being and resilience (Graham, 1999; Yunkaporta, 2009). Graham (1999, p. 7) points out the importance of maintaining and strengthening these natural relationships, saying, "Aboriginal people maintain that humans are not alone. They are connected and made by way of relationships with a wide range of beings, and it is thus of prime importance to maintain and strengthen these relationships." These relationships can be maintained and strengthened through song, stories, ritual and ceremony (Yunkaporta, 2019).

How might these relational ways of being help build the ability of a young person to understand, respond to and interact with their environment (both internal and external) in a way that allows them to see themselves as healthy despite the changes and challenges they face? To progress, I propose a model of resilience that integrates insights from Buddhism and First Nations knowledge systems with a Western psychological model of resilience to inform a set of relational meta-competencies for resilience for young people as synthesised below.

2.8 Integrating of Western and beyond-Western worldviews and resilience

Key concepts or competencies related to resilience from Buddhism and First Nations wisdom as outlined above - impermanence, interconnectedness, mindfulness, compassion, connection to place and Country, Custodianship and reciprocity – in this research are integrated with a Western psychological perspective of resilience. This integration provides a richer model of the dynamic, multi-faceted relationship between a young person and their environment as illustrated in Figure 1 below.

Figure 1: Integration of Western and beyond-Western worldviews of resilience



This model reflects the significance of a systems and socio-ecological understanding of resilience, recognising a young person as embedded within multiple interconnected systems influencing their mental health and resilience. From this relational systems perspective, a young person’s resilience is determined not only by their individual ability to adapt or respond to difficult circumstances but also by the “interactions between an individual and the system in their broader environment, including

families, peer groups, schools, cultures, and communities” (Jongen et al., 2020, p. 4). As a result, resilience can be strengthened through interventions focused on developing resources across multiple levels, including individual, cultural and community contexts (Jongen et al., 2020; Kirmayer et al., 2011). Within this conceptual model of resilience, a young person's response to the uncertainty and complexity of contemporary society with anxiety and psychological distress may be seen as an 'appropriate' contextual response (Ojala, 2016; Pihkala, 2020; Verlie, 2021). With the current trajectory of rapid socio-cultural and environmental change, this expanded model of resilience seeks to provides multiple leverage points for intervening to support resilience and wellbeing for the resources for young people to define themselves as healthy despite adverse and uncertain environments.

2.9 A personal interlude: A parent’s perspective on young people and resilience

At this point of sensing into the field, in line with my feminist philosophy recognising my lived experience as a woman and mother as valid forms of knowing, I offer the following poem and journal entry documenting my perspective as a parent and a ‘black belt of first-person experience’ of resilience and experiential learning (Varela, 2000).

For my beautiful girl

Searching your room for sharps

Cuts me

To the core

Wanting to take away your pain

Make me human

Again

And again

Trying to understand how it got so hard

Consumes me

Endlessly

Longing to see you learn and thrive

Eludes me

Repeatedly

Struggling to change the system

Challenges me

Continually

If I can change the system

Will you stay

With me

Safe and well?

A selection of journal entries

“Just last night I lurked nearby as my seventeen-year-old daughter interviewed her nineteen-year-old sister about the impact of social media on young women’s mental health and wellbeing (a topic chosen with no direct input from me) for an assignment in the subject of Community and Family Services. During the interview they talk about the negative impact of social media on body image for young women, leading to body dysmorphia, anxiety and poor mental health. They also talk about how ‘body positive’ social media is growing and has a more realistic version of girls and women’s bodies. They move on to talk about how social media is so addictive and manipulative with the algorithmic programming ‘sucking you in’ so that you lose track of time and reality. While not surprised by my daughter’s research findings that social media is having such a negative effect on young women’s mental health and wellbeing, I’m surprised by the level of sophistication in their discussion and awareness of how and why this might be taking place.”

“As a parent supporting my two teenagers to navigate this difficult terrain of mental health, I tried to find reading material and resources that might help me to understand their experience and provide me with advice on how to support them. I scoured the bookshelves in my local library and bookstores trying to find books that reflect my own and my daughters' experiences, but a lot of them seem out of date without references to

technology and social media that I see having such a big impact on my kids. I feel surprised and concerned by the stories my children tell me about how many of their friends and peers are self-harming, experiencing eating disorders, using alcohol and substances to self-medicate and experiencing panic attacks and anxiety from their early teenage years. I wonder how I might have prepared myself and them better for the reality they are experiencing.”

“I struggle to communicate the complexity of their mental health needs with the school and feel like I’m stuck between a health system and school system that are not speaking the same language and are too busy and burned out to try. The school says they take ‘pastoral care’ and mental health seriously, although sometimes I feel like they are more worried about managing their risks and reputation than my child’s health. An old-school disciplinary system of taking a card to each teacher to mark A, B, C or D for preparation, homework, being on time, seems to set up my child with ADHD to fail day after day. She doesn’t want to go to school any more, can’t say I really blame her.”

Chapter 3: Sensing into the field - A paradigm shift in learning and education for uncertainty

3.1 Chapter introduction

In this chapter, I explore the need for a paradigm shift in learning and education in the context of uncertain futures and climate disruption. The current education system is designed for the relatively stable industrial economy of the twentieth century. It needs to adapt to meet the needs of young people growing up in the context of rapid socio-cultural and environmental change, as described in previous chapters (Barnett, 2012; Bauman, 2000; Hathaway, 2011). In this chapter, I consider the skills and competencies young people require for learning in VUCA (volatile, uncertain, chaotic and ambiguous) environments (Bennett & Lemoine, 2014).

I begin this chapter by reviewing current literature on future-focused skills and competencies in Australia and internationally. I then analyse and integrate current thinking on learning for uncertainty and outline the relevance of resilience to this approach to learning. Following this exploration of learning paradigms for uncertainty, I consider emerging pedagogies and practices to support learning for uncertainty and developing resilience for young people. These pedagogies include experiential learning, transformative learning, regenerative learning, Buddhist philosophy and psychology and First Nations cultural pedagogies. Next, I consider the structural, cultural, and systemic barriers to integrating these non-traditional learning experiences within a contemporary secondary school setting. Finally, I advocate for a paradigmatic shift towards recognising schools as complex adaptive systems or learning ecologies to support learning for uncertainty and build resilience for young people.

3.2 Future-focused skills and competencies

In beginning my inquiry into the needs of young people as learners in a rapidly changing world, I review and analyse current thinking and research in Australia and internationally about what skills and competencies young people might need for the future. While this review of literature is not comprehensive it represents a selection of

highly cited reports both within Australia and internationally, including government and industry sources. Governments, industries, and scholars in Australia and internationally recognise that a shift is necessary and are calling for ‘future-focused competencies’ to be integrated into curricula along with life-long learning to prepare students and citizens for a rapidly changing world. From an international perspective, the Organisation for Economic Development and Cooperation (OECD) 2030 Learning Compass report (2020) calls for a collective and global shift in the focus of learning to “meet complex demands, navigate uncertainty across social and digital spaces and engage with the natural world appreciating its fragility and value.” From an Australian perspective, the Alice Springs (Mparntwe) Education Declaration on Education Goals for Young Australians, has a strategic aim for students to be “confident and creative individuals who are resilient and develop the skills and strategies they need to tackle current and future challenges” and who can “recognise, adapt to, and manage change” (Education Council, 2019, p. 6).

In analysing future-focused skills and competencies across various research and reports, I identify four critical categories of cognitive and meta-cognitive, social and emotional, physical and practical and nature-based, as illustrated in Table 2.

Table 2: Categorisation of future-focused skills and competencies

Author/report	Cognitive and meta-cognitive	Social and emotional	Physical and practical	Nature-based
State of Australia’s Skills 2021: now and into the future (Morton, 2021)	x			
Future Skills (AlphaBeta, 2020)	x	x	x	

OECD Learning Compass 2030 (OECD, 2022)	x	x	x	x
The path to prosperity – Why the future of work is human (Deloitte Insights, 2019)	x	x		x
Lifecomp: The European Framework (Sala et al., 2020)	x	x		

The following analysis compares, and contrasts research and literature on these critical categories and identifies relevant skills and competencies supporting resilience and learning for uncertainty.

3.2.1 Future-focused skills and competencies – Cognitive and meta-cognitive

Key cognitive and meta-cognitive skills and competencies of interest to governments, industry and scholars for the future of work and learning include problem-solving, critical thinking, creativity and meta-cognition. The Australian Government's National Skills Commission report found that skills relating to resilience and flexibility, such as problem-solving, learning, innovation and teamwork, have proved critical during COVID-19 and are increasingly in demand from employers in a rapidly changing labour market (National Skills Commission, 2021).

There is an increased focus on meta-cognition in these government and industry reports on the future of work and learning, and this reflects the recognition of its importance of coping with uncertainty, complexity and ambiguity (ememcar). Meta-cognition is understood here as 'thinking about thinking' or having a critical awareness of one's thinking and learning processes (OECD, 2022). These skills are seen

as increasingly important as children enter secondary school where reasoning, regulation and reflection become integral to the curriculum. Mindfulness-based programs in schools are recommended to increase meta-cognitive skills and reduce stress and anxiety (Schonert-Reichl et al., 2015). The focus on higher-order skills such as critical thinking and creativity are also noted as being significant as they are less likely to be automated or replicated by artificial intelligence (AlphaBeta, 2020; OECD, 2022).

3.2.2 Future-focused skills and competencies – Social and emotional

A focus on developing social and emotional skills, sometimes referred to as ‘soft skills’ or relational skills, is highlighted across various sources focused on the future of work. Relevant future-focused social and emotional skills include inter and intrapersonal skills, care, tolerance and empathy, and adaptability. Social and emotional skills can be defined as a "set of individual capacities that can be manifested in consistent patterns of thoughts, feelings and behaviours that enable people to develop themselves, cultivate their relationships at home, school, work and in community, and exercise their civic responsibilities" (OECD, 2019, p. 4). Many foresight reports refer to these skills as difficult to replicate by AI or machine learning and increasingly in demand in caring professions in countries such as Australia with an aging population (Caena, 2019; Deloitte Insights, 2019; OECD, 2019).

Social and emotional skills are often categorised as interpersonal when referring to relationships between people or intrapersonal when referring to internal processes or awareness within a person. Interpersonal skills and competencies identified as necessary for the future of work and learning consist of communication skills, listening skills, empathy and tolerance (OECD, 2022). Intrapersonal competencies include self-awareness and reflexivity, emotional self-regulation and self-efficacy (Deloitte Insights, 2019; OECD, 2022). These skills are considered essential for the caring professions of healthcare, education, childcare and aged care work (Whiting, 2022). A report from Deloitte’s Access Economics on the future of work in Australia identified the ‘work of the heart’ or care work as being of greatest demand in the Australian workforce in the coming decades and predicts two-thirds of jobs in

Australia will be 'soft skills' intensive by 2030 with a serious shortage in most industries for these skills (Deloitte Insights, 2019).

Another key theme related to social and emotional skills is the increasing need for resilience and adaptability to change. While in some reports, such as the AlphaBeta report from Google, this is referred to as stress-tolerance and flexibility, others focus more on intrapersonal skills such as mindfulness and self-awareness to achieve greater resilience (AlphaBeta, 2020; Caena, 2019; OECD, 2019). Intrapersonal skills, such as self-awareness, self-esteem, emotional regulation, motivation and self-care, are closely linked to a person's sense of resilient agency and ability to cope with and thrive in environments of rapid change (Deakin Crick et al., 2015). One of the key competencies for the twenty-first century, according to Haste (2001), is the ability to manage the tension between continuity and innovation required for adapting to new technologies and dealing with ambiguity and diversity. The need for developing social and emotional skills reflects a requirement for greater tolerance and respect in ethnically, culturally and linguistically diverse populations, workplaces and places of learning (OECD, 2019, p. 2). Greater tolerance and inclusivity are associated with competencies such as empathy, self-awareness, respect for others and communication skills.

3.2.3 Future-focused skills and competencies – Physical and practical

The primary physical and practical skills identified as most relevant for the future of work and learning include teamwork, collaboration, problem-solving and communication skills and other skills related to navigating increasingly complex workplace socio-technical systems (National Skills Commission, 2021). One example is the ability to filter and analyse massive data flows to extract meaning and patterns (Buckingham Shum & Crick, 2012). In future work environments, people will be required to respond to unprecedented levels of uncertainty and large volumes of data and be expected to perform and make decisions in contested and unclear situations (Buckingham Shum & Crick, 2012). This capacity is described by Gergen (2015, p. 14) as "rapidly synthesizing multiple sources of information and moving improvisationally in a context of ambiguity." The ability to engage with ambiguity and sit with uncertainty are essential skills for these future contexts.

3.2.4 Future-focused skills and competencies – Nature-based

Many industry and governmental reports and scholarly research have identified the need to integrate nature-based skills and competencies for a more ecologically sound future (Deloitte Insights, 2019; OECD, 2022). David Orr (2004) stresses the importance of connecting with nature and greater ecological consciousness as critical skills to engage with the climate crisis. The OECD Learning Compass Report 2030 (OECD, 2019, p. 12) refers to the twenty-first-century competency of environmental stewardship where "humans co-exist with nature; humans are part of mother nature."

In summary, these four categories of future-focused skills and competencies all refer to the need to respond to rapidly changing work and learning contexts with themes of inter and intrapersonal skills, meta-cognition, adaptability, engaging with uncertainty and ambiguity, and connection to nature as critical to young people's ability to thrive in uncertain futures. In the next section, I focus more specifically on literature related to learning for uncertainty as a way to focus on developing learning experiences for building greater resilience for young people.

3.3 Learning for uncertainty

It is clear from the analysis above that governments (Caena, 2019; Education Council, 2019; OECD, 2022), industry (AlphaBeta, 2020; Deloitte Insights, 2019; Whiting, 2022) and scholars (Barnett, 2012; Buckingham Shum & Crick, 2012; Deakin Crick & Goldspink, 2014; Orr, 2004) are calling for increasing focus for developing skills and competencies to deal with uncertainty and develop greater resilience.

Creating learning environments for young people to nurture these skills will require a paradigm shift influencing learning structure, purpose, and evaluation (Barnett, 2012; Deakin Crick et al., 2015; Dewey, 1938). The need for a more holistic and experiential approach to learning is not a new claim, with scholars such as Dewey as early as the 1930s calling for greater integration of lived experience and connection to nature in learning models. There is, however, a renewed impetus and motivation to understand

and experiment with pedagogies such as experiential learning, transformative learning and regenerative learning, given the challenges with young people's mental health and the ongoing impact of climate change and other complex global challenges. In this sub-chapter, I synthesise current thinking around learning for uncertainty and analyse its essential characteristics. I then investigate several pedagogies and learning approaches that may contribute to developing resilience in times of uncertainty, including experiential learning, transformative learning and regenerative learning. Extending this further, I examine the potential of Buddhist and First Nations learning practices to contribute to developing resilience for young people.

Australia's current generation of young people requires learning environments and experiences that can support them to develop resilience and agency in rapidly changing social, technological, economic and climatic environments (Haynes & Tanner, 2015; Mitchell et al., 2008; Verlie, 2021). The Australian secondary school system primarily focuses on intellectual and academic excellence through a demanding curriculum and has limited capacity to focus on experiential learning, wellbeing and resilience (Barnett, 2012; Deakin Crick et al., 2015; OECD, 2019). The increasing challenges with young people's mental health outlined in the previous chapter are affecting the ability of schools to support and provide suitable learning environments for many young people to meet their current and future needs (Noble & McGrath, 2014; Seligman et al., 2009). In this context, it is timely to ask the following question: How might the role of schools and learning change to prepare young people for these uncertain futures better? Furthermore, how does this changing context effect what we value and prioritise in our educational institutions?

As we dig deeper into the implications of rapid and unprecedented change, or 'supercomplexity' as Barnett (2012) describes it, the ground of the educational landscape becomes more uncertain. A state of supercomplexity, as described by Barnett, goes beyond complexity to an environment where there is no stable description of the world, no knowledge uncontested and no value system unrivalled. Bauman uses the term 'liquid modernity' (2000) to refer to a world characterised by volatility, uncertainty and ambiguity. Barnett contends that with such a high level of

flux and change, the world becomes 'radically unknowable', resulting in "a personal sense that we can never come into a stable relationship with the world" (Barnett, 2012, p. 67). In such an environment, the focus of learning is not on removing the causes of anxiety and uncertainty but instead on creating the conditions for learners to develop the "wherewithal to live with anxiety" (Barnett, 2012, p. 69). This shift to recognising and acknowledging the challenges in the current environment for young people can help to create a situation where they can still *see themselves and their response as healthy* within this context, while learning the skills and competencies to navigate this VUCA environment.

Learning for uncertainty becomes as much an ontological experience as an epistemological one with a focus on ways of being and knowing. This approach to learning is described by Le Hunte (2020b) as a 'Curriculum for Being'. A shift in the purpose of learning to an ontological inquiry is described by Barnett as follows:

Under these conditions of uncertainty, the educational task is, in principle, not an epistemological task; it is not one of knowledge or even knowing per se. It is not even one of action, of right and effective interventions in the world. For what is to count as a right or an effective intervention in the world? Amid supercomplexity, the educational task is primarily an ontological task (Barnett, 2012, p. 69).

In recent years, scholars and education innovators have begun to explore what form this new learning paradigm might take. In reviewing this literature, several characteristics can be identified as significant in learning for uncertainty, which are synthesised in Table 3 below (Barnett, 2012; Barnett & Jackson, 2019; Buckingham Shum & Crick, 2012; Deakin Crick et al., 2015; Hathaway, 2017; Le Hunte, 2020b). These characteristics include a shift in the power dynamic between the teacher and student to become more learner or student-led, a focus on embodied learning practices, a recognition of the interconnectedness or relational aspects of being and learning, a focus on experiential learning and exposure to novel situations, ambiguity and paradox.

Table 3: Characteristics of learning for uncertainty

Key Characteristic	Description
Learner or student-led	Focus of learning is determined or shaped by the curiosity and interest of the learner, either individually or collectively
Embodied	Includes an awareness of and reflection on the connection of cognitive, physical, and emotional aspects of an experience
Interconnected	Recognises and foregrounds the context of learning and relational connections between people, place, communities and the more-than-human world
Experiential	Learning by doing through hands-on experiences and reflection
Exposure to novel situations, ambiguity and paradox	Learners are immersed in environments or given challenges to which there are no clear answers or outcomes and must collectively navigate the unknown

This approach to learning for uncertainty holds the potential for developing both resilience and transformation as learners are encouraged to challenge their assumptions and 'frames of reference' as they develop critical reflexivity to understand better how we might respond to uncertainty in the future (Barnett & Jackson, 2019; Hathaway & Boff, 2009a; Mezirow, 1997). Learning for uncertainty might include scenarios where learners are immersed in novel and paradoxical situations that "question their existing assumptions, beliefs, values, or images of themselves or the world" (Dirkx, 1998, p. 9). Developing this capacity to think and respond within uncertainty might include exposure to ethical dilemmas or understanding the limits to the field of disciplinary knowledge, where the learner helps to identify these 'epistemological gaps' (Barnett, 2012). Other learning experiences might involve exposure to complex scenarios where learners must make judgments based on incomplete information due to a lack of time, resources or evidence (Buckingham Shum & Crick, 2012).

There is limited environmental and sustainability education research on how to engage and support young people regarding their emotional or affective responses to climate change (Pihkala, 2020; Verlie, 2021). The rise of eco-anxiety for young people and climate change's impact on communities and young people's lives has had little attention in Australian schools to date. Some community-based programs in schools have been implemented following the recent floods and fires; however, little research or practice is addressing how to best prepare young people living in vulnerable communities for how to prepare mentally and emotionally for such events.

Research into eco-anxiety, eco-emotions and education, while still in its early stages, has found that critical emotional awareness, mindfulness, embodied, place-based and art-based practices can contribute to an exploration of eco-emotions (Ojala, 2012; Pihkala, 2020). Programs aiming to create space for young people to recognise, experience and accept emotional responses to climate disruption are challenging to find, while there are some experimental programs in schools in Finland and New Zealand (Ojala, 2012; Pihkala, 2020). In Australian secondary schools, there is content regarding the physical and environmental impacts of climate change within curriculum areas of Humanities, Geography and Science. However, there is limited opportunity for acknowledging or understanding emotional responses and eco-anxiety. The integration of social and emotional learning to address these needs and opportunities for developing resilience and a sense of agency are needed to better prepare young people in learning for uncertainty.

According to psychologists such as Bandura (1982), some uncertainty may have a preparatory benefit or 'steeling effect' that can promote self-efficacy and motivate the acquisition of skills and knowledge. This ability to act and respond in situations of uncertainty is described by Deakin Crick (2015) as a learning disposition of 'mindful agency'. This mindful agency, according to Deakin Crick (2015), requires a young person to learn the 'language of self' and can result in the ability to respond persistently to uncertainty and challenge over time. Next, I explore learning approaches and pedagogies relevant to learning for uncertainty that have the potential to promote greater resilience through experiential learning for young people.

3.4 Pedagogies for learning for uncertainty and developing resilience

Here, I make a case for integrating experiential, transformative and regenerative education pedagogies in learning for uncertainty to help build resilience for young people and develop the range of future-focused skills and competencies outlined earlier in this chapter. These pedagogies have primarily been developed and applied in adult learning environments and represent a paradigm shift for schools to develop experiential learning to support learning for uncertainty. I then extend this proposed paradigm shift in education by considering the contribution of more dynamic relational knowledge systems such as Buddhism and First Nations wisdom. These knowledge systems contribute a more nuanced understanding of our interconnectedness within dynamic living systems, which can contribute significant value to young people in learning for uncertainty.

3.4.1 Experiential learning, learning for uncertainty and developing resilience

Experiential learning theories and pedagogies provide a strong foundation for learning for uncertainty as they give young people the opportunity to learn and grow through their own lived experiences and reflexive practices. Experiential learning theories and practices date back to the early twentieth century with the work of a series of educational scholars, including John Dewey, Kurt Lewin, Jean Piaget, Paulo Freire and others. These theories have come back into prominence recently as they provide a more participatory learning environment that recognises the importance of a student's lived experience and encourages embodied, purpose-driven and active engagement with the community and environment (Dewey, 1938; A. Y. Kolb & Kolb, 2005; Kolb, 2014; Lewin, 1942). Experience is defined by Dewey (1938) as an activity in and by an 'organism' or learner through which the organism maintains integration with its environment. According to Dewey (1938), the teacher's role is to provide an environment conducive to learning focused on contemporary problems that need to be grappled with and solved. Lewin's (1942) field theory and 'life space' concept highlight the importance of an educational environment that recognises the lived experience of a young person as an essential contributor to their behaviour within the

learning environment. This focus on the relational and environmental aspects of learning provides a strong foundation for developing greater resilience for young people as it encourages them to see themselves in relation to the social field of their friendships, family, school, and community.

The work of these foundational theorists and educators has been built on by Kolb (2014) and others to develop a robust experiential learning theory (ELT) model. Experiential learning theory views learning as a holistic process of adaptation to the world that integrates cognition, feeling, perceiving and behaving; an approach to learning much broader than the 'transmission' model of learning most popular in our education systems (A. Y. Kolb & Kolb, 2005; Kolb, 2014). In this model, knowledge is created through experience, which follows a learning cycle or spiral in which the learner moves through processes of experiencing, reflecting, thinking and acting (A. Y. Kolb & Kolb, 2005). It can be an uncomfortable and challenging experience requiring the resolution of conflict and disagreement where "one is called upon to move back and forth between opposing models of reflection and action and feeling and thinking" (A. Y. Kolb & Kolb, 2005, p. 184). This pedagogy is well suited to learning for uncertainty and developing resilience, enabling learners to develop competencies to engage with their environment in more embodied and adaptive ways.

3.4.2 Transformative learning, learning for uncertainty and developing resilience

The theory of transformative learning, developed initially by Mezirow and with continued development mainly in adult learning, has excellent potential to contribute to learning for uncertainty and supporting young people to develop greater resilience through learning. O'Sullivan et al. (2002) defines transformative learning as a profound, structural shift in a person's thoughts, feelings and actions that irreversibly change their way of being in the world. This transformative learning may occur in a range of modes including, but not limited to, critical reflection, non-verbal embodied learning, inner and outer processes involving personal, social and ecological change (Hathaway, 2011). A key component of transformative learning, according to Mezirow, is the presence of a 'disorientating dilemma', an acute internal or external crisis, which an individual struggles to understand or come to terms with. This dilemma is often

accompanied by strong emotions, such as fear, guilt, or shame, which leads to self-examination and critically reassessing assumptions. Within this transformative learning process, exposure to a disorientating dilemma might result in self-examination of feelings, critical reflection, negotiating relationships, building confidence and developing a more inclusive and discriminating perspective (Mezirow, 1997).

Climate change can be framed as a disorientating dilemma for young people, resulting in strong emotions and the potential for transformative learning (Potts et al., 2023). Research has shown that many young people have a strong emotional response to climate change, which may include anger, frustration, fear, anxiety and depression (Pihkala, 2020; Stanley et al., 2021; Verlie, 2021). According to Mezirow, transformative learning requires these intense emotions to be validated for a learner to move into critical reflection and transition in a process that may be iterative and recursive (Mezirow, 1997; Taylor, 1994). Hathaway (2011) sees transformative learning might support a move towards 'ecological consciousness' that enables people to overcome despair and anxiety. Research undertaken with Australian students found that one of the significant barriers to action in climate change is climate anxiety, resulting in feelings of grief, disempowerment and apathy (Verlie, 2021). If we are to engage with climate in meaningful and transformative ways, according to Verlie (2019), we must accept our deeply enmeshed interrelationship with nature and climate, including the embodied and affective responses to these changes.

Transformative learning requires a shift in our 'frames of reference' or how we see ourselves, each other, and our environment. There is some contention in transformative learning circles as to whether young people have sufficiently developed the 'frames of reference' required for transformative learning. According to Mezirow (1997, p. 5), as adults, we have acquired reasonably stable 'frames of reference' that are described as a "coherent body of experience – associations, concepts, values, feelings, conditioned responses" that influence how we respond to different contexts, people and situations. These are described as a largely subconscious set of assumptions that we have built up about the world that have the potential to be 'transformed' through

our learning experiences. There is contention in the field of transformative learning as to whether adolescents in their stage of psychological development, who may not have formed these fixed 'frames of reference', are then able to experience transformative learning (Kegan, 2000; Meerts-Brandsma & Sibthorp, 2021). According to Kegan's (2000) model of cognitive developmental theory, the process of growing into a more 'socialised mind' through engaging with abstract thought and focusing on the needs of others is the point at which transformative learning becomes possible. While Mezirow (1997) recognises the potential for transformative learning in adolescence, he has questioned whether, at this age, young people have the capacity for critical reflection on their assumptions, values and beliefs.

There is limited research on the experience of young people with transformative learning; however, the shaping of identity that is paramount in the adolescent and early adult years is considered fertile ground for the transformation of values and worldviews (Illeris, 2014; Meerts-Brandsma & Sibthorp, 2021; Verlie, 2021). The process of identity formation, which is highly fluid in a contemporary setting, can be seen as a constant 'reflexive project' between stability and flexibility, between being oneself and changing oneself (Giddens, 1991; Illeris, 2014). From this perspective, adolescence is an ideal age for transformative learning as a process of 'becoming aware' of the multiplicity of values, identities and worldviews and being invited to experience the world through these perspectives and socio-cultural lens. This approach to transformative learning may be particularly valuable in developing greater 'ecological consciousness' and understanding different worldviews and models of the human relationship to living systems (Hathaway, 2011; Ross, 2020).

According to Hathaway (2011), transformative learning has the potential to influence a shift towards greater ecological consciousness both individually and collectively. This shift to ecological consciousness through transformative learning can be achieved through processes of both attention and action (Hathaway, 2011; Hathaway & Boff, 2009a; Sewall, 1995). In terms of attention or perception, there is a range of techniques that Sewall (1995) recommends, including using imagination to extend perception and consider new possibilities, being mindful and paying attention to beauty and

aesthetics, perceiving relationships and interconnectedness, developing perceptual flexibility to span time and spatial scales. Actions that can promote a change in ecological consciousness through transformative learning might involve working in a community, social movements for change, working on the land, interacting with animals and ecosystems, practicing new habits or creating art, music and stories (Sewall, 1995).

In transformative learning, educators enable learners to start to recognise their own frames of reference and use their imagination to redefine the problems from a different perspective. Ideally, educators create a learning environment where learners can explore discourse by taking on different roles, such as defending or challenging a position explaining or analysing evidence from various perspectives. Part of this transformation process is shifting one's frame of reference to become more inclusive, differentiating, questioning, and critically reflective (Mezirow, 1991). Hampson and Rich-Tolsma (2015, p. 215) found in their work with university students that integrating transformative learning with climate education “enable(s) the regeneration of deep layers of our individual and collective being – the regeneration of perspectives and principles which can most effectively engage with the uniquely challenging predicament which is now presenting itself to humanity.” With its potential to shift both personal and collective attention and action in relation to ecological consciousness, transformative learning has great potential for integration within school environments in learning for uncertainty. Similarly, regenerative learning, focusing on ecological values and connection to natural ecosystems, can bring new perspectives to shift the education paradigm in schools.

3.4.3 Regenerative learning, learning for uncertainty and developing resilience.

Regenerative learning is another pedagogy with great potential to integrate into schools to support learning for uncertainty and developing resilience. This learning style fosters ecological values such as connection, generosity, partnership and celebration (Goleman et al., 2012; Orr, 2004; O’Sullivan et al., 2002). A sense of connection to and appreciation of the value of nature is integral to regenerative learning. According to Orr (2004), our modern Western education systems generally

fail to foster a love of nature or biophilia or promote biocentrism, a worldview that is earth-centred rather than human-centred. As a result, most students who specialise in a discipline or subdiscipline may lack an understanding of how this discipline fits into a more integrated relational worldview with nature.

Spending time in nature is essential for a young person's mental and emotional health, and the absence of access to nature has been linked to a range of psychological and health problems (Louv, 2012; York, 2014). Studies have shown that as our experiences with digital media devices and technology multiply, our direct experiences with the natural world tend to diminish (Cordes & Miller, 2004; York, 2014). On the other hand, the rich sensory experience of being immersed in nature has been linked to increased creativity, awareness, environmental sensitivity and the development of ecological consciousness (Kellert, 2002). Dewey (1938) posited that children need to understand the interdependency between themselves and nature by being immersed in the natural world and not simply studying it cognitively. Regenerative educators such as Orr (2004) and others call on schools to build into their curriculum learning experiences that renew engagement with nature to increase students understanding that we are part of this complex ecological system and need to care for it.

Focus areas of regenerative learning include stewarding, de-colonisation, interconnectedness, connection to nature and empathy or compassion. Developing empathy and compassion for all living things is vital to being ecologically literate or 'eco-literate' (Goleman et al., 2012). Learning empathy is an experiential process that requires an emotional bond between students and the world around them. York (2014), in her thesis on transformative environmental education through the arts, argues that engaging with art and natural environments can inspire awe, mystery and a sense of connection to nature, which impacts how we think, behave and interact with our surroundings. This awe, mystery and sense of connection can be cultivated by a combination of attention, imagination, storytelling and immersion in supportive communities of practice (York, 2014).

Regenerative learning, transformative learning and experiential learning all hold significant potential to transform individual and collective consciousness and develop resilience for young people that aligns with the characteristics of learning for uncertainty. Next, I explore the potential of Buddhist philosophy psychology and First Nations knowledge systems for developing pedagogies of learning for uncertainty and developing resilience.

3.4.4 Buddhist practices, learning for uncertainty and developing resilience

Buddhist philosophy and psychology provide a wide range of experiential practices that can be integrated into learning for uncertainty and building resilience.

Mindfulness and meditation practices developed and passed down through thousands of years include powerful tools for transforming consciousness and developing resilience. These theories and practices include experiential learning to develop interconnectedness, compassion, understanding impermanence, and relationality. As mentioned earlier, these practices have been found to support mental health and resilience for young people within school environments and in workplaces (Kabat-Zinn, 2003; Meiklejohn et al., 2012; Weare, 2013). Educators such as Macy (2014) reference Buddhist philosophy and practice in developing processes that support people to reconnect with their emotional response to climate change. Like transformative learning, this process works with emotional responses to pressing problems to empower transformative action. Practices and learning processes developed by Macy and Brown (2014), such as ‘the work that reconnects’, encourages participants in ‘transcendent’ emotions such as gratitude, awe and compassion that widen one’s sense of self. Within Tibetan Buddhism, specific techniques such as Lojong or Seven Point mind-training, teach practitioners to shift their attitude to adverse or challenging circumstances to develop greater patience, perseverance and compassion resulting in greater resilience (Goldman Schuyler, 2010; Wallace, 2003). These practices require paying attention to situations, people or circumstances that cause mental and emotional distress and actively using these to develop awareness. As Buddhist teacher Pema Chodron (2021, p. 7) explains, “Lojong introduces a different attitude toward unwanted stuff: if it's painful, you become willing not just to endure it but also to let it awaken your heart and soften you. You learn to embrace it.” These

practices and theories provide experiential practices with the potential to support young people in developing and transforming mental and emotional responses in learning for uncertainty.

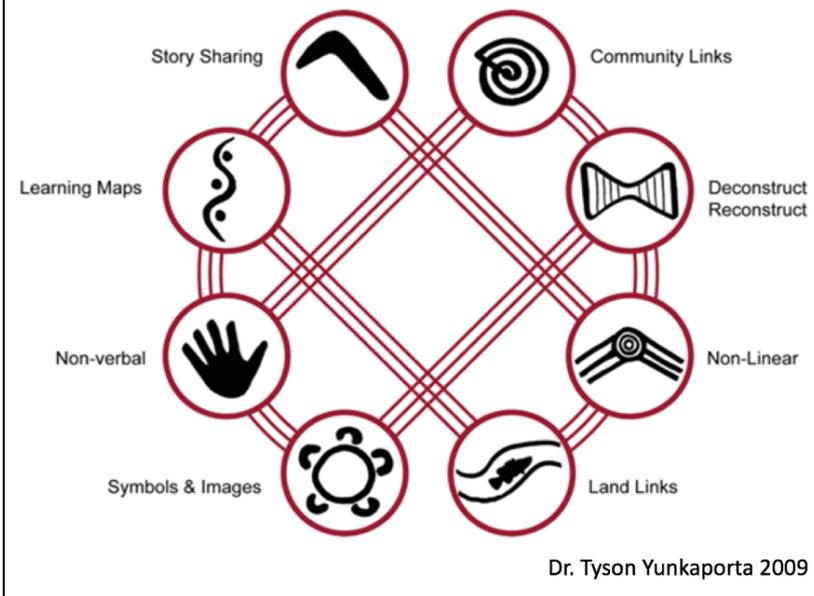
3.4.5 First Nations pedagogies, learning for uncertainty and developing resilience

Many First Nations peoples have sophisticated and highly relational models of education and learning that encourage an awareness of interconnectedness and where cultural knowledge supports resilience for young people. In this section, I explore the potential of these models for integration into secondary schools to support greater resilience for young people. In particular, I focus on the Eight Aboriginal Ways of Learning developed by Aboriginal educators and researchers in Western New South Wales (NSW). I also introduce the educational framework of Dene Kede developed by the Dene and Cree people of the Northern Manitoba region in Canada to promote resilience for children and young people. These learning practices were chosen as they are being integrated within schools to provide a more relational model of learning to enhance students' sense of interconnectedness and increase cultural awareness and resilience.

The Eight Aboriginal Ways of Learning (Figure 2) is a pedagogy and model designed for educators who wish to integrate a stronger understanding of Aboriginal culture, Country and language into their schools and classrooms (Department of Education and Training New South Wales, 2021). This model outlines eight Aboriginal ways of learning: story sharing, learning maps, non-verbal, symbols and images, land links, non-linear, deconstruct and reconstruct and community links (Department of Education and Training New South Wales, 2021; Yunkaporta, 2009). In the following section, I explore critical concepts of this model and how they are being integrated into educational settings, including connection to Country, the importance of language, non-verbal ways of communicating and identifying patterns within complex systems.

Figure 2: Eight Aboriginal Ways of Learning

Eight Aboriginal Ways of Learning



Note: This diagram has been included with the permission of traditional owners (Yunkaporta, 2009)

Connecting to Country and Culture through experiential learning is central to Aboriginal learning pedagogies (Graham, 1999; Yunkaporta, 2009). Aboriginal Elder Mary Graham sees this connection with place and land as essential to building resilience and a sense of collective spiritual identity for children and young people in an educational context (1999). According to Graham, this connection with land is sacred and helps children and young people understand our connection to each other and the community. Graham recommends learning experiences and programs that require young people to actively care for Country as being an essential part of growing into adulthood as she explains:

Activities such as group care for a particular chosen tract of land, not only via gardening but tending, having recreational and ceremonial activities there, creating stories about and artistic expressions relevant to the sites, protecting them from damage, and maintaining continuity with them throughout the formative years of childhood and on into adulthood (Graham, 1999, p. 109).

Non-verbal ways of learning and reflexivity are also crucial in Aboriginal experiential learning (Graham, 1999; Yunkaporta, 2009, 2019). Non-verbal learning is depicted in the Eight Aboriginal Ways of Learning by the symbol of a hand to represent that “all knowledge that can be understood or acquired without words, including gestures, inference, expression, eye movement, kinaesthetic learning, images and revealed knowledge (for example dreams, insights, inspiration, reflection)” (Yunkaporta, 2009, p. 5). These non-verbal ways of learning have been integrated into school programs in Western NSW using traditional songs about the land conveyed through gesture, tone, rhythm and expression (Yunkaporta, 2009). Graham (1999, p. 108) highlights the importance of creating opportunities for collective reflection as a group within learning environments to build shared bonds and resilience, describing this reflexive process as “a group process of meditating upon our collective actions and experiential learning; it is not a matter of individuals reflecting in a random way but of collectively reflecting on why and how we as a group act and experience events.”

Learning the language and culture of a local area is integral to learning in Country. Yunkaporta (2009, p. 6) describes the interconnection of language to Country (2009, p. 6) as follows: "In the Aboriginal language classroom...we are teaching the languages of the land. This link to land and Country should always be present as it ensures cultural integrity." In the classroom, this connection to Country through language might be achieved by mapping the events of a local Dreaming story on a map. The local Aboriginal language can be integrated by labelling the different kinds of soil, animals, landmarks and sites of the story (Yunkaporta, 2009, p. 6). The relationship to Country can be reflected by learners in drawing patterns using maps and symbols.

Two elements in the Eight Ways framework focus on using visual modes of learning, Learning Maps and Symbols and Images. Learning Maps represent a learning journey with "points of understanding indicated along the way rather than end to end" (Yunkaporta, 2009, p. 5). These maps can be based on the local landscape or local seasonal changes and integrate symbols, landmarks, animal journeys and languages along the way (Yunkaporta, 2009, p. 5). Symbols and images are essential, according to

Yunkaporta (2009, p. 5), as "Aboriginal thinking is often done in images or shapes rather than words. Concepts can be shown in this way."

This approach to integrating cultural knowledge and practices into learning environments reflects a paradigm shift in epistemology that, according to Graham (1999, p. 108), can teach young people "not so much what to think, but how to think" through identifying patterns and connections. Part of this way of seeing and being in the world involves looking for and identifying patterns as "the patterns in stories, phrases, songs, kinship and even in the land can show us the spirit of learning that lives in our cultures" (Yunkaporta, 2009, p. 1). This way of learning through patterns allows the learner, who has identified a pattern in one context, also to identify it in other contexts. Yunkaporta (2019, p. 89) explains this focus on connections, "Look beyond the things and focus on the connections between them. Then look beyond the connections and see the patterns they make." This ability to shift into 'pattern-mind' is described by Yunkaporta (2019) as the ability to see entire systems, trends and patterns within them, which can then be used to make predictions and help us find solutions to complex problems such as sustainability issues.

The central role of traditional culture, language and knowledge in developing greater resilience for young people has also been highlighted by Elders of the Cree and Dene communities in the Northern Manitoba region in Canada. Elders have contributed to developing a curriculum framework for schools called Dene Kede (Department of Education, Culture and Employment, 1993; Hansen & Antsanen, 2016). The Elders noted that while resilience was a foundational part of Indigenous education, this has been disrupted by colonialism and 'Eurocentrism' (Hansen & Antsanen, 2016). The Dene Kede is a curriculum model developed in 1993 that calls on young people to continue the Dene traditions according to the Elders:

There is a need to root ourselves in tradition, not for the sake of the past but for the sake of the future. Our children, with the gift of their culture, can work towards ensuring our future survival as well as the

survival of humankind (Department of Education, Culture and Employment, 1993, p. 3).

The Elders consider understanding interdependence and reciprocity central to young people developing resilience and a “positive self-concept and sense of culture” (Hansen & Antsanen, 2016, p. 2). They stress the significance of interconnectedness between land, language, animals, stories and spirituality as intrinsic to Indigenous education (Hansen & Antsanen, 2016). The education they describe is mainly experiential, focusing on the quality of relationships in the learning experience, including a gentle approach to teaching and encouraging the learner to reflect on and learn from their own experiences (Hansen & Antsanen, 2016). The Elders also emphasise the importance of including emotional and spiritual elements within learning to balance the physical and mental aspects (Hansen & Antsanen, 2016).

Decolonisation of education through restoring cultural traditions and values is seen as essential to developing greater resilience for Indigenous and non-Indigenous young people by the Cree and Dene Elders (Hansen & Antsanen, 2016). The Cree and Dene people have a strong spiritual relationship with the land and stress the importance of humility in seeing oneself as a steward of the land rather than having control over it (Hansen & Antsanen, 2016). All parts of the natural world are seen as being alive and having their own spirits, as Elder John Martin explains, “Everything is spiritual, the trees are alive, the grass, the rocks, they have a spirit. The animals have a spirit, and so the ceremonies are based on those teachings” (Hansen & Antsanen, 2016, p. 11). The curriculum of Dene Kede promotes a holistic worldview integrating spiritual and emotional aspects of learning, embracing the interdependence of living systems to improve the resilience and wellbeing of children and young people (Department of Education, Culture and Employment, 1993; Hansen & Antsanen, 2016).

These experiential pedagogies developed over tens of thousands of years by First Nations peoples provide significant potential for developing new models of learning for uncertainty to develop greater resilience for young people by integrating an

understanding of the interconnectedness of all life and relational ways of being and knowing. The pedagogies and practices outlined above, including experiential learning, transformative learning, and regenerative learning, along with Buddhist and First Nations frameworks provide significant potential to contribute to a model of learning for uncertainty and enable the development of future-focused skills and competencies covered earlier in this chapter. However, for these more relational models of learning to be integrated into Western education systems, a paradigm shift is required that prioritises young people's wellbeing and resilience as being of equal if not more importance than their academic achievements (Noble & McGrath, 2012; Seligman et al., 2009). In the following section, I analyse current thinking and practices in Australian schools in programs to develop resilience and wellbeing. I also make a case for the need for a paradigm shift towards greater experiential learning informed by the above pedagogies and understanding schools as complex adaptive systems.

3.5 The Australian school systems and creating the conditions for a paradigm shift

In this section, I analyse current policies and research on social and emotional learning and resilience in Australian schools. I then explore literature regarding alternate paradigms of understanding schools as complex adaptive systems (CAS) using theories of systems thinking, learning ecologies and symmathesy (a term used to denote a living-learning system described below). Following this, I propose how we might create the conditions for this paradigm shift in education systems to support the integration of more relational learning pedagogies to support greater resilience for young people within these systems.

3.5.1 Australian schools and programs for resilience and wellbeing

The need to better equip children and young people to adapt to change and develop resilience is increasingly recognised in education policy at national and state levels in Australia (Education Council, 2019; NSW Education Standards Authority [NESA], 2019). Despite this, the capacity to holistically integrate learning for social and emotional learning (SEL) and resilience for young people is currently limited and ad

hoc (Noble & McGrath, 2014; Slemp et al., 2017). There is a growing critique of the Australian Curriculum's General Capabilities framework (which includes Critical and Creative Thinking, Personal and Social Capability, Ethical Understanding, and Intercultural Understanding) that these future-focused competencies are not able to be well integrated into subjects in the standard curriculum (Gilbert, 2019; Wiltshire & Donnelly, 2014). The school system in Australia represents one of the most significant potential opportunities and barriers to shifting ecological consciousness and developing greater resilience and wellbeing for children and young people (Noble & McGrath, 2012; Seligman et al., 2009).

The strategic goals for Australian education systems to support students' mental health and wellbeing and develop greater resilience have been developed at the national and state levels (with national and state governments sharing responsibility for education). At a national level, concerns regarding students' declining mental health and wellbeing have been recognised as a significant focus by the Education Council in the Alice Springs (Mparntwe) Education Declaration on Education Goals for Young Australians (2019). The development of personal and social capabilities and connection to resilience is recognised in the Australian national curriculum and described as follows:

Students with well-developed social and emotional skills find it easier to manage themselves, relate to others, develop resilience and a sense of self-worth, resolve conflict, engage in teamwork and feel positive about themselves and the world around them. Developing personal and social capabilities is a foundation for learning and citizenship (Australian Curriculum, Assessment and Reporting Authority [ACARA], 2022b).

The NSW Department of Education and Communities (DEC) has developed a Wellbeing Framework for Schools, which recognises the changes in the school environment and world in which young people are growing up and commits to

strengthening their cognitive, physical, social, emotional and spiritual development (NSW Department of Education, 2015).

One of the most substantial movements to integrate social and emotional learning into education and schools in Australia over the past twenty years has come from the Positive Education (PosEd) movement. Influenced by the work of Martin Seligman and Positive Psychology, this network of researchers and educators aims to “build strengths, capabilities, well-being and resilience in educational communities” (Slemp et al., 2017, p. 103). The PosEd network has developed programs in schools focused on Social and Emotional Learning (SEL) aiming to build psychosocial skills in areas such as understanding and regulating emotions, developing positive relationships, showing empathy and problem-solving (Noble & McGrath, 2014; Slemp et al., 2017). Empirical evidence from these programs has found improvement in students' social and emotional outcomes and positive academic outcomes (Durlak et al., 2011; Greenberg et al., 2017). Some school programs based on Positive Education principles, such as BounceBack!, MindMatters and KidsMatter, have had considerable success and uptake; however, there are also significant challenges with ongoing engagement for students and teachers within schools, including competing resource demands, limited time and competing interests (Slemp et al., 2017; White, 2016). Noble and McGrath (2014) identify the following characteristics of the most effective programs: taking a whole-of-school approach, having programs taught by teachers and integrated with academic learning, ensuring programs that have strong buy-in from teachers and school leaders, and committing to universal programs that run over multiple years.

A more relational view of resilience significantly shifts how educators might curate learning experiences to develop resilience and wellbeing for their students. According to Luthar and Cicchetti (2003), interventions should aim not to improve isolated skills or competencies without referencing the broader environment and ecological systems in which they will be maintained. Educational programs seeking to build resilience must be informed and integrated into the social and cultural context in which the young person lives, studies and works (Luthar et al., 2003).

According to Riedy (2016), what is required at this time of uncertainty and climate disruption is an 'interior transformation' or shift in our worldviews, myths and narratives to those with a more ecologically interdependent or 'planetcentric' focus. Pedagogies outlined above, such as experiential, transformative and regenerative learning, along with Buddhist and First Nations relational knowledge systems, provide an opportunity for a greater understanding of the interconnectedness and complexity of living systems. The paradigm shift required for schools and education systems to consider this kind of 'transformation of consciousness' as part of their remit is significant and challenging, given the current focus on academic achievement and mastery of subject matter (Hathaway, 2011).

Next, I explore and synthesise research and literature related to schools as complex adaptive systems from a systems-thinking and ecological perspective, then make a case for the conditions required to enact a paradigm shift in the focus of education to better support young people's mental health and resilience for uncertain futures.

3.5.2 Schools as complex adaptive systems

Interventions supporting students' mental health and resilience that take a whole-of-school approach over an extended period are most effective and sustainable (Mazzer & Rickwood, 2015; Slemp et al., 2017; Waters, 2011). In their work reviewing the effectiveness of Positive Education in Australia, Slemp et al. (2017) stress the importance of a systems-led approach that considers the complex, interrelated social and contextual factors that impact the wellbeing and resilience of young people. Understanding a school as a complex adaptive system provides an alternative to focusing on individual behaviour management. It recognises the importance of interrelationships, perspectives and boundaries to student wellbeing and resilience (Slemp et al., 2017). This systems approach aligns with a relational view of resilience as a dynamic interplay between young people and their environment. It provides an opportunity to shift the focus away from being primarily on the maladaptation of individual students towards a focus on building nurturing and experiential learning environments to promote mental health and resilience. A systems-focused approach acknowledges the impact of multiple crises, such as climate disruption and the

COVID-19 pandemic, on the whole school community and the need to focus on ways to grow both personal and collective resilience and wellbeing.

Complex adaptive systems (CAS) have many elements and actors, each interacting with others within the system. The CAS of a school might consist of students, teachers, parents, school admin staff, and school counsellors and extend to the Department of Education, local community, local businesses, extended family, health systems and others connected to the school system. How each element influences the others is not clear or straightforward, and multiple non-linear feedback loops impact the dynamic relationships between elements and the whole in unpredictable ways (Snowden & Boone, 2007). A critical characteristic of a complex system is reciprocal causality, meaning each part of the system affects the whole, while the system as a whole affects all parts (Wagner, 1999). A CAS, such as a school, learns and changes over time through sensing, adapting and recalibrating to both internal and external stimuli and influences (Bateson, 2016; Varela, 1991).

Recognising a school as a CAS involves recognising this system as nested within broader social and cultural systems made up of countless interrelationships and social interactions each day. Programs such as the Gatehouse Project conducted in Victorian schools, a multi-level integrated program aiming to improve mental health for students through a systems-focused approach, provide an excellent example of building capacity for system-led change (Bond et al., 2001; Bond & Butler, 2009). The Gatehouse Project aimed to promote mental health in secondary schools through a whole-school intervention by promoting student engagement and school connectedness to improve emotional wellbeing and learning outcomes. The approach was customised and co-designed in each school based on the understanding that every school is a complex adaptive system, as Bond et al. state:

Development of local capacity is complex because each community is unique and has different histories, cultures, structures, personalities, and politics. However, capacity building allows local communities to

better manage the multiple priorities that continuously impinge on them (Bond et al., 2001, p.369).

With this systemic lens, each school is considered a unique learning ecosystem that will respond and change differently and uniquely to capacity-building interventions. The program identified three priority areas for action: building security and trust, developing and practising communication skills and building positive regard through engagement within the school community (Bond & Butler, 2009). The researchers engaged with the partners from the local health systems as ‘critical friends’ to the school to support the change processes and strengthen relationships. A school-based adolescent health team worked with each of the fourteen school communities to identify relevant risk and protective factors in each school’s ecosystem to create a ‘social climate profile’ to “build their capacity for system change to promote sustainable mental health promotion” (Bond et al., 2001, p. 380). The research recognised each school as a unique CAS, focusing on capacity building to enhance wellbeing and resilience for young people, the whole school, and the broader community.

Within the CAS of a school, the quality of the relationship between teacher and student is vital to the students’ wellbeing and resilience. Within a school, the teachers’ mental health and wellbeing have also been found to impact the overall culture and climate of wellbeing in schools (Graham et al., 2011; Willis, 2022). In short, teachers’ mental health impacts their relationships with students, which in turn impacts students’ mental health and resilience (Graham et al., 2011; Mazzer & Rickwood, 2015). Recent studies report that teachers in Australian schools feel overwhelmed with the workload, crowded curriculum and change levels, particularly during and after the COVID-19 pandemic (Trudgen & Lawn, 2011; Willis, 2022). Teachers report experiencing tension between having time and capacity to focus on student wellbeing concerns and the demands of academic performance and improvement agendas (Graham et al., 2011; Willis, 2022). Despite this, most teachers will prioritise student

social and emotional needs over covering curriculum content and show a strong tendency of care towards their students (Willis, 2022).

A complementary theory to the consideration of schools as complex adaptive systems is seeing them as complex 'learning ecologies' (Barnett & Jackson, 2019) or 'symmathesies' (Bateson, 2016). Learning ecologies are complex systems of relational engagement that enable learning. Within this ecology, learning is an "ecological phenomenon that brings forth new meanings and understandings of the world. The very act transforms us and the world around us" (Barnett & Jackson, 2019, p. 1). Seeing schools as learning ecologies that are continually changing, growing and decaying aligns well with the dynamic relational model of learning mentioned above with Buddhist and First Nations pedagogies. Within these learning ecologies, there is potential to shift both behaviours and values through relational practice and experiential learning (Barnett & Jackson, 2019). This learning philosophy relies on learners interacting with and experiencing the world, where knowledge comes from the meaning-making that results from these interactions.

Similarly, the work of Gregory Bateson and his daughter Nora Bateson significantly contributes to this way of understanding learning as a dynamic interaction with one's environment, which is embodied and extends into the environment with fluid boundaries (G. Bateson, 2000; N. Bateson, 2016). Nora Bateson discusses learning ecosystems as being in a process of 'symmathesy' or learning together where our boundaries constantly shift and interact as we engage with 'interfaces for learning' (Bateson, 2016). The etymology of the word symmathesy is a combination of the Greek prefix 'sym' meaning together and the word 'mathesi' meaning learning or learning together. It can be used as either a noun to denote a complex learning ecosystem or a verb reflecting the constant change and calibration within a learning system.

The benefit of understanding learning as an ecology or symmathesy in a continual process of adaptation and calibration is that it aligns with a more dynamic, relational worldview and a perspective of resilience. Within this relational understanding of learning and resilience, what might otherwise be considered a 'maladaptive' response

to uncertainty and change, such as anxiety or depression, might also be recognised as a valid adaptation to a challenging environment. What was previously seen as 'pathology' can be seen in a new light within a dynamic, complex, adaptive learning environment. As Bateson articulates:

If a living context is a mutual learning context, how we approach a notion of "pathology" is radically altered. A symmathesy, as a person, or a family, is learning to make sense of its world. As their bodies, emotional, mental and interactional processes would all be included in their ways of calibrating their world (not necessarily consciously) -- all pathology is also learning. How a symmathesy makes sense of its world is a learning process at multiple levels. However, that learning is not necessarily positive or progressive in the orthodox understanding of learning. We can learn to be sick. A tree learns from its context that it needs to grow crooked. Remove the value judgment from that process, and we will instead see a remarkable feat of life to survive in whatever tangle it perceives. Where is the pathology? And toward a response to that question: Where is the healing? In the learning (Bateson, 2016, p. 19).

These dynamic relational models of learning contain within them the ability to understand not only pathology and ill health but also healing and regeneration. If developing pathology is an experience, so too is healing. A young person can learn to make sense of their environments despite experiencing adversity while developing a new set of calibrations to heal through greater resilience. In order to make this shift from pathology to transformation and healing, both the person and the system need to find a new way to 're-understand' their world and interactions with their environment (Bateson, 2016). This re-orientation requires a high level of awareness and reflexivity in both the person and the system. This research contributes to understanding Australian schools as complex adaptive systems, learning ecologies and symmathesies in co-designing experiential learning practices designed to develop student resilience and promote awareness-based systems change.

Chapter 4: Methodologies and scholarly processes

4.1 Chapter introduction

In this chapter, I articulate my methodologies and scholarly processes. I begin by positioning the research as future-focused and transformative and explain the rationale behind this position. I then delve into the epistemology and ontology informing my research approach, followed by a summary of my primary methodology of participatory action research (PAR) with a feminist theoretical underpinning. Next, I describe my second key methodology, awareness-based systems change (ABSC). Moving on to more specific processes, I explain the three cycles of theoretical and practice-based research along with my methods, including literature review, thematic analysis, and thick descriptions. Finally, I consider questions of research quality, ethics and limitations.

4.2 The imperative of future-focused and transformative research

The future-focused nature of this research is essential to understanding my motivation to contribute to the discourse of mental health, resilience, and the future of education. As a mother, I feel a moral imperative to contribute and be of service to future generations who are inheriting multiple crises of climate disruption and accompanying economic, political, social, and ecological challenges. In this context, research with a “future forming orientation” that might “actively shape the contours of the future” (Gergen, 2015, p. 1) is preferable to a more traditional ‘mirroring’ approach to research that seeks to describe and understand a stable reality. In my research, I seek to engage with the chaos and crises as part of the complexity of these times and to proactively propose theories and interventions to “use research not simply to reflect the past, but to create new futures” (Gergen, 2015).

The purpose of my futures-focused research is also to be transformative, which means creating the conditions for internal and external transformation. For example, the spectre of climate change creates a sense of urgency for shifting the external ‘system structures’ and the internal ‘assumptions and worldviews’ influencing climate change (Fazey et al., 2018). My research engages with the current education system and

schools within their existing paradigms of operation while planting the seeds for "different forms of thinking, actions, systems and structures" (Fazey et al., 2018, p. 55).

4.3 Ontological pluralism and ways of knowing

As a researcher my experience of defining ontology is challenging as my understanding does not fit neatly within the relativist or materialist view of reality. This challenge of slotting into a relativist or materialist ontological is influenced by my approach to learning, where I have sought to immerse myself in many different cultures and worldviews to help me understand reality and knowledge. In many ways, my learning journey has reflected a shift from a 'separation paradigm' of my early education, focused on describing, analysing and experimenting, to a more 'relational paradigm' focused on connecting, empathising and understanding (Lange et al., 2021).

My understanding of reality is that it is created largely by our own mind and the perception we bring to any situation or interaction. This perspective aligns with the relativist view of reality. However, I also hold that a conventional reality does exist, based on a complex series of causes and conditions, which aligns with a materialist view of natural phenomena, patterns of behaviour and experiences that can be measured and analysed. This 'ontological pluralism' (Turner, 2020) serves me well as a 'transdisciplinary' researcher seeking to understand and synthesise both materialist, evidence-based research including psychology, education, and health disciplinary knowledge with more subjective elements of experiential and transformative learning. Working with and integrating different ways of knowing (including Buddhist and First Nations) into my research practice and inquiry requires the flexibility of ontological pluralism, which reflects a more dynamic and fluid perspective of what reality can and might be. This shift to a more relational way of knowing and being in the world aligns with a transformative and future-focused research philosophy as articulated by Lange et al.:

Relationality, as an emerging (and ancient) paradigm, is central to theorising and practicing transformative sustainability education.

Relationality is transformative, by definition, in both challenging the

dominant Western paradigm and providing life-affirming processes and patterns for a regenerative future (Lange et al., 2021, p. 27).

My understanding of how knowledge is created is primarily aligned with a social construction paradigm where the experiences, interactions, and behaviours of individuals within a social system are constantly created and recreated (Andrews, 2012; Burr, 2015). These human practices are contingent upon the relational interactions between people within the context of their social environment. Knowledge and ways of knowing extend beyond the human to the living world and more-than-human world, where the patterns of interaction, connections, stories and rhythms create new knowledge (Abram, 2013). As a researcher I am embedded in the research contexts and actively engaged in meaning making through observing and analysing the interactions of participants including teachers and students. In the context of the school pilot program new knowledge is constructed through the social interactions of the participants. While each individual experiences a different subjective perspective on the shared experience, new ways of being and knowing are created through ongoing shared experiences and interactions. This is evidenced through rich data emerging from these shared experiences including researcher observations, feedback and reflections of participants, artefacts created in the learning process, dialogue and discussion.

My research integrates several methodologies to surface and make visible these relational and behavioural threads that construct meaning, including feminist participatory action research (FPAR) and awareness-based systems change (ABSC). Each of these methodologies and the rationale for their use are explained in more detail below.

4.4 Participatory action research

My primary methodology, participatory action research (PAR), develops practical knowledge by combining action, reflection, theory and practice (Reason & Bradbury, 2008). As a methodology, action research, according to Brydon-Miller et al. (2003, p.

13), “rejects the notion of an objective, value-free approach to knowledge generation in favor of an explicitly political, socially engaged, and democratic practice.” One of the benefits of PAR is its responsiveness to the context or system in which it takes place, as it allows for the active re-configuration of a context in collaboration with the actors in that system. PAR enables the shaping of new alternative futures within complex constructed social systems (Gergen, 2015). As such, PAR aligns with my research imperative and onto-epistemological approaches to research outlined above. Below, I use Reason and Bradbury’s (2008) six criteria of PAR to explain key characteristics of my PAR methodology.

4.4.1 Emancipatory in nature

PAR is emancipatory in nature as “it leads not just to new practical knowledge, but to new abilities to create knowledge” (Reason & Bradbury, 2008, p. 5). My research is emancipatory in nature as it seeks to build agency and resilience of young people and research participants. Both students and teachers are actively engaged as co-inquirers in the process of experimenting with experiential learning activities aiming to develop greater resilience and wellbeing for students. My motivation as a researcher comes from a desire and personal commitment to improve the experience of young people with mental health challenges at school and of the teachers and schools seeking to support them to learn.

4.4.2. Draws on many ways of knowing

In PAR, the researcher draws on a variety of ways of knowing, not only within the inquiry and evidence generated but also in the way it is communicated and shared with wider audiences (Reason & Bradbury, 2008). As a researcher, I draw on a multitude of different ways of knowing, including “experiential, presentational, propositional and practical ways of knowing” (Heron & Reason, 2008, p. 366). More specifically, I draw on a range of worldviews and perspectives, such as Western psychology, Buddhist philosophy and First Nations knowledge systems, to inform the design of experiential learning activities for students. The many 'ways of knowing' integrated into the design of the pilot program include conceptual, cognitive,

embodied, sensory, reflective, affective, creative, and intuitive practices. Similarly, the evidence generated in the pilot program represents different ways of knowing, including creative work and artefacts, reflection and journaling, written observations, dialogue, and interactions.

4.4.3. Is values-oriented

PAR seeks to address contemporary issues of significance “concerning the flourishing of human persons, their communities, and the wider ecology in which we participate” (Reason & Bradbury, 2008, p. 3). My research seeks to reassess the values of education and learning and advocate for a focus on mental health, resilience and agency of young people as a priority for the future of education.

4.4.4 Engages with people in collaborative relationships

One of the influential roles of PAR is to open new 'communicative spaces' for dialogue and development within organisations and systems (Reason & Bradbury, 2008). My research opens such spaces through the ongoing collaborative relationships between myself as a researcher and school leaders, teachers, students, co-facilitators, and the broader school community.

4.4.5 Enables creative action in the face of practical and often pressing issues in organisations and communities

PAR creates the conditions for the researchers and participants to respond to real-world challenges within their environment over time and provides an opportunity for creative action to address challenges as they arise (Reason & Bradbury, 2008). The issue of declining mental health for young people is a significant and pressing social issue in Australia, impacting not only young people but their parents, families, teachers, and many others. With its co-design and iterative approach, my research provides a space and opportunity to respond creatively to this challenge.

4.4.6 Is a living, emergent process

PAR recognises that the outcomes of engaging in a complex social system such as a school cannot be pre-determined but will change and develop over time, especially “as those engaged deepen their understandings of the issues to be addressed and develop their capacity as co-inquirers both individually and collectively” (Reason & Bradbury, 2008, p. 40). This living emergent process is a characteristic of my research, as demonstrated in the shift from face-to-face program to online delivery for the final two modules during COVID-19 lockdowns. The emergent nature of PAR allowed us to adapt and integrate this challenge into our research, incorporating the experiences of students living through the COVID-19 pandemic and lockdowns into the inquiry around resilience.

4.5 Feminism and participatory action research

My research takes a feminist approach to PAR, contributing additional perspective and lived experience to the research process. Both feminism and PAR have contested and redrawn boundaries that have traditionally been set up between the researcher and the researched (Reid & Frisby, 2008; Ribbens & Edwards, 1997). Feminist research theory validates women's personal and professional experiences as relevant ways of knowing and foregrounds their voices as a contribution to academic discourse and knowledge production. Feminist participatory action research (FPAR) is a method that allows for alternative ways of co-producing knowledge that recognises and values women's lived experience in all domains of their lives, whether this be at home, in the workplace or anywhere else (Reid & Frisby, 2008). Representing these ways of knowing can be creative and may involve a range of ‘counter-practices’ such as using journals, interactive interviews, participatory modules, poetry, photography, film and art (Reid & Frisby, 2008).

In this research, my experience as a woman and mother engaging with the secondary school, mental health, and other related fields provides valuable insight into the challenges and opportunities for intervention in these systems. Throughout my research journey, I have recorded first-person observations and reflections through

journaling, poetry and prose. Ribbens and Edwards (1997, p. 2) describe this process of reflexivity as “shift(ing) uneasily between the position of the participant and observer/listener, constantly reflecting upon how we know about things, and how to view the knowledge we produce.” I have included several personal interludes in my thesis to complement and add the perspective of lived experience alongside my academic research. This practice contributes a personal perspective to this research and challenges me to continually reflect on my own assumptions and biases as a researcher. Awareness and reflexivity are integral to my second primary methodology of awareness-based systems change, detailed below.

4.6 Awareness-based systems change and understanding the social field

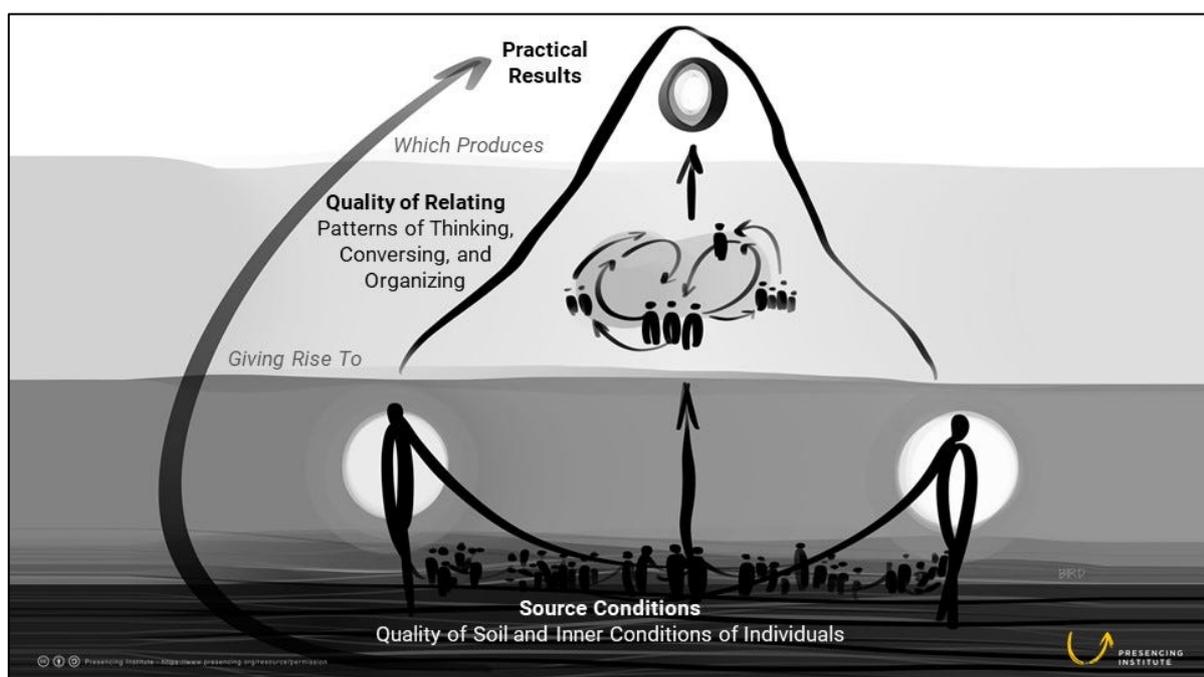
You cannot understand a system unless you change it. You cannot change a system unless you transform consciousness. You cannot transform consciousness unless you can make a system see and sense itself (Scharmer et al., 2021).

A second methodology used in my research is awareness-based systems change (ABSC) developed by the Presencing Institute at MIT. This model extends Lewin’s (1942) work in social field theory and complements PAR by bringing a deeper awareness of the ‘social field’ of inquiry as “the sum total and quality of relationships collectively enacted” (Dutra, 2020). Lewin’s (1942) field theory model holds that our environment and the relationships within our environment influence our behaviour. ABSC research seeks to understand better the ‘social field’ or context of a complex adaptive system in order to learn from it and transform it by helping participants within a system become more aware of the dynamics of the system they are in (Pomeroy, 2021; Scharmer & Kaufer, 2013). This awareness develops through co-inquiry between the researcher and research participants into the deeper structure of social systems or ‘source conditions’ to sense, see and shift them. ABSC aligns with PAR as it also seeks to influence change in a social field, but specifically through awareness-based processes requiring prolonged engagement with participants in the field, rich

descriptive presentations of data and ongoing reflexivity for all participants, including the researcher (Cho & Trent, 2006).

This research methodology is both generative and co-creative. It allows people to see themselves as actors and contributors within a system and to imagine the best possible future for this system collectively. The process of change, visually represented in Figure 3 below, requires attention to the inner condition of participants, including the quality of the attention, intention and personal practices (Scharmer et al., 2021). ABSC adds a new dimension to understanding complex adaptive systems such as a school, as it seeks to observe a system from the outside and complement this with a view of the collective experiences of those within the system, which are usually invisible. According to Scharmer & Pomeroy (2021, p. 3), this invisible dimension is "the source conditions that give rise to patterns of thinking, conversing, and organizing, which in turn produce practical results." According to this methodology, a change in self-awareness and intrapersonal consciousness levels gives rise to an improved quality of relating, producing visible and practical results.

Figure 3: Awareness-based systems change visualisation



(Scharmer et al., 2021)

My research seeks to influence the source conditions or “quality of the soil and inner conditions of individuals” (Dutra, 2020) through engagement with the participants over an extended period, with opportunities for them to develop their relational meta-competencies. An understanding and level of awareness within the school system is developed through co-design and a series of experiential modules where participants learn skills for systems thinking and identify opportunities to intervene in the system to improve resilience and wellbeing.

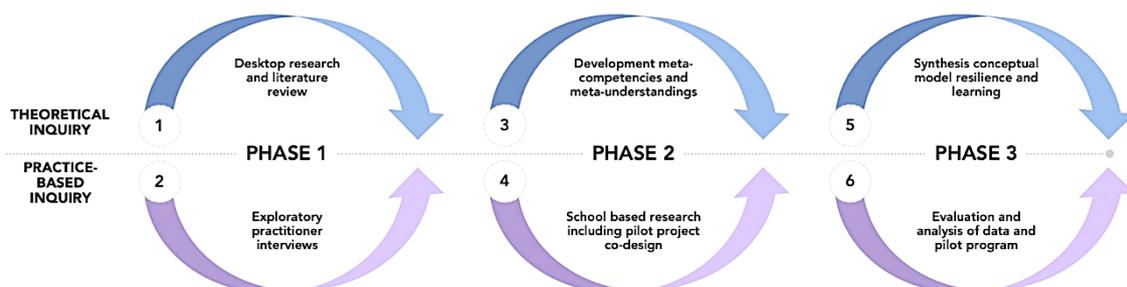
4.7 Methods and research tools

My research consists of three overarching phases of theoretical and practice-based research, and I used PAR cycles to structure the practice-based component. In this section, I explain the three phases and then explain each PAR cycle. I then summarise my analytical methods, including literature review, thematic analysis, and thick descriptions.

4.7.1 Overall research design and overview of theoretical and practice-based phases

The three phases of theoretical and practice-based research are visualised below in Figure 4. While visualised as distinct phases for clarity, there was a degree of iteration and intertwining between these. For example, the literature review continued throughout the research, informing each phase.

Figure 4: Multi-phase research methodology



In my first research phase, I investigated the social field of young people, mental health, resilience and learning. Theoretically, this involved a literature review of scholarly literature across disciplines and grey literature. For my first phase of practice-based inquiry, I conducted exploratory interviews with educators, high school teachers and youth workers with mental health and resilience expertise. My initial ethics application, assessed as low risk, allowed me to engage with stakeholders while preparing ethics applications for research with young people.

I selected the Phase 1 interviewees using purposive and convenience sampling methods through existing networks (Etikan et al., 2016). Ten semi-structured interviews were held half face-to-face and half online due to distance and travel constraints. All interviewees were based in Australia, with the majority in New South Wales (9) and Victoria (1). The interview transcripts were processed and coded in NVIVO using reflexive thematic analysis (Braun & Clarke, 2022), described in more detail below. The data, insights and thematic analysis from this first research phase then informed the second phase of conceptual development and co-design and delivery of the school pilot program.

In my second research phase, I developed a conceptual framework of relational meta-competencies for fostering resilience and ran co-design modules and a pilot program in a secondary school. For my theoretical inquiry, I synthesised the Phase 1 literature review and stakeholder interview themes to design a framework of six relational meta-competencies for young people to develop resilience. The co-design modules also informed this framework, and following this, I integrated the meta-competency framework within the design of the pilot program. The Phase 2 practice-based research consisted of three co-design modules with teachers and students, followed by a pilot program. Students were selected to participate in the pilot via an expression of interest process facilitated by the teachers. Fourteen students self-nominated for the pilot (see Chapter 4.9: Ethical considerations for more details on the selection process). These students participated in codesign workshops and five one-day experiential learning modules from February to August 2021. Data was collected in a range of formats, including pre-and post-pilot program surveys, post-event surveys,

student and researcher journaling, artefacts created by students, audio recordings, photographs, and co-facilitator design and debrief sessions. This data informed the third and final research phase.

During my third research phase, I integrated the theoretical and practice-based findings from Phases 1 and 2 into a model for experiential learning to promote relational resilience for young people. The theoretical inquiry reviewed and iterated the relational meta-competencies framework for resilience and analysed relevant learning experiences related to these. I evaluated the pilot using group interviews with students and online surveys in my practice-based research. The students presented their work to the school community, including the Wellbeing Committee. The outcomes of this phase of research are integrated and documented in Chapter 14 and 15.

4.7.2 Participatory action research cycles

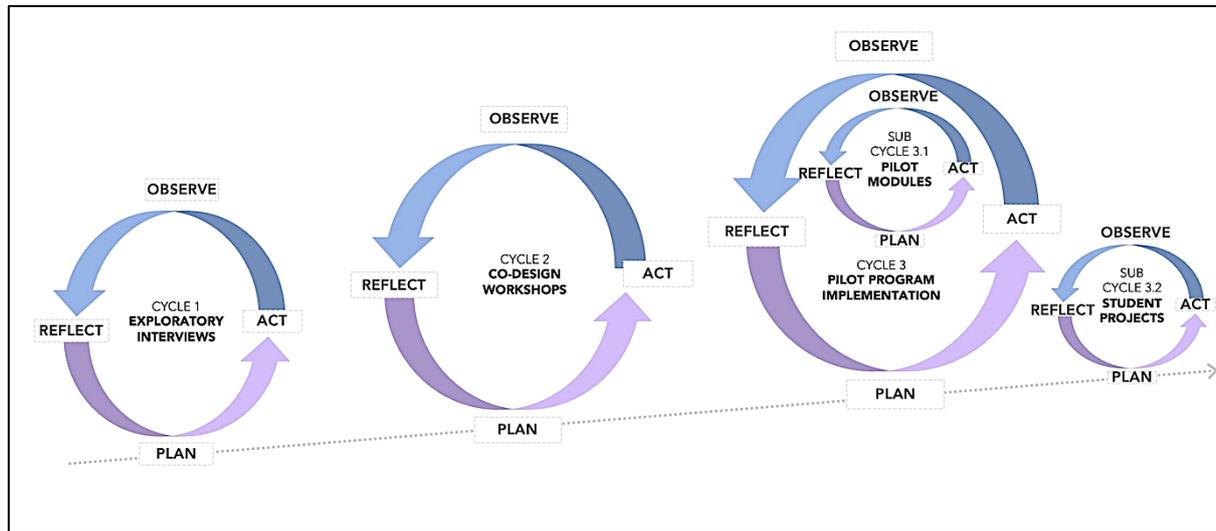
This section introduces my PAR cycles (detailed further in Chapters 5 to 7). Each PAR cycle followed a process of planning, acting, observing, and reflecting. The findings from each cycle informed the next cycle in a process of iterative development, testing and implementation. A series of smaller micro-cycles also took place within each of the three high-level or macro-cycles, which I explain below.

The three macro-cycles of PAR (Figure 5) consisted of:

- Cycle 1: Exploratory interviews
- Cycle 2: Co-design modules
- Cycle 3: Pilot program

Within the macro-cycle Cycle 3 of the pilot program, were several micro-cycles; for example, each learning module also followed a process of planning, acting, observing and reflecting (micro-cycle 3.1). The student-led projects also followed a PAR cycle as they planned, tested and reflected on what they learned (micro-cycle 3.2).

Figure 5: Participatory action research cycles visualisation



As outlined above, each PAR cycle informed the following cycle. The exploratory interviews with educators and youth workers (Cycle 1) informed the co-design modules (Cycle 2) by identifying key themes and meta-competencies for resilience. In the co-design modules (Cycle 2), these themes and meta-competencies were refined through input from teachers and students, which then informed the planning and action of the pilot program (Cycle 3). These PAR cycles of planning, acting, observing, and reflecting are detailed further in Table 4 below.

Table 4: PAR cycles of planning, acting, observing, and reflecting

Cycle	Plan	Act	Observe	Reflect
1. Exploratory Interviews	Identify interviewees	Interview educators, youth workers, and youth mental health experts	Identify critical themes through thematic analysis. Validate identified meta-competencies against the literature review	Map relationships of key themes and meta-competencies
2. Co-design modules	Plan modules for teachers and students	Engage teachers and students to explore	Map themes and priorities from modules	Integrate observations and priorities

	integrating key themes and meta-competencies identified in Cycle 1	resilience and wellbeing for young people through a range of participatory methods	with students and teachers	of teachers and students into key themes and meta-competencies framework
3 – Pilot program	Plan pilot modules focusing on key themes and meta-competencies in Cycle 1 & 2	Design and deliver learning modules	Observe, collect, and analyse data from participants during learning modules	Integrate pilot data analysis and findings into the framework of meta-competencies for resilience

4.7.3 Analytical methods

In this section, I describe my analytical methods, including literature reviews, thematic analysis, and thick descriptions, and then articulate the grounds for the quality and validity of these research methods.

My literature review began with a broad contextual inquiry into the current state of mental health and wellbeing for Australian young people with a focus on education and learning. The initial literature review focused on the fields of psychology and education, where I used Scopus, Scimago, Psychinfo, Proquest, and Google Scholar to search keywords and boolean strings such as [‘young people’ or ‘youth’ or ‘teenagers’ or ‘adolescents’] and [‘resilience’ or ‘wellbeing’ or ‘mental health’] and [‘secondary school’ or ‘high school’ or ‘learning’ or ‘education’]. I also reviewed relevant grey literature, including government and industry reports, media coverage, social media and blogs by relevant experts and commentators. As I was interested in exploring how different cultures and worldviews related to the concept of developing resilience for young people, in particular Buddhism and First Nations peoples, I read specialised material in these fields as well as attending online seminars and modules relevant to these subjects, for example I attended an online webinar, ‘Indigenous Philosophy and the Relational Ethos’ with Indigenous Elders and scholars including Mary Graham (NENA, 2021).

In Cycle 1 a series of semi-structured interviews with educators and youth workers seeking to inform an understanding of the contemporary context from their perspective on issues impacting young peoples' resilience and wellbeing. I analysed these interviews using reflexive thematic analysis (Braun & Clarke, 2006, 2019, 2022). In applying reflexive thematic analysis, I developed a series of themes that "connect and build on each other", applying a constructionist lens and describing patterns of meaning (Braun & Clarke, 2022, p. 4). I began this process with an initial round of open coding on a paper-based version of the interview transcripts. I then refined these initial codes using a process of visualisation, clustering, and mapping to identify patterns, themes and subthemes (Appendix A). The final codes representing themes and subthemes were then returned to NVIVO for re-coding interviews. The themes identified in the interviews and co-design modules as impacting young people's resilience and wellbeing and the relational meta-competencies identified were also used as codes for analysing student surveys and final group interviews.

For my qualitative analysis of the co-design workshops and pilot modules I used thick descriptions. The term thick descriptions was coined by Ryle (2009) to both describe and interpret social actions within the social context in which they occur, as opposed to thin descriptions, which primarily describe situations on a more superficial level. This interpretive analysis method was further developed by anthropologist Geertz (2008), who emphasised the importance of affect, intention, motivation and reflexivity in documenting interactions using thick descriptions. Thick descriptions do not seek to provide a one-to-one correspondence between reality and observation but rather to observe, describe and interpret in a way that provides context and detail with insight into the emotional and intuitive responses of the participants within the web of their social relationships (Denzin, 1989; Ponterotto, 2006). Through interpretation and analysis, what is meaningful (and often hidden) in the context can be drawn out and made visible as part of the social field, such as intention and motivation, emotional responses, body language and posture, and dynamics of interactions. According to Schwandt (2001, p. 255), this 'interpretive characteristic' of descriptions rather than the level of detail makes them 'thick.'

I chose the method of thick descriptions for several reasons. Firstly, thick descriptions support a richer and more performative understanding of the social field that aligns with the methodologies of PAR and ABSC. The performative nature of this research refers to what Gergen & Gergen (2018) describe as increased 'dimensions of engagement' where participants, including the researcher, can experiment with new modes of learning both reflexively within themselves and with each other.

In using thick descriptions I encourage the reader to 'see' for themselves through a series of detailed contextual descriptions. And finally, for the ability to capture nuances of social interaction, power dynamics and emotional responses of participants in documenting students' experiences of meta-competencies such as adaptability, agency and creativity, which are highly abstract in nature. The method provides a way to explore multiple ways of learning and knowing (Gergen, 2012) as well as the "more performative nature of transformative learning", where learners 'become together' and shape their knowledge based on their interaction with each other and their surroundings (Lange, 2018, p. 293).

My thick descriptions are presented in Chapters 8 – 13, interpreting and analysing the participants' experiences of each relational meta-competency. In these chapters, I document observations and insights in a series of 'scenes' or descriptive vignettes using thick descriptions that explore 'webs of social relationships' including details, context and emotions (Denzin, 1989). Within my thick descriptions, I integrate an element of performativity through the metaphor of a film script articulating 'scenes' that indicate the time and location (interior or exterior). The descriptions integrate multiple forms of performance within dialogue, interactions, artefacts created, writing and reflections. These thick descriptions were developed by analysing and interpreting data and evidence collected during the co-design modules and pilot program through audio and video recordings, module artefacts, student interviews and surveys, journaling, researcher observation and reflection. Multiple data sources and evidence were used to triangulate the data to inform the thick descriptions and accompanying analysis.

4.8 Quality and validity in qualitative research

In this section, I outline my understanding of quality and validity in qualitative research, particularly in the context of PAR. In terms of ensuring the validity and quality of my research, I discuss the extended nature of the engagement, dialectic and triangulation of data sources, member checking and my practice of reflexivity as a researcher.

Validity in qualitative research is contingent on the paradigm of research being used, according to Cresswell and Miller (2000). In PAR, Reason and Bradbury (2008, p. 9) argue that “good knowing rests on collaborative relationships, on a wide variety of ways of knowing, and an understanding of value and purpose, as well as more traditional forms of intellectual and empirical rigour.” Validity in qualitative research has been adapting to meet emerging paradigms such as PAR. Cho and Trent (2006) stress the importance of considering the purpose and format of research to understand the appropriate process and criteria for considering validity. Geertz (2008) states that researchers can ensure interpretive validity through techniques and methods such as prolonged engagement, holistic processes, triangulation and member checking. The criteria for validity in PAR qualitative research include the ongoing engagement with participants, the extent to which the data is descriptively presented and the researcher’s competence in making sense of the daily life of their participants (Cho & Trent, 2006). Interpretive validity refers to how meaning is attributed to the participants’ events, objects and behaviours by the researcher (Maxwell, 1992). In light of this understanding of validity in qualitative research, I address how these techniques for ensuring validity apply within my research practice and process.

The decision to use PAR, as discussed above, related to my desire as a researcher to be embedded within the school environment for an extended period and to influence changes in terms of the paradigm of learning while observing and sensing how the research participants and school as a system responded to this change. The co-design

modules and pilot program took place over nine months, during which I communicated regularly with the teachers and students. As a researcher, I wanted to interpret a local construction of meaning from an 'emic' or insider perspective, which required building relationships and trust over time, as well as recognising the participants as the 'experts' of lived experience within the school system (Cultural Anthropology, n.d.). During this extended engagement, I kept a regular journal of observations, reflections, and interpretations to record the dynamics and engagements between myself and the research participants. The pilot program modules involved several co-facilitators contributing to designing, implementing, and evaluating the learning experiences. The planning discussions, debriefs, and reflections after each module were also documented. The range of data sources collected during this extended engagement period was extensive and varied, enabling multiple perspectives to be integrated and considered when interpreting participants' experiences. An example is the range of data sources used to contribute to the interpretation and analysis in the thick descriptions for each meta-competency, as described above.

Member checks were undertaken regularly and informally with students and teachers during the nine-month pilot program. The format for these included circle check-ins and check-outs, informal discussions, shared dialogue reflections during and at the end of modules, online Zoom check-in calls between modules, post-event surveys and teacher feedback. An example of this process of member checks was at the beginning of each module when we asked participants to review and discuss previous modules. This form of ongoing sense-making and validation became part of the culture and process of working together and provided a deeper ongoing understanding of the participants' lived experiences. The member checks helped to develop a level of trust and familiarity that became more evident during the COVID-19 pandemic when students felt comfortable discussing and debriefing their experiences of being in lockdown and challenges with online schooling during our online meetings and modules. Teachers also seemed to value the opportunity to debrief and reflect on their experiences openly and honestly with me during these challenging times.

The final aspect of validity relates to my critical reflexivity as a researcher. In PAR research one has to be prepared to “continuously test assumptions sceptically and rigorously”, actively seek exceptions to agreement and challenge ideas from evidence and literature (Dick, 1993, p. 38). My practices for ongoing reflexivity included regular journaling, mindfulness and meditation, and check-ins with my supervisors and pilot program co-facilitators. Before, during and after each pilot module, I took observational notes and recorded reflections in debrief meetings with co-facilitators. One of my ongoing practices as a researcher has been to explore and document my assumptions and biases concerning education and learning to help me remain open to interpretations, evidence, and worldviews different from my own. I reflect further on the ethical considerations related to my critical reflexivity in the next section, 4.9 Ethical Considerations.

4.9 Ethical considerations

Any research that engages with young people requires a high level of responsibility and commitment to designing ethical learning experiences with a focus on safety and accountability. In this section, I articulate my critical ethical considerations and processes, including ethics reviews, participant engagement, personal ethical considerations, identifying assumptions and biases, and engaging with First Nations knowledge systems.

In undertaking this research, I relied on the national guidelines for working with young people provided in the National Statement on Ethical Conduct in Human Research (National Health and Medical Research Council [NHMRC], 2018) and ethical frameworks and processes within UTS and the NSW Department of Education. I obtained a Working with Children Check clearance and ethics approval through the Human Research Committee at UTS (ETH19-4360 and ETH20-5053) and a SERAP (2020261) ethics application through the NSW Department of Education. The school-based research required a commitment to clear briefings, transparency and seeking permission from parents and caregivers for students to participate in the research.

Clearance for permission to use photographs was obtained from parents and the school.

One ethical consideration was the selection of student participants for the pilot program. The recruitment process was discussed in the co-design module with teachers, who expressed a preference for setting up an expression of interest process for students to apply to be part of the program. Teachers wanted an opportunity to review the applications and make a final decision on who would take part in the program. The expression of interest was sent to all students in the year, and fourteen students responded with a written application, all considered suitable for the pilot program. Students were informed that they could withdraw from the pilot program at any time and that their participation or otherwise would not affect their relationship with the school, UTS or any of their academic work. All data was stored securely according to the Research Data Management Plan and de-identified in any writing or research publications.

My ethical approach aligns with feminist theory in engaging with communities for their benefit and advocating for change for young people with limited power and influence within the social system. Some key personal ethical considerations in this research include a deep belief in the need for compassion to reduce suffering. As a parent, who has engaged with the mental health and secondary school systems, I brought a level of empathy and insight to inform my research practice. This personal experience also made me aware of the need to question my own blind spots, assumptions, and biases. An example of this was an assumption I had coming into the research that secondary schools were no longer 'fit for purpose' in providing the skills and competencies young people need in a rapidly changing world, influenced partly by my lived experience of my children disengaging from school and learning after a few years in secondary school. What I realised from working on the pilot program and engaging with other communities during my research is that for many families, Australia's education system provides opportunities for their children that they might not get elsewhere. For example, many students in the pilot program have families who have immigrated to Australia, searching for better educational opportunities and lives

for their children. The selective school system in Australia and the educational opportunities provided to their children are highly valued within these families and communities as a pathway into tertiary education and careers. Acknowledging and reflecting on these contrasting experiences and perspectives helped me better understand my assumptions and approach the inquiry more openly.

As discussed in Chapter 2, a final ethical consideration relates to engaging with First Nations and Aboriginal and Torres Strait Islander knowledge and wisdom. As a non-Indigenous researcher of mainly Irish descent, I am aware of engaging with Aboriginal and Torres Strait Islander culture and knowledge in ways that are respectful and non-extractive. One of my main ethical concerns was to not contribute to a process of cultural appropriation in extracting First Nations knowledge without consent or engaging in the 'proper way'. As well as following the research protocols outlined by the Jumbunna Institute for Indigenous Education and Research, I also sought permission from Aboriginal scholars whose work I reference in this thesis as part of my final review. Tyson Yunkaporta and Tjanara Goreng Goreng have given me consent to reference and include their work in my thesis.

4.10 Limitations and boundaries

Every research project has limitations and boundaries. The primary limitations I explore below include the challenges of working within a secondary school environment, resource and time constraints, the impact of the COVID-19 pandemic on the research, and the limitations and trade-offs in using PAR.

Some of the primary limitations of the research involved designing and delivering experiential learning activities within a secondary school environment. Working in a selective school meant time constraints due to academic and extra-curricular commitments such as external tutoring and sports. I worked closely with the key liaison teacher to plan and schedule the sessions around times with less academic load and pressure on the students, such as exam times. There were some situations when students were told they had to attend class rather than the modules despite prior approval. Having said this, the teachers and school were generally very

accommodating in arranging suitable times to hold the modules and meet with students online between modules. Another more significant constraint for my research was the default focus within the school environment on learning as primarily an individual task with a competitive aim. In my research I explore a more relational model of learning and resilience through engaging students in not only individual but also collective learning and agency. I note the limitations within a traditional school context to engage in deeper intra and interpersonal inquiry as well as engaging with the collective action and change within this environment.

Some research limitations were experienced as a pragmatic response to the limited time and resources available to me as a mature aged researcher who is also a primary carer for children and income provider. In the initial exploratory research phase, I had hoped to engage with and interview young people, educators, and youth workers; however, the time constraints associated with submitting an ethics application to work with young people at this early stage meant it was not feasible. Instead, I submitted two separate ethics applications, one for the initial exploratory interview stage and a second for working with students and teachers in a school environment. I had initially intended to engage more closely with teachers and parents as research participants in the PAR; however, time and resource constraints meant this was not possible.

My research was adversely impacted by the COVID-19 pandemic and the consequences of this, as the school moved to online learning during two extended state-wide lockdowns in 2021. We found that online delivery was not nearly as engaging for this experiential learning style and that we couldn't cover as much material within the online modules. The lockdowns also impacted students' mental and emotional wellbeing, with students reporting feeling more anxious, isolated, and distracted. In the two final online modules, students seemed less engaged in dialogue and more interested in non-verbal digital collaboration, such as writing synchronously on interactive platforms such as Mural. Despite the challenges in online delivery, the students did give feedback that these final two modules were valuable, though they would have preferred to do them face-to-face.

Undertaking PAR with one school over a more extended period involved trade-offs between the depth and responsiveness of the research with its replicability and generalisability. While the research provided extensive, rich qualitative data in one school environment, further research would be needed in other schools to justify external validity or generalisability to other schools. The specific characteristics of the school where the pilot program took place, being a selected girls public school, may limit the applicability of the findings. However, methodological approaches, such as the co-design with teachers and students, the pilot program format, and the relational meta-competency framework, can be adapted and applied in other school environments. In the case of this research, the value of responsiveness was particularly valuable during the COVID-19 lockdowns and provided rich insights into the students' experiences of resilience within this context.

Chapter 5: Participatory action research Cycle 1 – Exploratory interviews

5.1 Chapter introduction

In this chapter, I identify significant themes and insights pertinent to the resilience and wellbeing of young people from the analysis of a series of semi-structured interviews with educators and youth workers. My analysis provides a contemporary snapshot of how young people respond to change and uncertainty based on the perceptions and perspectives of educators and practitioners working with young people daily. After outlining the participant profiles, I analyse the following overarching questions.

1. What are the issues impacting wellbeing and resilience of young people at this time?
2. How do young people develop resilience?
3. What skills and competencies might young people need in the future?
4. What is the role of secondary schools in supporting wellbeing and resilience?
5. What changes are needed to provide learning environments in schools to develop resilience?

These semi-structured interviews, informed by my literature review and sensing into the field, took place between January and August 2020 in urban and regional/rural settings. I selected interviewees through purposive and convenience sampling using the following criteria: significant experience working with young people in an educational or welfare setting and a professional interest in resilience and wellbeing. I developed a list of potential candidates and invited them to participate and advertised at the university. I have applied pseudonyms to protect the privacy of participants. An overview of the interviewee profiles and pseudonyms is outlined in Table 5.

Table 5: Exploratory interviewee profiles

Pseudonym	Role	Years of experience	Relevant experience	Interview format
Aisha	Youth mental health practitioner	10	Psychologist, academic, researcher for young people and mental health in schools	Online
Clara	Secondary school teacher	10	Teaches science and special education in rural NSW school	Face-to-face
Natasha	Youth worker/Educator	7	Teaching and support in an alternative school for young people at risk	Face-to-face
Mala	Youth worker	5	Advocate for young people, youth entrepreneurship	Face-to-face
Darren	Secondary school teacher	17	Special education and year adviser, rural secondary school	Face-to-face
Rocco	Secondary school teacher	30	Teacher and education strategist in semi-rural school	Online
Tarika	Youth mental health practitioner	17	Designing and delivering mental health programs in schools	Online
Nabila	Child and youth mental health practitioner	20	Designing and delivering digital mental health programs in schools	Face-to-face
Marcus	Youth worker/Educator	10	Designing and facilitating programs for	Online

			young people at risk, mentoring	
Alex	Youth worker/Educa tor	10	Designing transformative learning and wellbeing programs for young people	Online

5.2 Overarching question 1: What are the issues impacting the wellbeing and resilience of young people at this time?

The issues and themes identified from these interviews provide insight into the underlying socio-cultural challenges young people grapple with in a contemporary Australian context. I analysed the interviews and identified these themes through reflexive thematic analysis (Braun & Clarke, 2022) (See Chapter 3 for more details on methodology). My interpretive analysis of these themes, presented below, is supported by a visualisation and interviewee quotes.

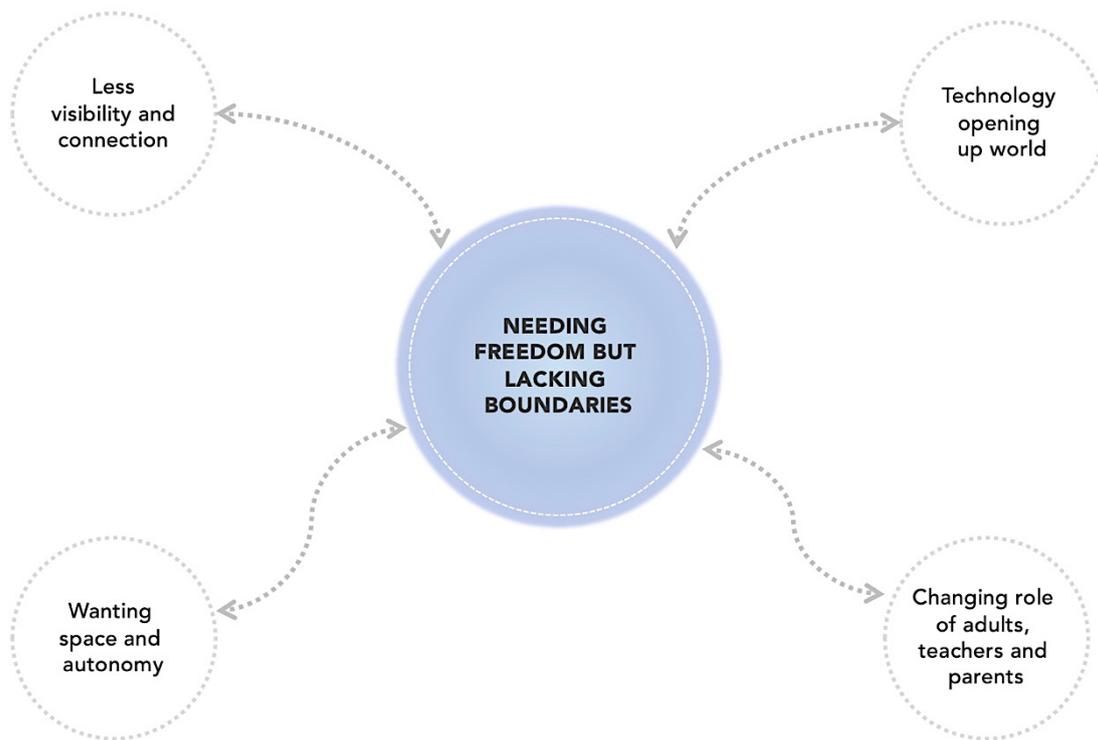
- needing freedom but lacking boundaries
- loss of connection and belonging
- confusion and pressure about identity
- changing institutions and pathways
- high levels of uncertainty
- challenges around mental health

5.2.1 Needing freedom but lacking boundaries

This theme refers to the tension (or paradox) between young people needing freedom and lacking boundaries. Several interviewees referred to young people needing to be themselves yet at the same time feeling a lack of boundaries unique to the context of today's society. These interviewees described how this tension negatively influences young people's experience of resilience through four primary sub-themes: less visibility and connection, technology opening up the world, wanting space and

autonomy, and the changing role of adults, teachers and parents (Figure 6). Each of these sub-themes is considered further below.

Figure 6: Interview theme - Needing freedom but lacking boundaries



One of the primary sub-themes related to *needing freedom but lacking boundaries* is a perceived lack of visibility and connection between parents and their children, particularly relating to their media and social media use. Interviewees commented on the changing nature of digital communication between young people being, primarily via messages and social media, which parents and teachers often have limited oversight or access to. This lack of visibility of media usage was seen as shifting the boundaries of power between young people and adults in their lives. Most educators and practitioners reflected on the impact technologies such as the internet and mobile devices had on young people's lives, their relationships with each other, their parents and the wider world. As one interviewee commented:

I think one of the biggest things is how the world is changed with digital information, you know, just having [it] in the palm of their

hands, every young person has a mobile phone...And I think that is the biggest thing I'm seeing families, communities, and parents struggling with when working and supporting young people (Tarika, Youth mental health practitioner).

Related to this is the sub-theme of *technology opening up the world*. Interviewees noted the changing nature of technology exposing young people to high volumes of largely unfiltered media. There were concerns about the impact on young people of having this unfiltered access to world news and other content, which might include extreme content or abusive communications within their social networks. This real-time access to world and local events, as they are unfolding, was considered to have a negative impact on young people's mental health and wellbeing as they are "exposed to lots of bad things happening all over the world. More exposure to negative events and worry" (Nabila, Child and Youth Mental Health Practitioner).

The changes in visibility and oversight of children and young people's access to information and communication were also connected to the sub-theme of the *changing role of adults, teachers and parents*. As mentioned above, the changes in technology, including increased portability, are making it difficult for parents to oversee what media young people consume without impinging on their freedom and privacy. Whereas in the past, parents and teachers had a higher level of oversight and responsibility in filtering and interpreting information that the young people in their care were accessing, the rapid changes in technology and modes of communication have resulted in less visibility. Interviewees expressed varying levels of concern and distress about how these technology changes reduced their ability to understand and support the young people in their care. As one noted by one interviewee:

And so many of them are on social media. There's no switching off. There's no downtime. There's no disconnect. So, it's a whole new world certainly from what I grew up, and I see this as being the biggest change that media that is coming at them is not filtered. There are no guidelines. So, it comes without any boundaries. They

have access to any information they want. Good, bad and dangerous, in an instant from a very, very young age (Tarika, Youth mental health practitioner).

Another youth worker and educator working with young people at risk in a community-based school setting gave an example of the availability of drugs online and how easily young people can access this without their parents having any idea, commenting, “It's all done by writing and I think that has a big impact on young people that they sort of feel they're (too) young to suddenly be able to just do what they want” (Natasha, Educator/Youth worker in alternative school).

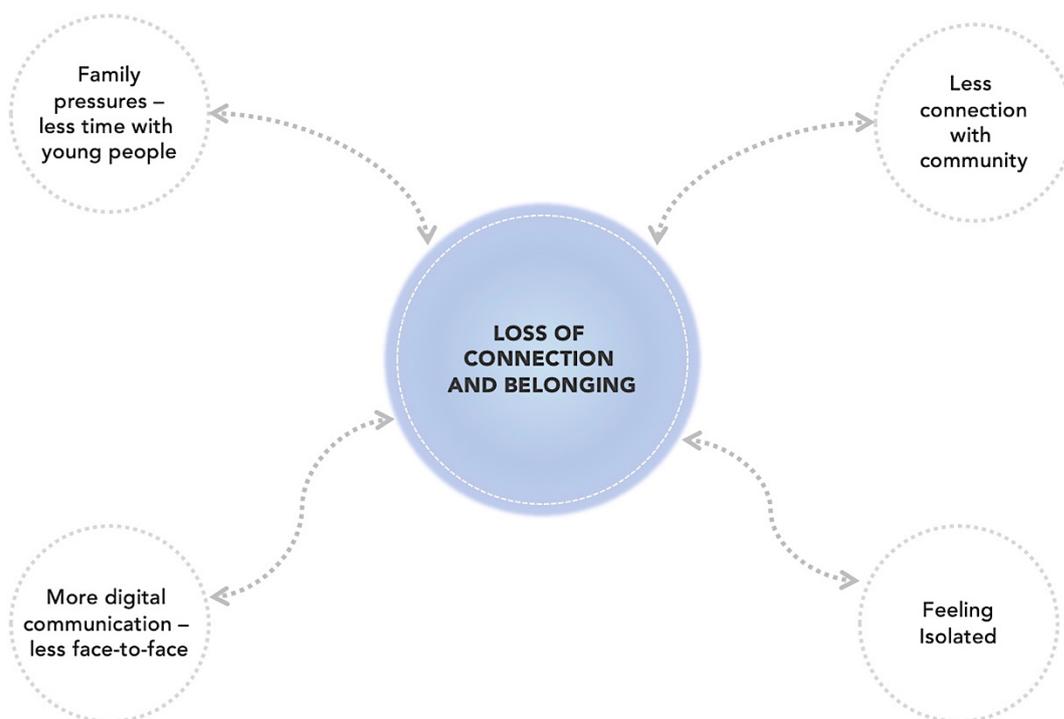
Almost paradoxically, the final sub-theme of *wanting space and autonomy* refers to young people wanting greater freedom and autonomy to be able to define their own identities and live without the constraints imposed on them by parents and teachers. As one interviewee points out, young people are 'bringing the change' and it is the role of parents and teachers to create safe parameters for them to experiment within. One secondary school teacher gave an excellent example of allowing young people to create their own boundaries within a more open digital environment. The teacher used the digital platform Minecraft for students to work in groups to build virtual environments to learn about sustainability. When one of the students in a team repeatedly sabotaged their team's digital world, they were blocked by other members from entering. As a result, students created their own boundaries within the digital environment, with the teacher stepping back to allow this dynamic to play out in a safe environment.

This first theme of young people needing freedom, but lacking boundaries entwines with the second theme of a loss of connection and belonging, particularly in relation to changes in technology and media use by young people.

5.2.2 A loss of connection and belonging

Another critical perspective shared by interviewees is that young people are experiencing a loss of connection and belonging. Sub-themes related to this loss include more digital communication, less connection with community, family financial pressure, and feeling isolated (Figure 7).

Figure 7: Interview theme - Loss of connection and belonging



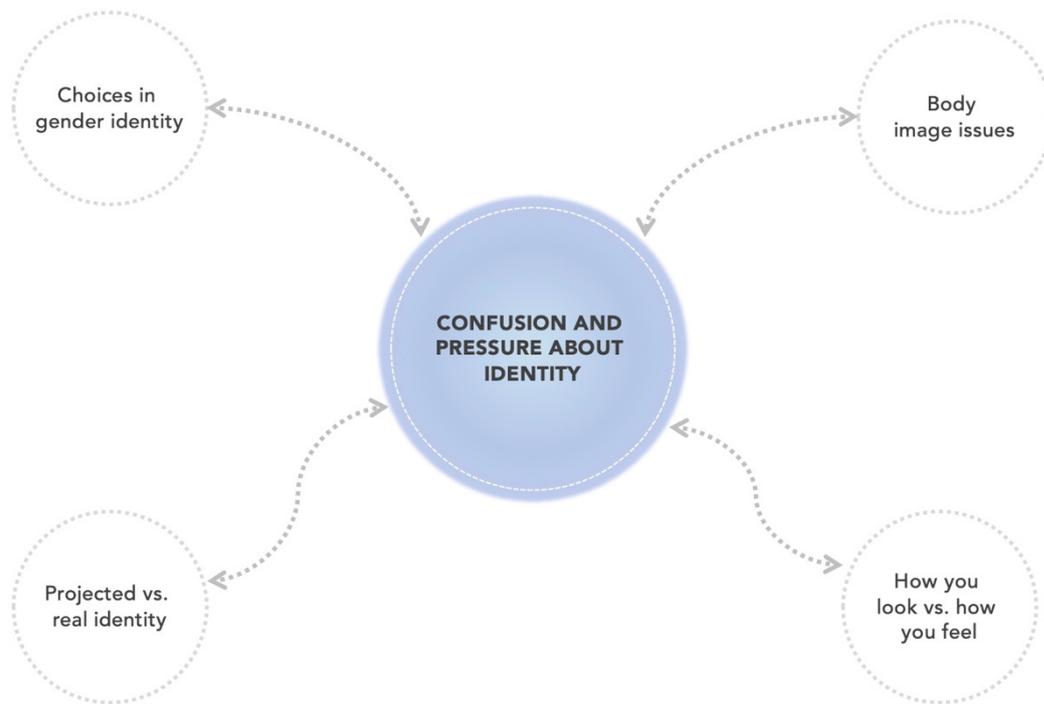
The idea that connection and belonging are essential to the wellbeing and resilience of young people was clearly communicated by all interviewees, with a youth worker stating, “More often than not [what is] needed is connection, vulnerability, authenticity, a space where they can just be themselves and be seen and accepted for who they are” (Marcus, Youth worker/educator). Social media was mentioned repeatedly as having the capacity to create a sense of isolation and exclusion, mainly when young people see their friends or peers out having fun while they are at home or not invited. Increasingly, young people were observed to have less direct verbal face-to-face communication and much more digital communication, which was perceived as potentially contributing to feelings of isolation and loneliness.

Regarding families and communities, some interviewees commented on the pressure many families are experiencing financially and socially and how this can impact their ability to spend time with and support young people. Technology was noted as impacting communication and connection within families, with devices being used to avoid direct communication by both young people and parents. This loss of connection was also referred to regarding changes in communities as one youth worker explained, "We are moving away from the need to connect and have a sense of community. That takes a toll" (Marcus, Educator/Youth worker).

5.2.3 Confusion and pressure around identity

The theme of identity, which is so critical to young people's experience of adolescence, was often mentioned in interviews as a source of confusion and pressure for many young people. Again, the impact of changes in communication and technology was significant in the interviewees' reflections on the four sub-themes: projected versus real identity, how you look versus how you feel, body image and choices in gender identity (Figure 8).

Figure 8: Interview theme - Confusion and pressure about identity



Several paradoxical issues related to identity and image emerged from the interviews, for example, the difference between projected and real identity and how you look versus how you feel. Educators and youth workers noted increasing expectations on young people to curate their appearance on social media, "Just the expectations, looking good online. It's not an expectation of other people but more something you put on yourself" (Darren, Secondary school teacher). According to some interviewees, a projected identity on social media may or may not reflect how young people feel and can be used as a form of protection or to provide false confidence. As one secondary school teacher reflected:

One of the big challenges is personal confidence. I think it's very difficult for young people to develop their own sense of identity in the face of so much outside influence. So everywhere they look, there is this mass of different personas that are portrayed for them. And I think it's difficult for young people to find their own identity. There's just so many versions of themselves. And then I think it's difficult for them to realise who they should be (Clara, Secondary school teacher).

For some young people, a projected identity on social media of confidence and happiness was seen to contrast with underlying feelings of anxiety and distress. A teacher noted this contrast when referring to boys at his school:

I speak to boys a lot who tell me how anxious they are, yet they seem on the outside to be normal, functioning healthy kids. Like they have friendship groups and hang out together and all that sort of thing. But then, individually, they are really anxious about everything. I don't know what's driving it other than their own expectations of their own behaviour and how they look and how they are perceived by others (Darren, Secondary school teacher).

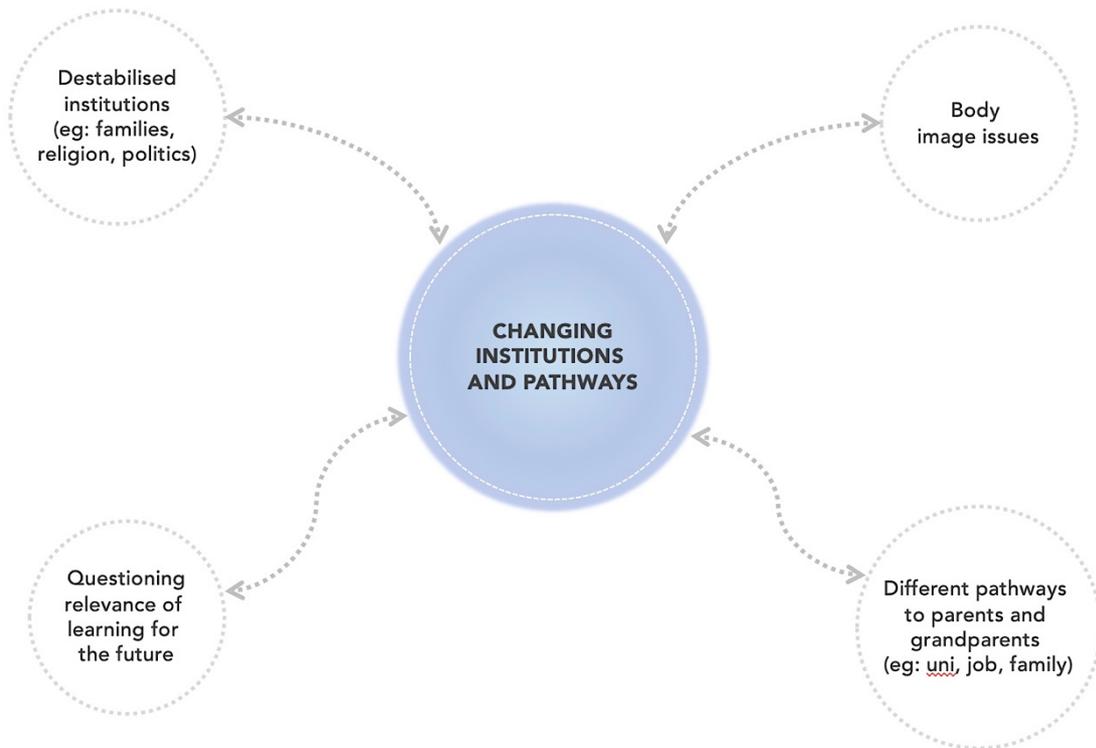
Many young people were described as experiencing pressure around body image, which social media can exacerbate. One youth worker commented, "The pressure on young girls now wanting to get lip fillers done at sixteen. And you know the fashion, it all has to be named brands because there are photos to take" (Natasha, Youth Worker/Educator).

Confusion around gender and identity was commonly mentioned with so many choices a young person was expected to make and not a great deal of support in making them. One youth educator called for greater freedom and safe spaces for young people to "explore identity away from the limiting tropes of gender" (Marcus, Educator/Youth worker).

5.2.4 Changes in institutions and pathways

Another recurring theme highlighted in the interviews was the changes in the traditional institutions and pathways available for young people and how this can create uncertainty and anxiety about their future. The main institutions referred to included religion, politics, families, and work. Within this theme I identified several sub-themes: different pathways to parents and grandparents, less trusting of traditional pathways, destabilised institutions and questioning the relevance of learning (Figure 9).

Figure 9: Interview theme - Changing institutions and pathways



Educators and youth workers referred to the impact of changes in traditional institutions that have provided social and cultural structure and connection in the past. The changing nature of families from more traditional nuclear families to more diverse family types, including more single-parent and 'blended' families, was noted as impacting some young people's resilience and wellbeing. The decline in religion was mentioned as another changing institution, with observations that, in the past, religion provided common values and a sense of community. One youth worker referred to the values of religion, saying these values are not available to many young people today. These changes were seen as being connected to identity and leading to insecurity for young people, "Kids are tapping into insecurities around the things that gave us identity, which were gender, politics, work and more" (Marcus, Educator/Youth worker).

Alongside these institutional shifts, changes to study, employment and the future of work were noted as causing stress and pressure for families and young people. One

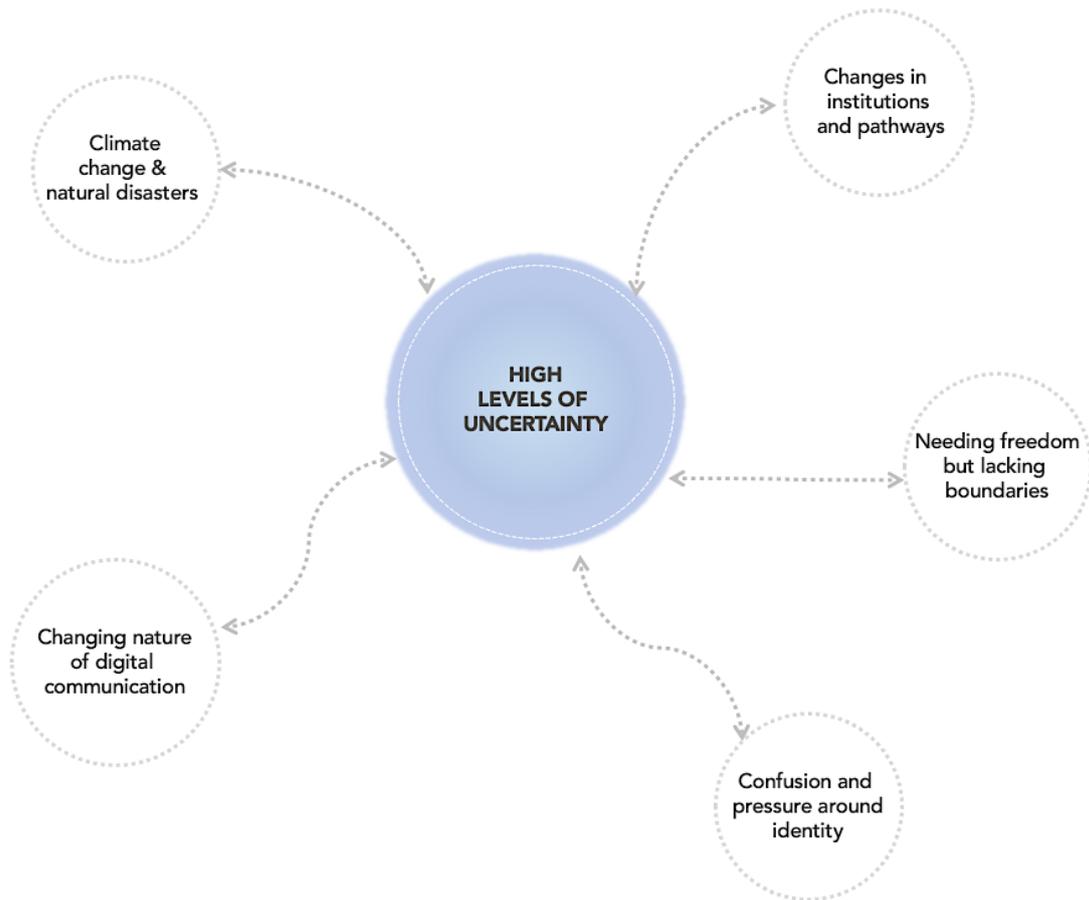
teacher reflected that the traditional pathways that parents or grandparents in families would have followed regarding career trajectories and family life were changing. One youth worker observed that young people were less trusting of traditional educational pathways, noting, "They're less engaged in a certain pathway, go to school, go to university get a job. That's not the pathway anymore. It's not known" (Tarika, Youth mental health practitioner).

Interviewees referred to changes to employment and the future of work as impacting young people through the casualisation of the workforce and growth of the 'gig economy'. Young people were seen to be increasingly left to their own devices to create a 'portfolio of gigs' across multiple employers, juggling multiple jobs and studying. Increased concerns from young people about the potential to find secure work, buy a house and have a family were raised, creating anxiety and uncertainty about their future.

5.2.5 High levels of uncertainty

High levels of uncertainty emerged as a critical meta-theme from the interviews and was clearly connected to other themes discussed above, including the changes in institutions and pathways (5.2.4), needing freedom but lacking boundaries (5.2.1), confusion and pressure around identity (5.2.3), changing nature of digital communication (5.2.1 - 5.2.4), together with climate change and natural disasters (Figure 10).

Figure 10: Interview theme - High levels of uncertainty



In addition to the themes causing uncertainty discussed above, climate change and natural disasters were noted as another significant cause of uncertainty for young people, impacting their wellbeing and resilience. As one teacher noted, this generation of young people is the first to grow up with the very real threat of planetary ecosystem collapse. As such, "They've got the burden of the uncertain future of the planet's health. I think humans have never experienced that before" (Clara, Secondary school teacher). This uncertainty was described as leading to high levels of anxiety and stress for young people because "they are worried about the future; they're worried about the planet; they're not sleeping" (Nabila, Child and youth mental health practitioner).

That said, interviewees reported various levels of interest and awareness concerning climate change from young people. When asked specifically about how the young people they work with perceived climate change, some educators observed students "sticking their heads in the sand" or joking about the climate crisis. In contrast, others

referred to high levels of awareness, particularly for students involved in the school strikes for climate movement. The importance of providing opportunities for young people to be involved in making a positive difference was stressed by teachers to counteract uncertainty and helplessness:

I think many students are taking the agency to respond to those issues. And you see that climate strikes and protest movements...[have] got a benefit for wellbeing in that they are taking action [in] response to it because it gives you a feeling of being able to do something as opposed to helplessness (Rocco, Secondary school teacher).

The seriousness of climate change and climate-induced natural disasters, including the Black Summer bushfires, and their impact on mental health and resilience became more pressing during the period these interviews were held. In an interview held after the bushfires, a youth worker commented on the impact on mental health:

Every time we experience things like we've just gone through with the bushfires, or you know, talking about sustainability, there's a lot of mental health concern that gets triggered. So, we have a lot of anxiety triggered, a lot of questions, hopelessness, you know, just that lack of certainty (Tarika, Youth mental health practitioner).

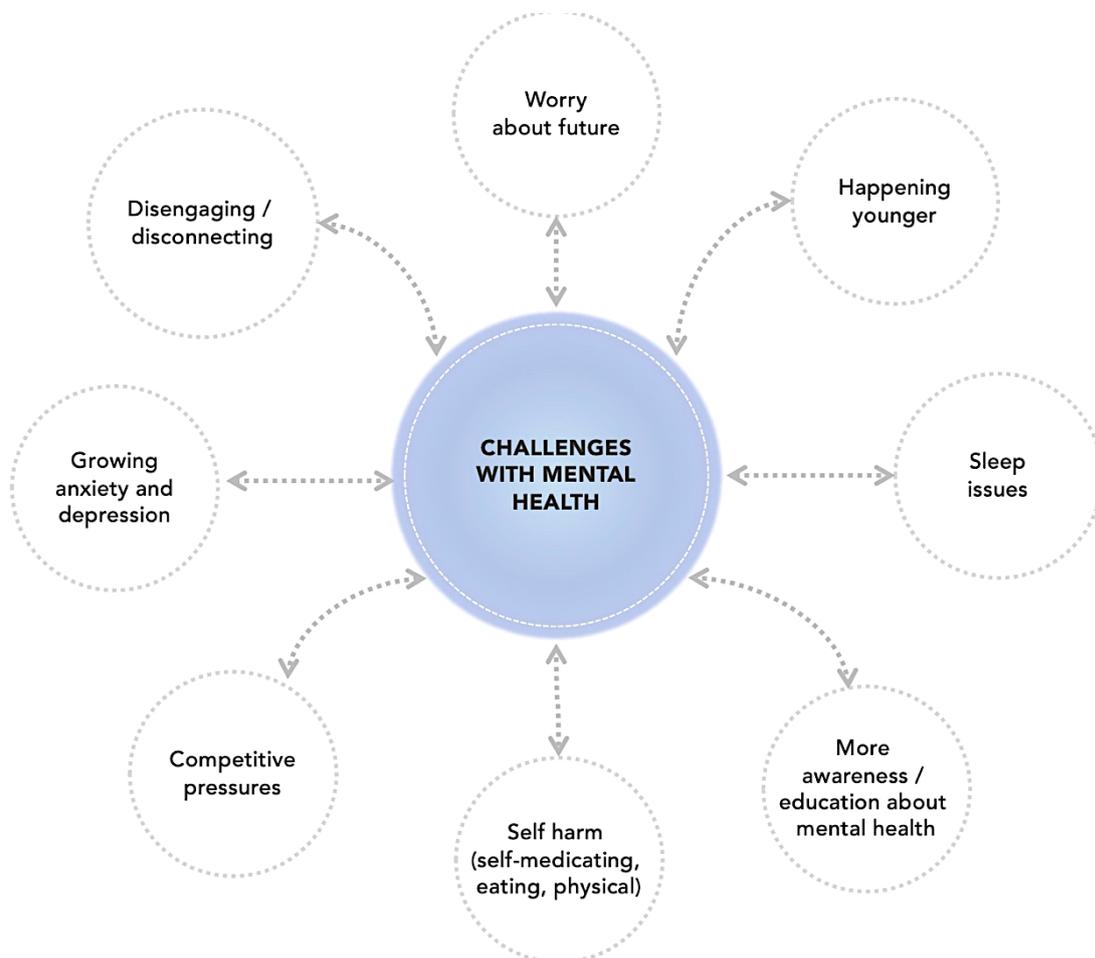
Interviewees witnessed how these high levels of uncertainty related to climate change were causing young people to ponder difficult existential questions, as paraphrased by a youth worker: "What kind of meaningful existence am I going to have? And what kind of world am I going to live in? How can I live my life? How can I live my life and be the best that I can be?" (Marcus, Educator/Youth worker).

5.2.6 Challenges with mental health and contributing factors

The final theme identified as a vital issue impacting young people's wellbeing and resilience was mental health. All interviewees expressed concern for the growing

challenges around mental health challenges being experienced by young people they were working with. Sub-themes identified include worry about the future, mental health challenges happening younger, disengagement/disconnection, growing anxiety and depression, sleep issues, self-harm, competitive pressures and more awareness and education about mental health (Figure 11).

Figure 11: Interview theme - Challenges with mental health



While issues often associated with poor mental health for young people, such as drinking, taking drugs, eating disorders, self-harm, depression, and anxiety, are not new, the scale and severity of these challenges were seen to be increasing rapidly by interviewees. This prevalence of mental health challenges was seen to be impacting teachers, students, parents, and school communities, as well as affecting the ability of

many students to learn. One practitioner who spends a lot of time in different schools noted the impact of mental health challenges within schools as "weighing down the classroom", observing:

The mental health issues and the individualised needs of the students are far exceeding anything that we've ever seen in the classroom before. So, teachers [are] acting more like therapists, bouncers, to actually get to learning is really difficult for them (Nabila, Child and youth mental health practitioner).

Several youth mental health practitioners working in schools observed that the age mental illness is manifesting and being diagnosed is getting younger and is increasing in severity. One interviewee referred to children as young as seven self-harming and cutting themselves. Sadly, another mentioned a school they were working with where an eleven-year-old had committed suicide the previous year. Other mental health challenges such as eating disorders, panic attacks and school aversion were noted to be presenting at increasingly younger ages in primary school children.

Secondary school teachers noticed higher levels of disengagement and school non-attendance from young people who were experiencing mental health challenges such as anxiety and depression. Sleep issues were also referred to as playing a big part in young people's declining mental health. Avoidance and self-medication through alcohol, marijuana, prescription drugs and other recreational drugs were described as common coping strategies:

They are narcotising, putting it to sleep, hiding from it, going to sleep, turning yourself off. Every single strategy that involves not feeling it, that's the go to you know. Avoidance, avoidance, avoidance. So, it's amazing and more complicated forms of avoidance than I've ever seen before where they're just becoming almost zombified in their skins as a way to kind of back away from the intensity of it, rather than navigate through it (Tarika, Youth mental health practitioner).

These challenges in mental health and their impact on young people, families and schools are a serious concern. Most interviewees referred to an urgent need to rethink resourcing for mental health in schools to better support young people, families, teachers, and school staff. This theme of mental health and the role of schools concerning mental health is explored further later in this chapter (Section 5.6).

5.2.7 Reflections on thematic analysis of overarching question 1

In reflecting on the responses and themes from overarching question 1 (What are the issues impacting wellbeing and resilience of young people at this time?), I crafted a series of questions for young people (Table 6). These questions contributed to planning the subsequent cycles of PAR, specifically as discussion prompts and activities in the co-design modules and the design of the pilot program.

Table 6: Questions from interview themes relating to wellbeing and resilience

Interview theme	Questions arising
Needing freedom but lacking boundaries	<ul style="list-style-type: none"> - What makes you feel safe? - How might you set your own boundaries? - How do you feel when there are no boundaries? - How might parents and teachers set boundaries around technology use?
A loss of connection and belonging	<ul style="list-style-type: none"> - What makes you feel connected? - What makes you feel disconnected or isolated? - What are your communities? - How do you like to communicate with others?
Confusion and conflict around identity	<ul style="list-style-type: none"> - Do you think people’s identities online are different to their real identities? - How important is body image to young people? - Is how you look more important than how you feel?

Changing institutions and pathways	<ul style="list-style-type: none"> - How do you think your life will differ from your parents and grandparents? - What are the most important things to learn and experience at school? - What skills and competencies do you think will be important for your future?
High levels of uncertainty	<ul style="list-style-type: none"> - How do you feel about the amount of change that is happening in society now? - How do you feel about climate change? - How do you think work and jobs might change in the future?
Challenges around mental health	<ul style="list-style-type: none"> - What things most affect your mental health and sense of wellbeing? - How do you think other young people are coping in general? - What worries you the most?

5.3 Overarching question 2: How do young people develop resilience?

This overarching question reflected a desire to understand how experts observed young people developing resilience and what learning environments and experiences they thought could best support building resilience. Using reflexive thematic analysis, the following themes were identified and are explored below in more detail:

- allowing young people to fall down and get back up
- encouraging self-awareness through emotional intelligence and embodied experiences
- developing stronger communication and relational skills
- experimenting with playfulness and creativity.

These themes, which largely complement the literature on resilience, informed the curation of the following cycles of action research of co-design workshops and the design of the pilot program.

5.3.1 Allowing young people to fall down and get back up

A strong theme to emerge was that young people need opportunities to develop resilience by trying hard things, falling down and getting back up to try again. Some interviewees believed students need to be given the opportunity to fail in a safe environment such as a classroom and school, "If you can fail and if you can try again, that can build resilience" (Clara, Secondary school teacher). This process of trial and error was noted to help young people develop confidence and a greater sense of agency. One youth worker observed that if young people have an opportunity to contribute to projects that make an impact, where they need to break down a big problem into smaller steps or stages, they can develop the skills and confidence to apply that to other areas of their lives.

5.3.2 Encouraging self-awareness through emotional intelligence and embodied experiences

These experts considered self-awareness of body and mind as essential to developing resilience for young people. Most interviewees mentioned the importance of young people learning to recognise and understand their emotions and notice when they are stressed and anxious. The ability to connect bodily awareness and inner emotional responses, or *somatic understanding*, was identified as being required from an early age to build skills necessary for emotional regulation and resilience. One educator stressed the importance of developing this somatic understanding from an early age:

Whether you want to call it emotional intelligence or building somatic understanding in their body, [it's about] working with children really young to begin to recognise those bodily sensations and being able to recognise what thoughts are in their mind, and instilling an understanding around how the mind works (Nabila, Child and youth mental health practitioner).

Interviewees believed that learning to become more aware of these inner states and emotions gives a young person more perspective so that they might develop greater emotional regulation to 'respond' rather than 'react' to a situation or person. One youth worker referred to self-awareness as a young person noticing their personal 'triggers', and so realising when they might need "time and space to rest, reorient and, and recover so that [they] can be resilient" (Marcus, Educator/Youth worker).

Teaching young people about how the nervous system operates, stress management, healthy coping strategies and health strategies around diet and activity were also mentioned to address strong emotions and anxiety. One educator described how their resilience program approaches this:

They're given resources to deal with really strong emotions like anger, worrying, panic, sadness, loss, frustration [as] energy in the body, rather than emotions that are pulling you around on the lead. It really frees them up to get to know themselves without just the whole thing being a roller coaster, so I think that is essential (Tarika, Youth mental health practitioner).

5.3.3 Developing stronger communication skills and networks of relationships

Another theme identified in the interviews is how young people develop resilience through communication skills, relationship building and developing empathy. The ability to communicate and have relationships with other young people from different backgrounds and exposure to a range of different social and cultural environments was noted as necessary for developing resilience. These communication skills could be developed in a family, school, community or with friends. Authenticity was stressed as integral to communication for adults working with young people or 'being real' with them.

Creating the space for developing relationships in a school environment was seen as essential for students to gain greater resilience. Opportunities for greater connection and relationship building 'not constrained by outcomes' were highlighted as a priority

for both students and teachers. One teacher working in a progressive school environment commented on the importance of building relationships across age groups in the school as well as between teachers and students. Their school addressed this by having home rooms or 'pods' designed for teachers and students from a range of age groups to meet and hang out in a comfortable 'home-like' environment. These more networked relationships across years, and between staff and students, were considered to create more robust social and relational networks to support wellbeing and resilience as described below:

The school campus was based on the idea of the school as a village and the classroom as a home. We have pods [that are] buildings where students of different age groups and teachers live together, it's got a kitchen and eating an area. The pastoral and wellbeing programs are conducted there to build a sense of community (Rocco, Secondary school teacher).

This design creates space for the relational aspects to develop so that “tutors and teachers are really working from a space of knowing the kids to quite a deep level and the students have a strong relationship with each other and the teachers” (Rocco, Secondary school teacher).

5.3.4 Experimenting with creativity and playfulness

A number of interviewees referred to creativity, playfulness, and experimentation as a way to engage young people in resilience programs and to enable them to develop greater resilience and adaptability. Educators refer to developing creativity through various learning experiences, such as through the arts, sports, music, and even starting a small business. One educator believed this playful, spontaneous response builds a capacity to respond to uncertainty and change and, hence, resilience:

I would argue that playfulness and storytelling and human connection are essential to our ability to be resilient, adaptable and to

thrive in the face of challenge and change, which kind of is the only constant (Marcus, Educator/Youth worker).

In summary, the overarching question around how young people develop resilience identified a range of approaches, including providing safe environments to fail and try again, developing self-awareness and emotional self-regulation skills, promoting stronger communication skills and networks, and experimenting with creativity and playfulness.

5.4 Overarching question 3: What skills and competencies might young people need in the future?

The third question ascertained what skills and competencies educators and youth workers thought were important for young people in the future based on their observations of how these competencies are changing over time. Many educators considered '21st-century competencies' such as communication, collaboration, and teamwork as a good framework for future-focused education. Others referred to the General Capabilities in the Australian Curriculum, which include literacy, numeracy, information and communications technology, critical and creative thinking, personal and social skills, ethical understanding and intercultural understanding (Australian Curriculum, Assessment and Reporting Authority [ACARA], 2022b).

Concerning wellbeing and resilience, interviewees referred to mindfulness, self-awareness and distress-tolerance as competencies that might enable young people to manage strong emotions and deal with uncertainty and change. The ability to self-manage multiple roles and jobs within an increasingly diversified 'gig economy' was also stressed as important as many young people will be "operating outside of traditional institutions working across multiple employers, juggling multiple jobs" (Rocco, Secondary school teacher).

Understanding complexity, as well as how systems work and change, was mentioned by a few interviewees as necessary for young people with projects that allow them to

experience a sense of agency within these systems. One teacher referred to the challenge of introducing this kind of thinking into a school setting, reflecting “that ability to embrace complexity and feel okay with situations being ambiguous is a challenge in a school setting where they have traditionally declarative knowledge” (Rocco, Secondary school teacher).

5.5 Overarching question 4: What is the role of secondary schools in supporting wellbeing and resilience?

In line with the boundary of my inquiry, I sought to understand better the interviewees' perception of the role of schools in supporting wellbeing and resilience. This appeared to be an area of contention in my review of literature (including grey) and media. All the educators I interviewed considered supporting resilience and wellbeing as part of the role of schools. Most felt teaching resilience and mental health as a set of skills and competencies alongside traditional academic subjects and skills was necessary, with one teacher commenting, “We do have the majority of young people in our care and our sphere of influence for five days a week for eight hours a day. So, we do have a massive role to play” (Clara, Secondary school teacher). Other interviewees mentioned that not all teachers think the same way, that some teachers feel this is expecting too much of schools and teachers, and that many teachers feel untrained and unprepared to deal with student mental health challenges.

As touched upon above, most interviewees referred to the challenge of educating young people who were suffering from anxiety, depression, ADHD and other mental health challenges and the impact this had on the ability of teachers to be effective in the classroom and for students to learn. Other barriers discussed included a lack of resources in terms of school counsellors and mental health training for teachers and staff. For example, one youth mental health expert referred to the ill-equipped and under-resourced nature of many secondary schools, saying some had only one counsellor per 700-800 students (Aisha, Youth mental health practitioner). Others told stories of both teachers and parents feeling overwhelmed and untrained in

knowing how to respond to the increasing prevalence of issues such as self-harm, anxiety, panic attacks, eating disorders, and school avoidance and refusal.

Interviewees reported varying degree of willingness of schools being prepared or able to fund and engage with support programs and services for student wellbeing and resilience. Several educators referred to the need for a more preventative approach, whereas many schools were in 'crisis mode' on the ground. In many cases, schools were reported to be struggling to respond. They were too busy trying to deal with the crises and current needs of students to be able to develop more preventative programs or initiatives, such as training for teachers in mental health first-aid and trauma-informed care. A high level of inconsistency within the school sector regarding resourcing and programs to support resilience and mental health was noted. A selection of well-funded independent schools was seen to be providing effective programs to support young people's mental health and resilience, whereas many other schools were critically under-resourced. To address this disparity in resourcing, one youth mental health practitioner called for greater regulation and minimum requirements for all schools in providing mental health and resilience programs and services.

A recurrent theme reflected in many educator's comments was the need to prioritise and integrate mental health and resilience with more traditional academic priorities and goals within schools. Tension between the Wellbeing Framework and academic excellence was observed, "The wellbeing framework is seen as secondary to excellence...The wellbeing framework really needs to be central, rather than secondary" (Marcus – Educator/Youth worker). Co-curricular programs for wellbeing and resilience of students, while valuable, were often seen to be implemented in response to a crisis and considered as 'add-ons' and an imposition for teachers with too many responsibilities. One teacher commented on this marginal status of wellbeing and resilience in schools:

It's always seen as an additional tool rather than integral to what schooling is about, you know, helping these people develop their

identity around wellbeing [as an] essential core [of] what education should be about... not just on Thursdays we do resilience (Rocco, Secondary school teacher).

A whole-school approach, including engagement with a range of staff over an extended period, was seen as the most effective and long-lasting intervention. One educator providing co-curricular resilience programs recommended twelve months as a minimum time frame to embed resilience into schools:

Once we've been in there for 12 months, we are just wrapped into their culture. But if I go in for only a term, it's like this thing they did for a term. It's like, 'Oh, yeah. I remember that thing', you know, they'll remember some aspects of it, but it's not really woven into something they do and they're proud of, and they put up on their website and they talk about it (Tarika, Youth mental health practitioner).

Different perspectives on the role of teachers in providing mental health support were reflected in the interviews. While some interviewees working in youth mental health advocated the need for teams of specialists working within a school, others recommended training for teachers and school staff in mental health, resilience, and wellbeing. Many felt a change in culture around mental health within schools was needed, requiring upskilling for teachers, students and staff and changing language and attitudes around mental health. A few interviewees referred to the changes required as needing to happen at a broader community and systems level as well as at an individual school level:

If you think from a systems perspective, too, education won't be able to reform itself in a silo. It has to connect to organizations, businesses, it has to connect to families, government, has to go across all the silos of different industries and sectors (Tarika, Youth mental health practitioner).

5.6 Overarching question 5: What changes are needed to provide learning environments in schools to develop resilience?

The next overarching question concerns how schools might develop learning environments and strategies to support greater resilience and prepare students for the future. The key themes I identified were:

- greater engagement with the community and families
- encouraging peer-to-peer learning
- training young people in mental health awareness and support
- experiential learning
- greater focus on the relational aspects of connection and belonging

Greater engagement of schools with communities and families was noted as necessary for schools to provide learning environments to develop wellbeing and resilience. One interviewee felt it is unfair to ask schools to carry the responsibility alone, saying, "It's all well and good to say, 'schools need to do more', but we as a community and a society need to do more to support those schools" (Marcus, Educator/Youth worker). Another teacher talked about the benefits of integrating engagement and partnerships with industry and community for students to support a greater sense of agency beyond the school grounds:

We have a wildlife reserve [and] farms on our school grounds, which bring in issues to do with food security, sustainable practices, wildlife breeding programs. It's very much embedded within the school, and the [students] take care of the grounds. (Rocco, Secondary school teacher)

Families were also considered to play an essential role in supporting young people's mental health and resilience in partnership with the schools. One youth worker further explained how to involve parents and why this was necessary, "I think there

needs to be access [for] parents to be able to also see what their children are learning. I think we need to involve families and communities in that" (Nabila, Child and youth mental health practitioner).

Collaborative and peer-to-peer learning environments were noted as having potential for students to develop greater agency and resilience in learning. Peer-to-peer learning was seen as supporting a shift to participatory and experiential learning. One educator described this as "shift[ing] the power within the pedagogical system... [for] much more peer-to-peer empowerment because kids are integral in this process" (Marcus, Educator/Youth worker). The need for peer-to-peer learning and mental health first-aid for students was also mentioned, given that research has shown many young people turn to their friends rather than parents and adults for support:

We need to train our young people to notice warning signs that [their friends are] not well. How to have healthy, inspiring conversations with each other rather than feed negativity and let that kind of peer support be given some skills. Because, unfortunately, young people are each other's replacement counsellors now. So, being able to train them with some appropriate skills to keep better serving each other, I think is really important (Tarika, Youth mental health practitioner).

Experiential learning was seen as key to supporting young people to develop greater resilience and wellbeing and increase engagement in the learning process. One teacher described their approach to experiential learning as tapping into students' own interests to build engagement, for example, supporting students running small businesses or completing online university courses as part of their personalised school learning goals. Engagement through tapping into students' interests was seen as providing opportunities to increase engagement and wellbeing through experiential learning:

So, I think that's the new role for what school is about. I mean, it's always been a triad of learning, you know, academic learning,

engagement and wellbeing that's always been reality if you've ever taught class. Perhaps we haven't focus[ed] as strongly on wellbeing and engagement as worthy goals in and of themselves helping kids to find meaning and purpose (Rocco, Secondary school teacher).

One interviewee described the kinds of experiential learning environments or spaces for engaging with uncertainty as being authentic, creative, messy and equitable. This youth worker explained the importance of creating an informal learning space where young people could 'hang out' and engage in genuine processes of inquiry. These experiential learning spaces were described as spaces of genuine inquiry:

Acknowledg[ing] the messiness of making sense of our existence. Where we're not seeking agreement or consensus but we're just trying to create a space to really question and disagree and inquire (Marcus, Educator/Youth worker).

Educators were seen as having a role in modelling ways to be within uncertainty in being able to make mistakes, be authentic and demonstrate resilience:

What matters is not a program. What matters is our flexibility, our vulnerability, our connectedness, our authenticity, our sense of joy, our playfulness. Our ability to make mistakes, because, you know, we model to them the behaviours we want to see, if we can help them discover [and] see that it's actually okay to make mistakes (Marcus, Educator/Youth worker).

According to one youth worker working with at-risk young people, resilience can't be evaluated on a behavioural model of fitting in or supporting the status quo. Particularly for young people who have experienced trauma, resilience is the ability to keep going and "Sometimes resilience is expressed in ways that other people see as destructive while it is really being used to protect themselves" (Marcus, Educator/Youth worker).

A few interviewees referred to conditions to enable greater focus on resilience as requiring a shift in the role of the teacher to become more of a facilitator or catalyst for learning. This shift in the learning environment was described as requiring a preparedness of the educator to be more vulnerable and responsive to the unknown, as "The best learning environment is not a physical environment; it's a set of dispositions that we as educators need to embody to take into any environment" (Marcus, Educator/Youth worker). The ability to allow space for disagreement between young people was also seen as necessary for resilience:

By opening up and empowering and encouraging those kids to actually disagree and be a part of that conversation, you can actually be responsive to what they're offering. (Marcus, Educator/Youth worker)

Finally, several educators saw the co-design of future learning environments with students as critical. These educators believed that co-designed learning environments could better meet their students' needs and support wellbeing and resilience. Some young people were seen as wanting to contribute to the changes in education and learning:

And this is the point is that our young people they are bringing the change...bringing the challenge. And we need to give them the freedom to really explore that within safe boundaries, to know that they have the parameters to really do that...and support them to do that so that we can learn from them (Marcus, Educator/Youth worker).

These insights confirmed my approach to the pilot program as requiring a robust experiential approach with students engaged in co-design and co-inquiry. The integration of peer-to-peer learning, creativity and training young people in mental health awareness and support were also confirmed through these interviews. While it

was not possible due to time and resource constraints to engage with parents and the broader community, this could be valuable in future research. The importance of relationships, connection and belonging, and safe spaces for young people to express themselves reinforced the relational aspects of resilience and the integration of the framework of relational meta-competencies for resilience into the pilot program.

5.7 First iteration of a framework of meta-competencies for relational resilience

After PAR Cycle 1, I developed a draft set of relational meta-competencies for resilience informed by the literature review and observations of sensing into the field, along with the thematic analysis of exploratory interviews. To begin with, I synthesised the observations of the exploratory interviews and literature review findings into an initial set of what I termed 'meta-understandings' and 'meta-competencies'. In PAR Cycle 1, I defined meta-understandings as ways of seeing or understanding the world and meta-competencies as active ways of being in the world based on this meta-understanding. This first iteration of meta-competencies and meta-understandings was aligned with themes identified in the exploratory interviews and insights from research into the relational worldview of Buddhism and First Nations knowledge systems (Table 7). For example, once we grasp the meta-understanding of interdependence of all of life, we can live and experience the meta-competency of reciprocity. Interdependence and reciprocity relate to interview themes of boundaries, connection and belonging. This initial framework of meta-competencies was then developed and iterated through the two following cycles of PAR, as explained in Chapters 6 and 7.

Table 7: PAR Cycle 1 meta-understandings and meta-competencies for resilience

Meta-competencies	Meta-understandings	Thematic analysis
Reciprocity	Interdependence	Connection Boundaries

Agency/Autonomy (personal and collective)	Purpose (personal and collective)	Boundaries
Belonging	Interbeing/interconnectedness	Connection Image/identity
Adaptability	Impermanence	Changing pathways/structures Uncertainty
Empathy	Suffering	Dealing with mental health

This chapter provides insight into what learning experiences and environments can support young people to develop resilience based on the knowledge and experience of educators and youth workers in the field. My observations and reflections on the themes and responses from these interviews, alongside the literature review and sensing into the field, contributed to planning PAR Cycle 2 co-design modules and PAR Cycle 3 pilot, documented in Chapters 6 and 7. The analysis and findings of the interviews and literature review contributed to developing the first iteration of a framework of relational meta-competencies supporting resilience for young people, which was further refined and iterated in PAR Cycles 2 and 3. In the next chapter I review and analyse the PAR Cycle 2 co-design workshops.

Chapter 6: Participatory action research Cycle 2 – Co-design modules with teachers and students

6.1 Chapter introduction

In my second major, PAR Cycle 2, I held a series of co-design workshops with teachers and students at the secondary school where the pilot program was to be run. During these co-design workshops I aimed to get to know the research participants, establish a collaborative relationship, understand their main priorities concerning wellbeing and resilience, and validate the themes identified in the exploratory interviews and the initial set of relational meta-competencies for resilience. The insights and findings from this round of action research were then integrated into the design and planning for the pilot program in PAR Cycle 3.

In this chapter, I provide an overview of the co-design workshop planning and theory, followed by a series of observations and insights. Through the co-design workshop process, research participants were invited to identify key issues impacting the wellbeing and resilience of young people, which were compiled and analysed. Finally, I analysed and integrated these issues and findings from the co-design workshops into a second version of a framework of relational meta-competencies for resilience.

6.2 Co-design workshops overview and theory

The co-design workshops with teachers and students provided an opportunity to establish a relationship with participants, which recognised them as experts in their own lived experiences of resilience and wellbeing. Through a process of co-inquiry, I prioritised relationship building while building the capacity to share power and knowledge with participants (McKercher, 2021). As a reference and loose framework for the co-design methodology, I used McKercher's (2021) co-design framework with a focus on creating the conditions for learning together. I focused on the four principles and six mindsets outlined by McKercher in the co-design process. The four principles include sharing power, prioritising relationships, using participatory means and building capacity (McKercher, 2021). The six mindsets are elevating the user

experience, curiosity, hospitality, being in the grey, learning through doing and valuing many perspectives (McKercher, 2021).

This approach to participatory co-design aligns with an ABSC methodology in creating the condition for teachers and students to sense and see the school system. The co-design process applied the soft-systems methodologies of rich pictures, empathy interviews and dialogue to map and reveal the system dynamics. Participatory co-design supported research and learning 'with' rather than 'for' the research participants and school community. I sought to create a more equitable relationship in the co-design workshops with students, describing my position as a researcher and a curious co-inquirer rather than as an expert or teacher. Within the school system, which largely relies on a model of learning as transmission, where students are the recipients of knowledge from teachers, I aimed to create an environment for participatory and experiential learning. In this way, students were invited to begin to sense into the system they were learning within:

Providing opportunities for students to name the systems they are nested within, their positionality, and the porous boundaries between systems, and to experience these connectivities are rich processes for transformative and sustainability learning. (Lange, 2018, p. 291)

The co-design workshops consisted of one half-day workshop with teachers and two half-day workshops with students, which were held at the school. An outline of these co-design modules is provided in Appendix B. The co-design workshops provided an opportunity to further sense into the social field within this specific school environment and customise the pilot program design based on the students' and school's needs. The data from these workshops helped validate and customise the framework of relational meta-competencies for resilience and develop the pilot program's experiential learning activities. The co-design process helped me to identify some of my assumptions and biases and reflect on these, which I discuss in more detail below. Next, I document the teacher and student co-design workshop process, identifying pertinent observations and analysing key insights.

6.3 Teacher co-design workshop observations and analysis

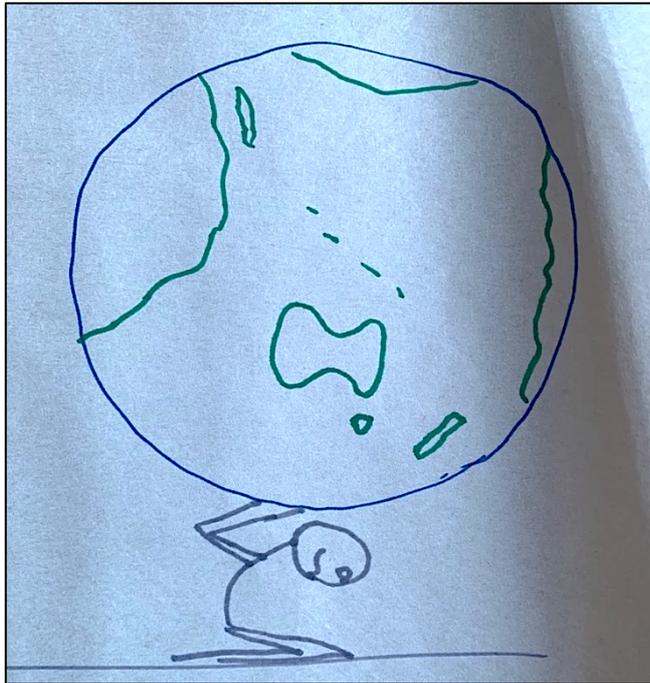
The co-design workshops with teachers took place in a communal staff room within the school and was attended by the Principal, Deputy Principal, the key liaison teacher and two other teachers who would have supporting roles in the research process. The Principal attended the opening of the meeting and talked about the challenges of student mental health in the school and the importance of engaging in research to experiment with new ways of supporting student resilience. She confirmed that resilience had been identified as a strategic priority for the next three years in the school strategy following consultation with teachers, parents, and families. Next, I gave a brief overview of the research focus, key questions, and methodologies. My supervisor joined us online to give an overview of how the research reflected the faculty's priorities to explore transformative learning and the potential of experiential learning for wellbeing and resilience.

The first participatory activity I invited the teachers to contribute to was creating a visual map of issues impacting the wellbeing and resilience of students, using the rich pictures method. A large paper roll was rolled out on the desk with coloured markers and pens. The question at the centre of the paper was, 'What do you think are the most important things affecting young people's resilience and wellbeing at the moment?' I invited the teachers to draw and map significant factors, people, and emotions and draw connections between them. To begin, the teachers seemed quite reluctant to pick up the pens and draw, so I tried to break the ice by drawing and writing words based on what they were discussing. With some encouragement, the teachers also picked up markers and started to draw, write, and make connections between different elements. It felt awkward to encourage these experienced teachers to draw their observations when they were clearly much more comfortable just talking about it. Despite this discomfort, I found the dynamic of drawing collaboratively and talking while we mapped helped to identify connections and relationships between the different issues and elements, providing important contextual information for me as a researcher. For example, a clear connection was drawn between the stress

students experienced to get high marks and the role and attitudes of parents. As the teachers talked about and mapped different parental expectations, they drew a distinction between different parenting styles, from more relaxed to more disciplinary and commented on the cultural expectations of parents from different backgrounds. These parental archetypes are illustrated below (Figure 12), with two sets of parents shown, one with an annotation 'do what you like' and 'no rules', and another set of parents with annotations of 'success', 'rules' and 'struggling to control.' These insights were helpful for me as a researcher in understanding and discussing parental expectations of students and understanding assumptions from the teachers' perspective.

The conversation with teachers during the rich pictures activity ranged across many topics impacting students' mental and physical health, including stress and time management, relationships, gender, cultural stigma around mental health and world issues such as climate change and COVID-19. The teachers talked a lot about the expectations of parents and families on some of their students and the stress this caused for the students. Teachers explained that being a selective public school (students take an exam at the end of primary school and are selected by academic merit to attend), many of their students would attend additional tutoring after school and other extra-curricular activities. The issue of cultural stigma around mental health was also a significant topic of conversation, as teachers explained that some students were reluctant to seek help for their mental health because they didn't feel they could talk to their families about their experiences. Towards the conclusion of the rich picture discussion, the conversation moved into more challenging territory about self-harm, eating disorders and suicide.

Figure 12: Teachers' rich picture mapping of parental expectations



A summary of issues and sub-issues identified by teachers as impacting young people’s wellbeing and resilience are listed below in Table 8.

Table 8: Issues identified by teachers impacting wellbeing and resilience

Primary Issue	Sub-issues
Parental expectations	Academic success, religion, traditions, culture, taboos
Academic pressure and expectations	Grades, scholarships, careers, prestige
Mental health	Stigma, shame due to cultural perception
World issues	Climate change, COVID-19
Social media	
Peers and relationships	
Gender and social identity	
Drugs and alcohol	
Religion	
Racism	

Family issues

Cultural difference

In the second part of the co-design workshop, I asked teachers to give feedback on the draft pilot program, and we discussed how this research might support and align with other initiatives in the school. I was keen to understand where the mutual value might lie for the teachers supporting the research. The key liaison teacher, who in her role was also responsible for teaching and learning strategy in the school, talked about her passion for developing 'student voice', saying she saw the potential for the research to give students more opportunities to contribute to the wellbeing strategy across the school.

Finally, we discussed recruitment and communication protocols. The teachers recommended running an expression of interest round for students to apply. We agreed to meet again after the co-design modules with students to get further input on the design of the pilot and modules.

6.4 Student co-design workshops observations and analysis

As part of the co-design process, students took part in two workshops of two hours duration, each held a fortnight apart in March 2021. I designed and facilitated these modules with two co-facilitators, Vanessa Alexander and Robyn Katz, both of whom have extensive experience in experiential learning and facilitation. I had been working with these co-facilitators over the preceding years, running interactive modules for community development, and we had developed strong creative and collaborative processes in working together. Our process of co-designing as facilitators for the modules involved several meetings in the lead-up to the modules to draft an outline of activities. I also met with and received feedback from our key liaison teacher on the draft co-design workshop outlines to ensure they aligned with her expectations and school protocols.

During the student co-design workshops, I introduced the students to the research purpose and invited them to join us as co-inquirers and collaborators in the research journey. These workshops aimed to create a culture of creative collaboration with the students and better understand their needs and priorities around wellbeing and resilience to inform the design of the pilot program. An outline of the activities undertaken in these modules, including rich picture mapping, empathy interviews and world café style discussions is documented in Appendix B.

6.4.1 Student co-design module one (16th March, 2021)

The first co-design workshop was held in a multi-purpose classroom in the school library and was attended by fourteen students and two teachers. We took care to arrive early and set up the room in a format that might encourage informal collaboration and participation by setting up a circle of chairs in the centre of the room, bringing in some pot plants, having music playing and essential oils in a diffuser (Figure 14). The module started with introductions, and I explained a bit about the research, the program's format and what the students might gain by participating in the program.

Figure 14: Room set up for student co-design workshops



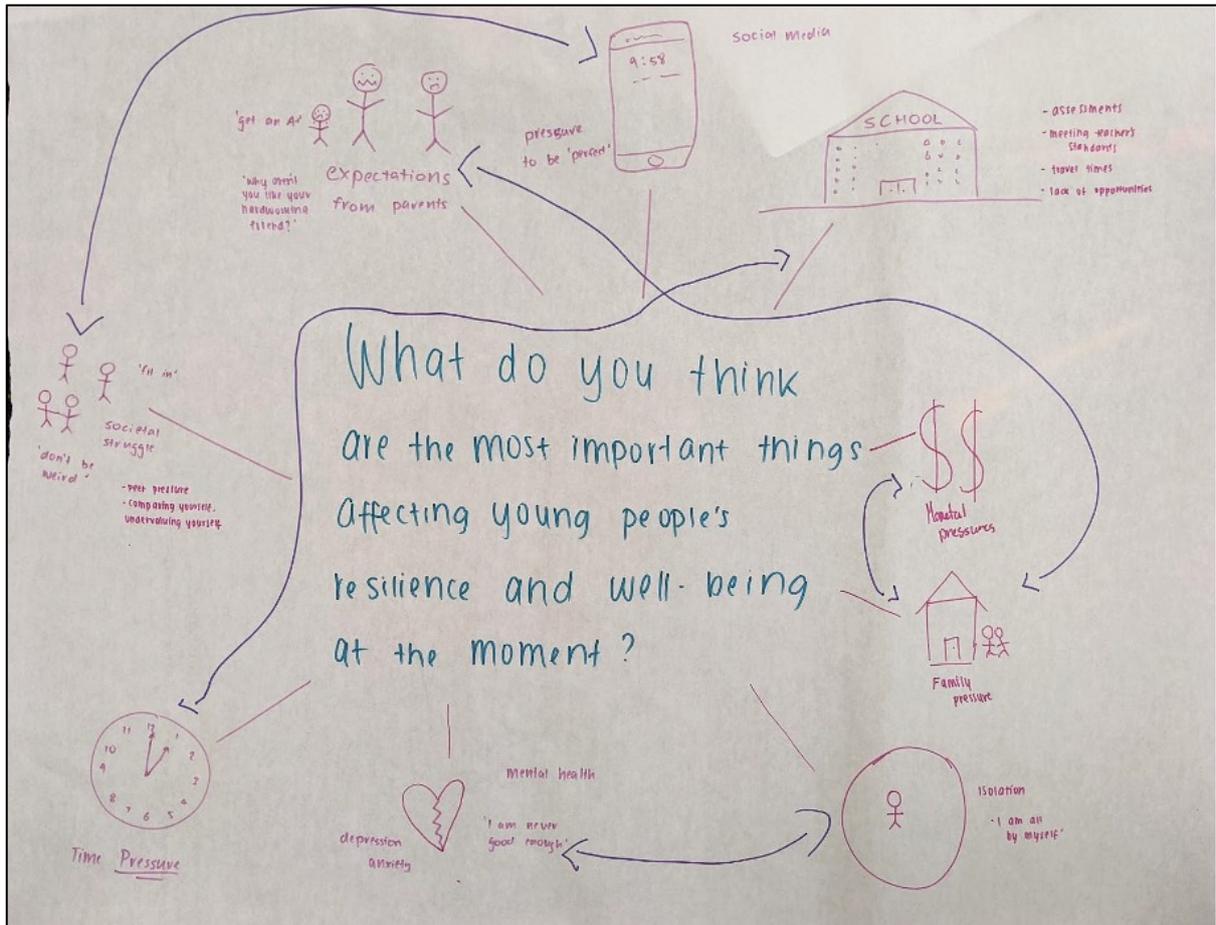
One of the practices introduced and used throughout the co-design and pilot modules was *circle practice*. The circle practice we used was adapted from ‘The Circle Way’, a methodology where participants sit in a circle and speak to a shared purpose in the centre of the circle (Baldwin & Linnea, 2010). The four principles of participation in circle practice were explained to students as: listening with attention, speaking with intention, taking responsibility for yourself and attending to the participation of the whole group (Baldwin & Linnea, 2010). When talking in a circle, the students were asked to suspend judgment, be respectful of others and treat what was discussed with confidentiality. We discussed the participatory nature of meeting in circle and the idea of check-in and check-out rounds, where each person is asked to respond to a question or prompt. For the first check-in circle, we used large photographic cards and invited students to choose a card that reflected their feelings about creativity and design. Each student chose an image and then had a turn to explain why they chose it and what it reflected about creativity and design. This process is discussed further in Chapter 11. The concept of co-design as a practice was also introduced to the students,

and we explained why we wanted to use co-design principles in our research work with the students and school.

We moved into three teams following the check-in round for a rich pictures mapping activity. Students were invited to respond to the same question as the teachers, 'What do you think are the most important things affecting young people's resilience and wellbeing at this moment?' Like the teachers, the students took a while to warm up to drawing and seemed more comfortable talking and writing down words. With encouragement, the students started to draw while they talked, doodling and sketching images and words. While the original question had quite a generic focus, the students responded from a personal perspective, talking about what they found challenging and why. Each team then shared their maps with the rest of the group.

Many of the issues identified by students in their rich pictures mirrored those identified by their teachers (Table 9). An example of the students' rich picture mapping is shown in Figure 15 below.

Figure 15: Students' rich picture of issues impacting wellbeing and resilience



Student teams were invited to reflect on, share and debrief their process of creating the rich pictures by responding to the following three questions: ‘What did you notice? What surprised you? What are you still curious about?’ These questions were used consistently throughout the pilot program as prompts for reflection and feedback. In reflecting on the experience of drawing the rich pictures, students commented that they share many of the same issues and concerns, particularly related to pressure and expectations. They noticed variations in this experience of pressure and stress between them; for example, sports might be stressful for some students if it is very competitive, while others find it relaxing. What surprised the students was how many factors influenced their wellbeing and resilience. They were surprised that, given how many issues they had in common, they didn't discuss it more. Collectively mapping the issues impacting their wellbeing and resilience was beneficial in helping students recognise the commonality and validity of their experiences, as one student commented, “It’s no wonder we feel stressed.”

Table 9: Issues identified by students impacting wellbeing and resilience

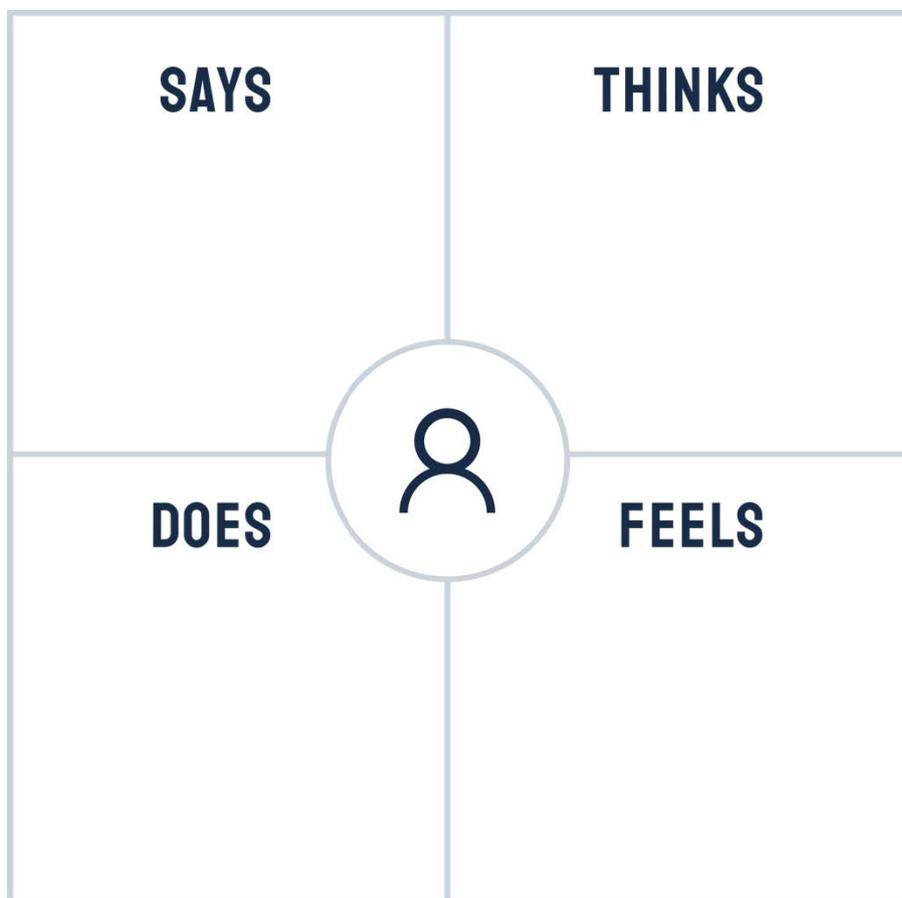
Primary Issue	Sub-issues
Expectations	From parents, high expectations of yourself, societal expectations,
School	HSC, grades, standards, tutoring
Mental health	Balance, anxiety, depression
Friendships and relationships	Peer pressure, fit in, have 'good' relationships, don't be weird
Social media	Likes, follows, pressure to be perfect
Image	Body image
World's problems	The future, big changes
Future	Exams (HSC), money, jobs, parents
Isolation	
Stigma around mental health	

These reflections on the rich pictures activity transitioned into a more general discussion about expectations. One student said she was curious to understand how much the expectations were her own and how much was coming from other people such as her parents or teachers. The students discussed how expectations can be positive and negative, as they can motivate you to do your best or make you feel bad if you haven't met your or other peoples' expectations of you. Two significant questions the students articulated coming out of this activity were: 'Why do we put so much stress on ourselves?' and 'Will it always be like this or change as we get older?' These questions and the discussion around expectations shaped the design of the pilot program in providing learning activities to enable reflection on how to deal with unpacking these expectations, better manage stress and explore what future students might see and want for themselves.

The next part of the co-design process was preparing students to conduct empathy interviews with their peers. Empathy interviews are applied in user-centred design

practices as a listening practice to understand the experiences and needs of individuals (Nelsestuen & Smith, 2020). As co-inquirers, the students were asked to conduct empathy interviews with their peers, focusing on the same question, 'What do you think are the most important things affecting young people's resilience and wellbeing at the moment?' Students were given tips for conducting these interviews and asked to pair up to practice an interview with each other using open questions and taking notes on the empathy map (Figure 16). As homework between co-design sessions, students were asked to work in pairs to interview at least two other students in their year and to bring their notes and data to the module.

Figure 16: Empathy interview template



My initial observations after our first co-design module with the students were that, as a group, they seemed very articulate and insightful about the issues affecting them. I noticed that the students demonstrated strong self-awareness and a capacity to see

things from different perspectives, for example, that expectations might be positive or negative. Most of the students seemed quiet, and while a few were happy to speak up, most needed a bit of encouragement and coaxing. I used these reflections to help refine the second co-design module and pilot by incorporating more sharing in pairs and small groups rather than in the larger group.

6.4.2 Student co-design module two (31st March 2021)

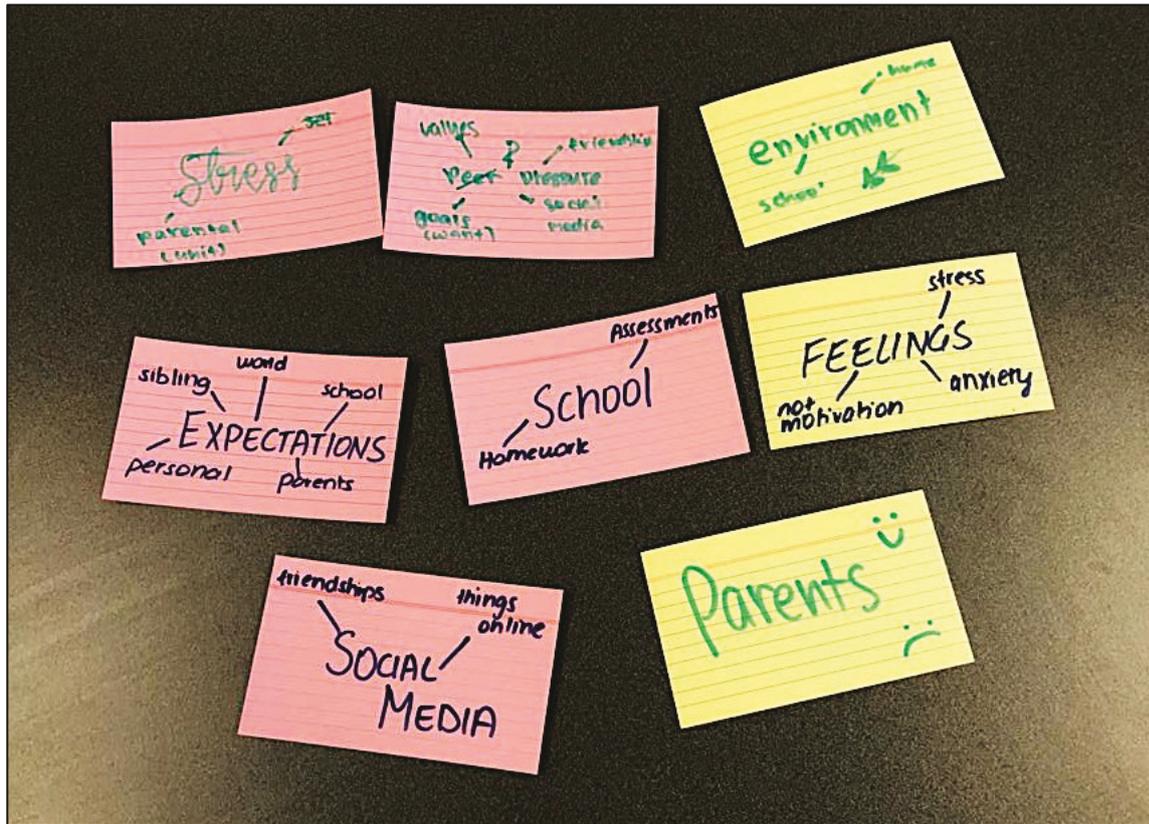
Two weeks later, the students seemed more relaxed and less nervous in the second co-design module. Following an opening check-in circle, they documented their empathy interviews through a mapping process where students worked in teams of two pairs. Using a large sheet of paper on the wall and a 'talking out loud' technique, each student reported what they heard and noticed in their interviews with other students. While one pair spoke, the other pair made notes on post-its and added them to the empathy map as the interviewers spoke. The note-takers placed notes in the four fields related to what the interviewee 'said', 'did', 'thought' and 'felt' (Figure 17, 16).

Figure 17: Students mapping empathy interviews



The next step for each team of students was to generate insights and record critical themes from these empathy maps onto index cards. We asked the students to note anything that seemed unusual or that they were curious to explore further. The themes identified by one of the team (Figure 18) included stress, peer pressure, environment, expectations, school, feelings, social media, and parents.

Figure 18: Themes identified by students from peer empathy interviews



The final step in the empathy mapping process was for all the teams to cluster their cards to identify the overarching themes (Figure 19). Students were asked to watch for any interesting anomalies or outliers as they did their thematic clustering. The students found many similarities in their themes, including expectations, social media, relationships (family and friends), stress, school, and social media. Two outlier themes that generated much interest and discussion were 'perspectives' and 'world issues'. The theme of 'perspectives' was discussed as being about values and what was considered 'good enough' by themselves and others in terms of academic performance and more generally. The 'world issues' theme also sat apart from most other clusters and included 'the future' and 'COVID-19' subthemes. The issues and themes identified through the student empathy interviews were very similar to those identified by the students in their rich picture process. They are integrated into the thematic analysis in Table 10 below.

Figure 19: Students clustering themes from empathy mapping



The feedback from students on the co-design modules was collected via an online survey where they were asked to reflect on their learning experience and what they found most valuable and engaging. Students generally reported enjoying the small group and paired activities but felt uncomfortable with the circle processes and felt they had to speak and have something different to say. They found the empathy interviews interesting and engaging, as well as the discussions, as it allowed them to hear each other's (and their teachers') perspectives and views. Regarding activities students least enjoyed or felt were less relevant, the more didactic teaching elements of learning about co-design practices were seen as being too much like school. Some students commented that they found the reflective journaling was not valuable, while others enjoyed it. These insights contributed to the design of the pilot program.

6.5 Compilation and analysis of themes from co-design workshops

In this section, I provide a compilation and analysis of issues, themes and patterns identified in the co-design modules relevant to young people's wellbeing and resilience and then explain how the reflections from these co-design workshops contributed to the planning of PAR Cycle 3, the pilot program.

After compiling and comparing the data from the rich pictures by teachers and students and the empathy interviews undertaken by students, I analysed commonalities and differences in themes and issues identified by students and teachers. These commonalities and differences are significant from an ABSC perspective as both teachers and students will 'sense and see' the school systems and issues impacting young people from a different perspective.

There were many similarities in the issues identified by both students and teachers as impacting the wellbeing and resilience of young people, with some notable differences (Table 10). Both students and teachers identified similar 'highest impact' issues on young people's wellbeing and resilience, including expectations (from family and students on themselves), relationships with peers and family, pressure at school, social media, challenges with mental and physical health, family issues, world issues, and identity and image. Both teachers and students highlighted mental health and stigma around mental health from a cultural perspective. Other common themes identified included relationships and friendships, pressure to do well at school, world issues, family issues and image and identity.

Table 10: Thematic analysis of issues identified by teachers and students

Issues/Themes	Teachers	Students
Expectations	Parental expectations, culture, academic success, religion, taboos, traditions	Expectations, societal expectations, from parents, high expectations of yourself, 'You're not good enough.'
Relationships	Peers and relationships	Friendships and relationships, pressure to 'fit in', peer pressure, 'Don't be WEIRD', 'Having GOOD relationships'

Stress		Stress, education (school/tutoring), time pressure
School	Academic pressure and expectations, scholarship, grades A+, careers, prestige	School, Higher School Certificate, grades, tutoring, standards
Social media	Social media	Social media, likes, follows, 'Pressure to be perfect'
World Issues	World problems, climate change, COVID, 'Peripheral but pervasive'	World problems, big changes, the future
Racism	Racism	
Family issues	Family issues	Family, parents, siblings
Mental and physical health and wellbeing	Mental health, stigma, shame culturally in seeking help, self-harm, eating disorders, drugs and alcohol	Mental health, balance, anxiety, depression, 'Guilty for feeling bad', isolation, 'I am by myself'
Identity/Image	Gender and sexual identity - LGBTQI	Image, body image
Religion	Religion	
Cultural	Cultural difference	

Essential distinctions in perspectives of teachers and students emerged around issues such as social media, seen as primarily negative by teachers and potentially positive or negative by students, depending on how it is used. Teachers referred to racism and

religion as relevant issues impacting students; however, these were not mentioned directly by students. Both students and teachers mentioned world problems such as climate change and COVID. The teachers' perspective on the impact of these world issues on students was that they were 'peripheral but pervasive' factors that increased students' baseline levels of anxiety. An example was given of the smoke that had been blanketing Sydney the previous summer during the Black Summer bushfires. It affected students as they were travelling to and from school and impacted the health of students with asthma and other health issues. The heightened baseline of anxiety, according to teachers, contributed to the potential to 'tip students over' into extreme anxiety and panic attacks when students experienced more direct stresses.

Issues raised as important factors influencing wellbeing and resilience by students that teachers did not mention included school, time pressure, body image, fear of isolation and the 'future'. During the clustering process of cards from each team, the students created a new category of *future* with the sub-categories of parents, HSC, jobs, and money, reflecting a level of uncertainty and worry about the future. Areas that teachers identified that did not appear in the students' thematic analysis included cultural differences and taboos, racism, religion, drugs and alcohol, self-harm, suicide and eating disorders. It is possible that issues such as drugs and alcohol, self-harm, eating disorders and suicide were seen as too sensitive to be raised by students, given that we were still in the process of getting to know one another and developing a level of trust.

As mentioned above, one of the outlier themes identified by students was the theme of *perspective*, which they agreed they were curious to explore further. The theme was discussed initially as a point of interest that everyone had different perspectives but also had many things in common. Students described the importance of perspective on various issues such as social media, families, parents, and friendships, where one's perspective could determine whether these positively or negatively impacted wellbeing. For example, friendships were described as sometimes positive and supportive while at other times 'toxic' and undermining with pressure to fit in and 'not be weird'. Another example given was parents' pressure to do better academically,

which could be seen as helpful in encouraging and motivating students; however, from another perspective, it could also cause greater stress and anxiety, making it more challenging to perform.

6.6 Reflections and evaluation of co-design workshops

In this section, I reflect on how the co-design modules contributed to the consideration and planning of the next cycle of PAR in the pilot program. It was clear from these modules and the analysis of themes that expectations, stress, and academic pressure were vital issues impacting students' wellbeing and resilience. Other issues, such as 'world issues', while they were significant and contributed to underlying concern and anxiety, were seen more as background issues for students. While I had initially considered incorporating student-led projects focused on sustainability and climate change into the pilot program, I reconsidered this in light of the existing stress and pressures students were experiencing in their own lives. Focusing on opportunities for students to address concerns and worries that were more relevant to their day-to-day lives seemed more important. I was also concerned that focusing on complex challenges such as climate change for the project-based learning component of the pilot might add to this sense of pressure and stress rather than help alleviate it.

Key questions that emerged for me as a researcher from PAR Cycle 2 that informed the planning for the next cycle in the pilot program included the following:

- How can we support collective agency of students and not add to the stress, expectations, and time pressures they experience?
- How do you support students to understand and work with expectations (both their own and others)?
- How do we create opportunities for student voices to be heard? and
- How can we help the students sense and see themselves within the school system?

6.7 Integrating evidence to identify relational meta-competencies for resilience

In the final stage of PAR Cycle 2, I synthesised the above insights with the findings from the literature review and exploratory interviews (Cycle 1) to revise the framework of relational meta-competencies for resilience. This synthesis of evidence allowed me to clarify and refine the first iteration of meta-understandings and meta-competencies (Table 7) by integrating the direct experiences and observations of students and teachers with the findings of the literature review, stakeholder interviews and relational worldviews of Buddhism and First Nations knowledge systems. In this next iteration, I distilled six relational meta-competencies for young people to support resilience, which were then woven into the design of the pilot program (PAR Cycle 3). These six relational meta-competencies identified were *adaptability*, *agency*, *compassion*, *creativity*, *interbeing* and *self-awareness* (Table 11). These are referred to as ‘relational’ meta-competencies as they refer to the dynamic interaction between a young person and their environment that contributes to greater resilience.

Table 11: Six relational meta-competencies for resilience

Meta-competency	Summary
Adaptability	An ability to respond to changing circumstances and contexts with flexibility and fluidity
Agency	A belief that one can influence personal and collective present and future experiences and circumstances
Creativity	An ability to express oneself through creative and artistic avenues to create something new and of value
Compassion	An ability to put oneself in another’s shoes, to understand their perspective and be willing to take action to improve their circumstances
Interbeing	A relational experience of feeling connected with all living beings and nature

Self-awareness	An ability to reflect on our thoughts and feelings and understand how they affect our behaviour and attitudes
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A summary and visual map of data synthesis to inform each meta-competency is provided below. Each of these meta-competencies is analysed and explored further in Chapters 8 to 13 with the findings of the pilot program about how students engaged with and demonstrated these meta-competencies.

The data sources and evidence used to inform the formulation and iteration of the relational meta-competency framework are listed below.

- 21st-century skills and competencies (Chapter 3)
- learning for uncertainty (Chapter 3)
- exploratory interview themes (Chapter 5)
- resilience protective factors (Chapter 2)
- Buddhist perspectives (Chapter 3)
- First Nations perspectives (Chapter 3)
- co-design module themes (Chapter 6)

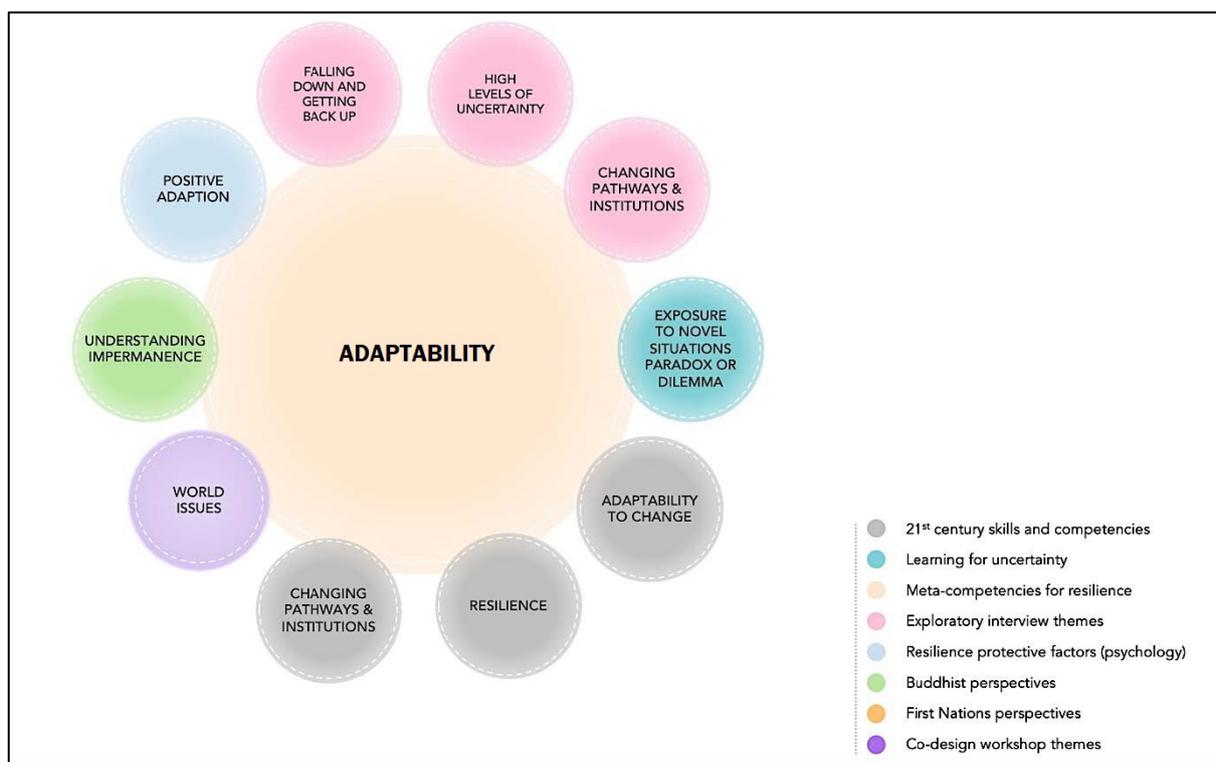
In the remainder of this chapter, I lay out the range of data and themes from these sources that have been synthesised and integrated for each of the six relational meta-competencies. These diverse data sets are visually distinguished by colours surrounding each meta-competency and documented in the legend.

6.7.1 Integration of themes and sources for adaptability

Adaptability is the first relational meta-competency I identified for resilience, which I summarise here as an ability to adapt to changing circumstances and contexts with flexibility and fluidity. The definition of meta-competency and its significance for resilience are discussed in further detail in Chapter 8. The relevant themes and data sources for adaptability are visualised in Figure 20 below. Regarding key themes from

the literature review, adaptability aligns with the 21st-century competencies of flexibility, the protective factor of positive adaptation and the ability to respond to change, novel situations, paradox and dilemmas. Regarding Buddhist and First Nations philosophies, adaptability relates to impermanence and the dynamic nature of reality. Relevant themes from the stakeholder interviews for this meta-competency include falling down and getting back up, high levels of uncertainty and changing pathways and institutions. From the co-design modules, themes identified relating to adaptability included the ability to respond to change and uncertainty.

Figure 20: Cluster of themes and sources for meta-competency of adaptability

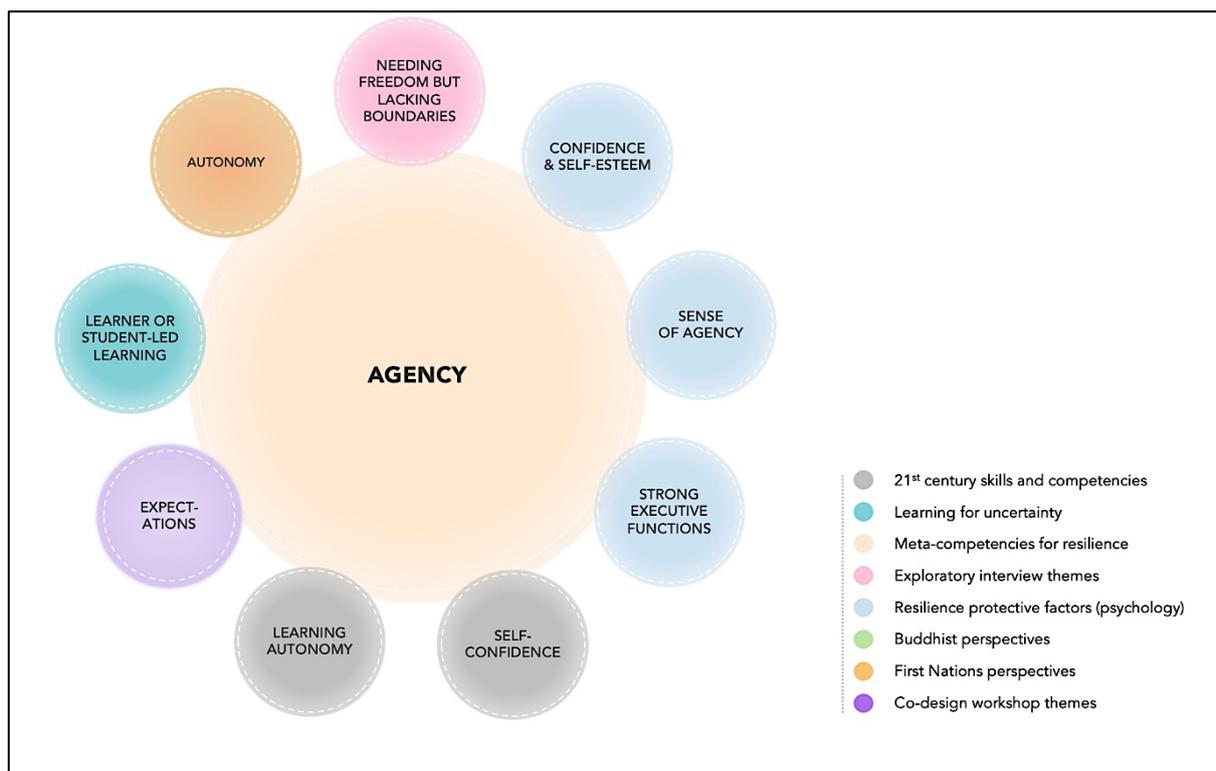


6.7.2 Integration of themes and sources for agency

Agency is the second relational meta-competency, summarised here as a belief that one can influence personal and collective present and future experiences and circumstances (see Chapter 9). Relevant themes and sources for agency are visualised in Figure 21 below. Relevant references in the literature review include the 21st-century skills of learning autonomy, student-led learning and self-confidence. Protective psychological factors of resilience include confidence and self-esteem, a sense of

agency and strong executive functions. The agency and autonomy of a child and learner are central to Aboriginal and Torres Strait Islander approaches to learning, according to Mary Graham (2009). Themes emerging from the stakeholder interviews related to agency include young people needing freedom but lacking boundaries, while the co-design modules identified expectations of oneself as related to agency. The meta-competency of agency is further explored and analysed in Chapter 9.

Figure 21: Cluster of themes and sources for meta-competency of agency

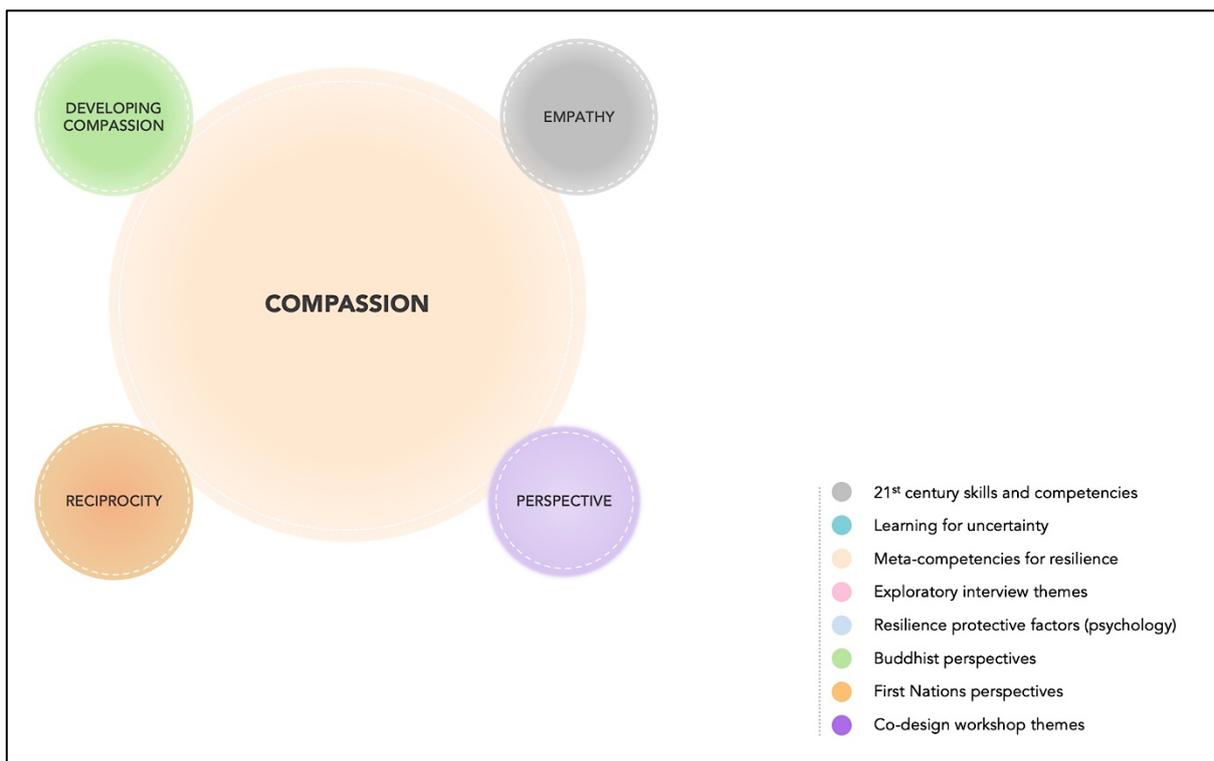


6.7.3 Integration of themes and sources for compassion

I adapted the relational meta-competency of compassion from the earlier version of empathy in PAR Cycle 1 to reflect an ability to put oneself in another's shoes to understand their perspective and be willing to take action to improve their circumstances (see Chapter 10). I changed this following reflection and analysis of the students' empathy mapping in the co-design modules. The discussions emphasised that just feeling empathetic with a friend when you can't make a change can make you feel worse; however, taking action to make a change can make you feel better. A visual representation of relevant themes for compassion can be seen in Figure 22 below. The

literature review identified empathy as a 21st-century skill and a protective factor for resilience. From a Buddhist philosophical worldview, compassion is a central theme, as is reciprocity from a First Nations perspective. This was reinforced in the co-design modules, where students identified perspective, empathy and compassion as significant to wellbeing and resilience. The meta-competency of compassion is further explored and analysed in Chapter 10.

Figure 22: Cluster of themes and sources for meta-competency of compassion

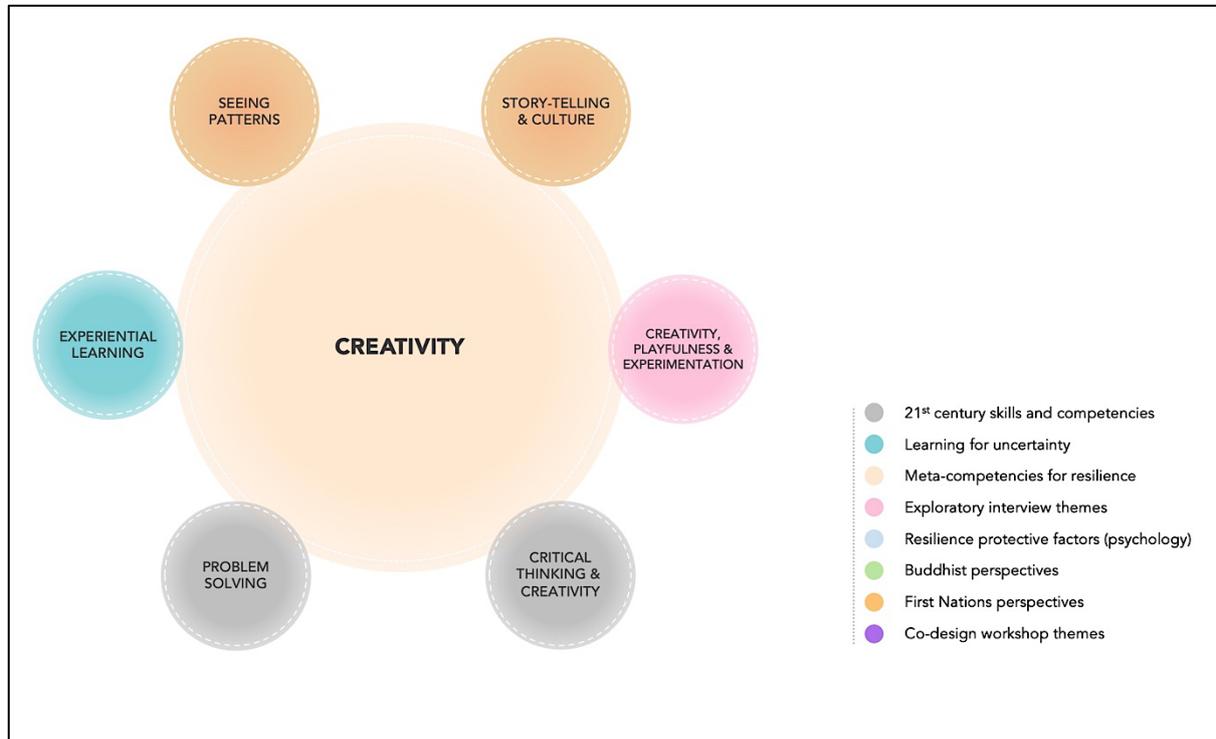


6.7.4 Integration of themes and sources for creativity

The meta-competency of creativity is summarised here as an ability to express oneself through creative and artistic avenues to create something new and of value (see Chapter 11). Relevant themes and data are visualised in Figure 23 below. Its inclusion was informed by the literature review, which showed critical thinking, creativity, and problem-solving as essential 21st-century skills and competencies. In First Nations, knowledge systems, storytelling and art were essential to resilience and wellbeing. In the stakeholder interviews, creativity, playfulness, and experimentation also emerged

as significant competencies for learning in uncertainty. The meta-competency of creativity is further explored and analysed in Chapter 11.

Figure 23: Cluster of themes and sources for meta-competency of creativity

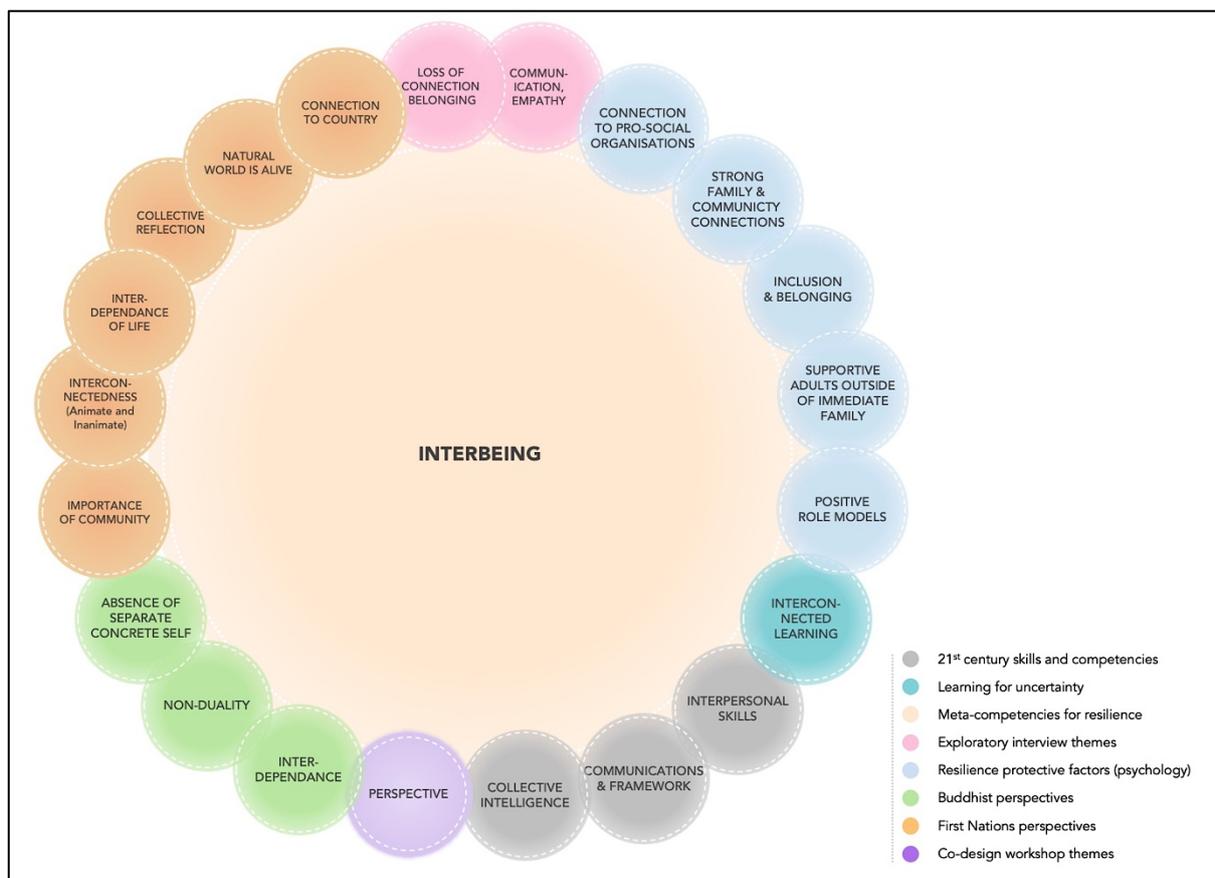


6.7.5 Integration of themes and sources for interbeing

The relational meta-competency of interbeing was adapted from the earlier PAR Cycle 1 draft framework, where it was referred to as interdependence and interconnectivity. Interbeing is summarised here as a relational experience of feeling connected with all living beings and nature (Chapter 12). As seen from the visualisation of relevant data and themes in Figure 24, it is one of the meta-competencies with the most themes and sources, along with self-awareness. Relevant 21st-century skills and competencies include communication and teamwork, interpersonal skills and collective intelligence. Resilience protective factors from psychology related to interbeing include inclusion and belonging, and strong family and community connections. From a First Nations perspective, relevant themes include interconnectedness of the animate and inanimate worlds, seeing the natural world as alive, connection to Country, interdependence and the importance of connection to community. From a Buddhist philosophy and worldview, relevant themes include interdependence, non-duality, and the absence of

a concrete separate self. Interviews referenced the importance of connection and belonging for young people and the importance of communication, relationships and empathy. And finally, the co-design modules stressed the importance of relationships with family and friends and a feeling of belonging. The relational meta-competency of interbeing is further explored and analysed in Chapter 12.

Figure 24: Cluster of themes and sources for meta-competency of interbeing

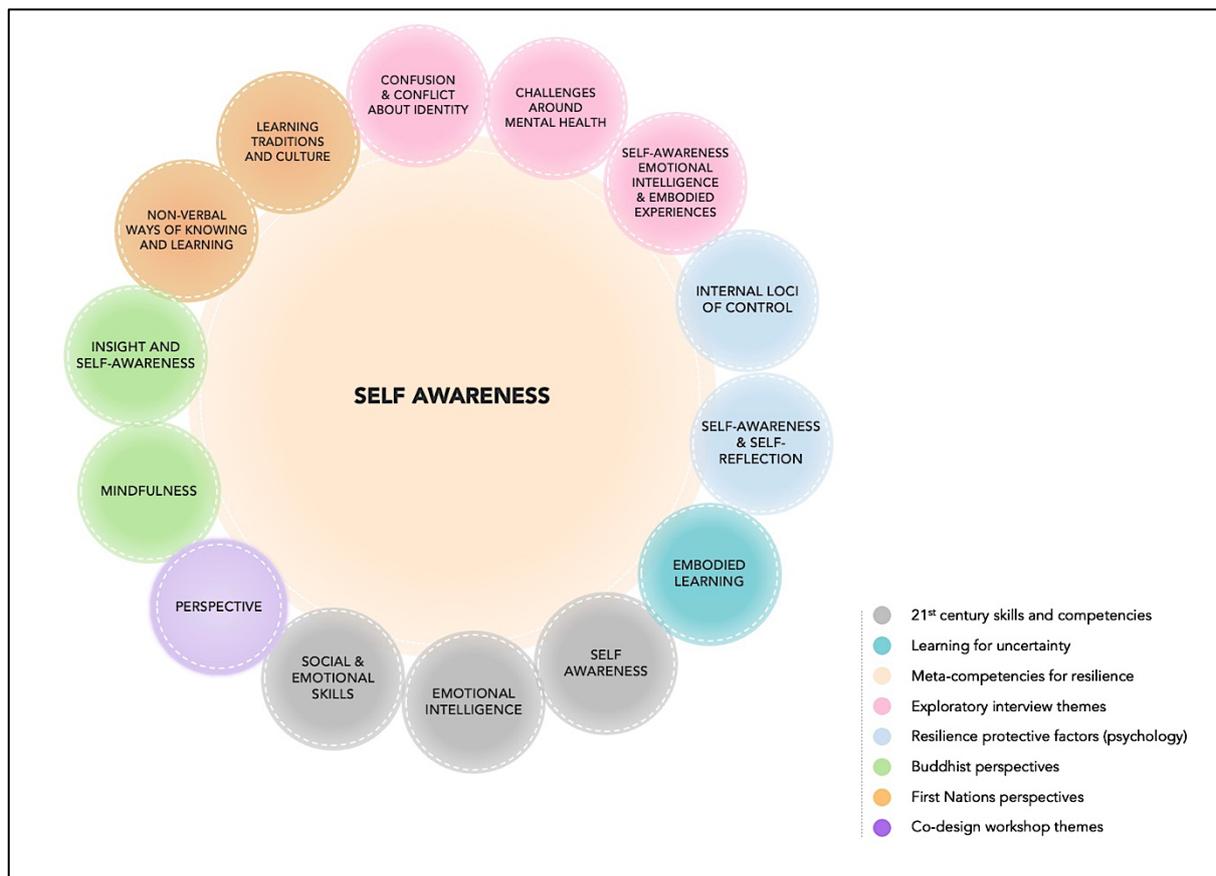


6.7.6 Integration of themes and sources for self-awareness

The final relational meta-competency of self-awareness is summarised as an ability to reflect on our thoughts and feelings and understand how they affect our behaviour and attitudes. As illustrated in Figure 25 below, relevant 21st-century skills and competencies include emotional intelligence, self-awareness, and social and emotional skills. The psychological model of protective factors for resilience includes self-awareness, self-reflection, and an internal locus of control. Relevant themes from the relational worldviews of Buddhism include mindfulness, meta-cognition, and insight.

At the same time, First Nations knowledge systems refer to the importance of non-verbal ways of being and knowing. The themes from the exploratory interviews relevant to self-awareness included themes of identity, image, and emotional intelligence, which were reinforced by the co-design modules. The relational meta-competency of creativity is further explored and analysed in Chapter 13.

Figure 25: Cluster of themes and sources for meta-competency of self-awareness



These six relational meta-competencies informed the design and focus of experiential learning practices in the pilot program (PAR Cycle 3). This process of integration and design is explicated in the next Chapter 7.

Chapter 7: Participatory action research Cycle 3 – Pilot program design and implementation

7.1 Chapter introduction

In this chapter, I articulate the strategic thinking behind the pilot program design, including the alignment of relational meta-competencies and themes identified in the first two PAR cycles. I discuss the process of adapting and iterating the pilot program based on a growing understanding of the context and changing circumstances during the pilot, including a pivot to online delivery during the COVID-19 pandemic. I articulate the aims and objectives of the pilot program, then provide insight into the process of design and iteration of the pilot through participatory processes. Next, I explain how I integrated the relational meta-competencies in the design of learning experiences and summarise the pilot program modules and their purpose and aims.

7.2 Pilot program aims and initial program design

In the first stage of the pilot program design, I drafted a program outline with a series of experiential learning modules that were aligned with the relational meta-competencies and informed by themes identified in the exploratory interviews and literature review. In the design process I aimed to address challenges of wellbeing and resilience identified in co-design sessions with teachers and students by integrating pedagogies and practices outlined in Chapter 3 related to learning for uncertainty, as well as practices informed by Buddhist and Aboriginal and Torres Strait Islander ways of knowing, being and learning.

The primary aims of the pilot program, developed in consultation with the school, were as follows:

- Co-design, in collaboration with teachers and students, a pilot program of experiential learning for Stage 5 (Year 9 & 10 students, aged 15-16 years) students in NSW High Schools to develop individual and collective resilience;
- Provide students with an opportunity to develop their transdisciplinary, systems thinking and innovation skills.

- Obtain feedback and insight from teachers to complement the information collected from students; and
- Explore approaches for documenting and evaluating individual and collective resilience.

Based on my definition of resilience (Chapter 2) as a dynamic relationship between a young person and their environment, I differentiated the pilot from existing student wellbeing and resilience programs by focusing on relational meta-competencies for resilience. My hypothesis is that these meta-competencies can develop personal resilience through social and emotional learning and collective resilience through complex problem-solving and systems thinking. The first version of the planned pilot program, as outlined in Table 12, shows the proposed modules, a description of the modules and relevant research instruments.

Table 12: First version of pilot program design and related research instruments

Module	Location	Description	Research instrument/s
1: Place-based Learning	Community venue	An experiential learning day held off-site in a local community venue where students learn about the history and connection with their local environment and explore themes of belonging and interconnectedness.	Student post-event survey online
2: Self-awareness, resilience &	School	A full day of experiential learning exercises promoting self-	Student post-event survey online

personal agency		awareness, self-care and help-seeking behaviour for young people.	
3. Systems thinking, complexity and sustainability	UTS	A one-day module where students learn foundational concepts of systems thinking and complexity for working with complex sustainability challenges.	Student post-event survey online
4. Futures thinking	School	A full-day program focused on emerging practices such as futures thinking and transition design.	Student post-event survey online
5. Local and global action and collective agency	UTS	A full-day module where students will explore the potential for their collective agency through addressing complex sustainability challenges.	Student post-pilot survey

7.3 Second iteration of the pilot program design

One of the benefits of PAR is the ability to adapt and respond to the needs of the project participants and context while maintaining the integrity of the research focus. The pilot program underwent several iterations and changes in response to the context and needs of the participants, the impact of COVID-19 and time and resource constraints. Design iterations and changes to the pilot throughout its duration from March to December 2021 are explained further below.

Following PAR Cycle 2, I changed the final module, removing 'Local and global action and collective agency' and replacing it with a module on 'Storytelling and perspective'. This change was made in response to the analysis of the co-design modules and getting to know the students and their interests and concerns, as discussed in Section 6.6. I realised from working with the teachers and students during the co-design workshops that the focus of the final module on local and global sustainability issues needed to be more relevant to the students' immediate challenges impacting their wellbeing and resilience. Instead, for a fifth module, I integrated the theme of 'perspective' that the students had shown a strong interest in during the co-design workshops. I was also looking for an opportunity to integrate a stronger focus on creativity in the pilot based on the interviews with stakeholders who stressed the importance of creativity for resilience and learning for uncertainty. As a result, I designed a new module focused on storytelling and perspective, replacing the module on local and global sustainability issues.

Another unexpected change during the pilot involved shifting to online delivery for the final two modules on systems thinking and futures thinking due to COVID-19 lockdowns. During this time, the whole school moved its learning online to protect students' and teachers' health. While this was not ideal for the format of interactive and experiential learning, we were also curious to see how an online setting might be adapted for experiential learning. The impact of this shift to online delivery is discussed in Chapter 14. The following section gives an overview of the final iteration of the pilot program, including an explanation of how the relational meta-competencies for resilience and interview themes were integrated into the program.

[7.4 Aligning meta-competencies with learning experiences](#)

Designing the pilot program modules involved aligning and mapping the relational meta-competencies and interview themes to facilitate further research and analysis of these throughout the program. In developing each module, relational meta-competencies were identified to inform their design, including the selection

experiential learning activities. This alignment of modules with meta-competencies and exploratory interview themes is documented in Table 13 below.

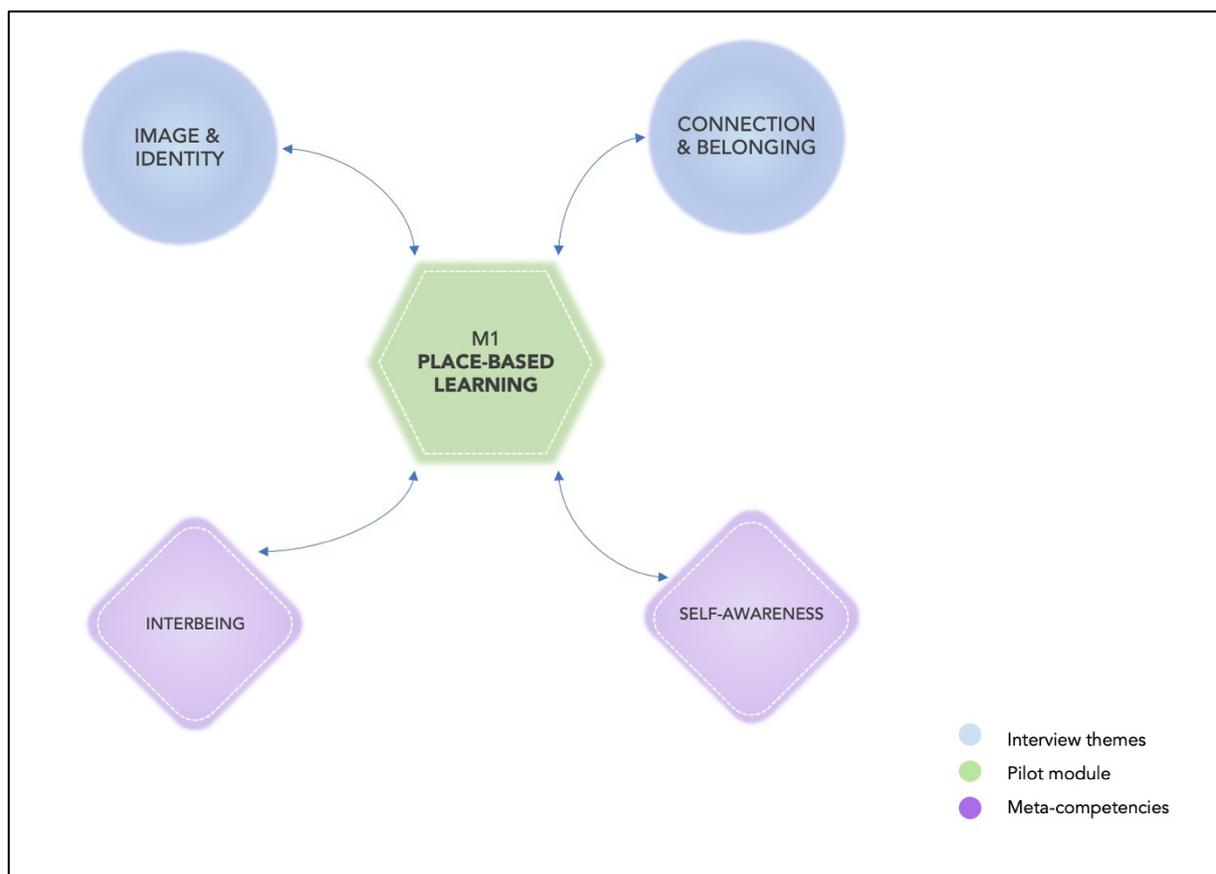
Table 13: Alignment of pilot modules with meta-competencies and themes

Module	Meta-competencies	Interview themes
0. Co-design modules	Agency Self-awareness	All
1. Place-based learning	Interbeing Self-awareness	Connection and belonging Image and identity
2. Self-awareness, resilience and personal agency	Self-awareness Compassion Agency	Boundaries Image and identity Mental health
3. Storytelling and perspective	Creativity Compassion	Connection and belonging Image and identity
4. Systems thinking	Agency Interbeing	Changing institutions and pathways
5. Futures thinking	Adaptability Creativity	Changing institutions and pathways High levels of uncertainty
6. Project-based learning	Agency Compassion	Mental health Connection and belonging

Identifying and mapping specific relational meta-competencies and themes for each module helped inform the choice of learning experiences and integration of pedagogies and practices relevant to these meta-competencies and themes. For example, the first module on place-based learning focused on the meta-competencies of interbeing and self-awareness and the themes of connection and belonging and identity, as illustrated in Figure 26 below. When designing the place-based learning module, I integrated the theme of connection and belonging and meta-competency of interbeing through learning experiences that encouraged students to connect to themselves internally, to each other, to nature, and to their surrounding environment.

Activities to support this included a nature immersion walk, craft, and deep listening practice. The module included activities to promote self-awareness, such as mindfulness, yoga and journaling. The theme of image and identity was explored in a crafting activity where students focused on creating an artefact that reflected connections and belonging. These experiential learning activities are discussed further in *Chapter 12: Meta-competency – Interbeing*.

Figure 26: Mapping of meta-competencies and themes for place-based learning



In Chapters 8 to 13, I explain in more detail the learning pedagogies and practices selected to create learning experiences for students related to each relational meta-competency and provide an analysis and interpretation related to the students' response to these learning experiences.

7.5 Pilot program modules planning and design

In this section, I provide further context and details of the design process for the pilot modules. The planning and design of each module was led by me as the researcher and contributed to by co-facilitators, teachers and students. For each module, I invited a team of co-facilitators with relevant skills and expertise to contribute to the design and delivery of the module. To enable a co-design process for the modules, I arranged meetings of the co-facilitators in the planning stage, where we worked collaboratively to decide on the kinds of activities and methods that would align with the objectives, meta-competencies, and themes for each module. This plan was documented in an online repository where we shared ideas, resources, and a run sheet for the module. Following each module, I arranged a debrief with co-facilitators, where we shared and documented our observations and reflections from the module. In the planning stage of each module, the draft run sheet and plan were shared with the key liaison teacher, who provided further input and feedback on the module. The students' input was primarily based on their responses and feedback from previous modules, which was incorporated into how the following modules were designed.

The pilot modules were hosted across three different locations, some being held at their school, one at the university and one in a local community centre. The student co-design modules were held at school in a multi-purpose classroom in the library, where the students felt familiar and comfortable. For *Module 2, Place-based learning*, I was looking for an environment where students could easily access and be immersed in local natural ecosystems was important. This module was held in a sustainability environment centre with community and educational facilities for hire through the local council. Our third main venue where we held the *Module 3: Storytelling and perspective* was on campus at the University of Technology Sydney, in a creative studio space for the final year students in the Bachelor of Creative Intelligence and Innovation. Students got to experience working in a creative higher education studio space and have an opportunity to come onto campus and become more familiar with the environment. The final two modules for *Module 4: Systems thinking* and *Module 5: Futures thinking*, were held online via Zoom as all the students and co-facilitators were

in lockdown during the COVID-19 pandemic. Next, I detail each learning module's purpose, aims, and objectives.

The pilot program design was informed by pedagogies outlined in Chapter 3 of experiential, transformative and regenerative learning as well as integrating practices and theories from Buddhist and First Nations knowledge systems. The characteristics of learning for uncertainty identified in Chapter 3, being learner-led, embodied, interconnected, experiential and engaging with ambiguity were considered in the development of the program. Students worked in small groups on learner-led projects where they designed a learning experience for younger students. The pilot design included a range of embodied practices including yoga, mindfulness, and mapping where we feel emotions in the body, these are described in more detail in Chapters 8-13. Interconnectedness was foregrounded in learning experiences that encouraged connection with others through sharing and understanding others' stories and perspectives, and connection to nature and the more-than-human world through nature immersion. The pilot was highly experiential and exposed students to novel learning environments, ambiguity and paradox for example, in *Module 5: Futures thinking*, where students were asked to engage with their emotional responses to the future and climate change.

7.6 Pilot program modules' purpose and aims

Each pilot module had a specific purpose and aims, which supported learning experiences to develop the relational meta-competencies for resilience. Table 14 defines the primary activities, aims and relational meta-competencies for each pilot module. More detailed module run sheets are available in Appendix C.

Table 14: Pilot program modules: purpose, aims, and meta-competencies

Module name and purpose	Aims of module	Meta-competencies
<p>M1 – Place-based Learning</p> <p>An experiential learning day held off-site in a local community venue where students learn about the history and connection with their local environment and explore themes of belonging and interconnectedness through various activities such as nature immersion, art and mindfulness.</p>	<ul style="list-style-type: none"> - To learn about the local area, including history, local animals and plants, Indigenous history and culture, changing site use over time. - To experience immersion in nature and observe mental and emotional responses to the natural world - To connect to self, each other, and the natural environment - To explore and reflect on themes of connection and belonging - To connect to body, senses, and mind through activities such as yoga and mindfulness - To relax and enjoy each other’s company in an informal off-site setting 	<p>Interbeing, self-awareness</p>
<p>M2 – Self-awareness, agency and personal resilience</p> <p>Participating in experiential learning</p>	<ul style="list-style-type: none"> - To learn from the stories of other young people about their experiences with mental health and how/where to get 	<p>Agency, self-awareness, compassion</p>

exercises for self-awareness and self-care and promoting help-seeking behaviour for young people. The session explores concepts of resilience, personal agency, adaptability, and self-compassion.

- support and help if they need it
- To encourage young people to seek help and not feel they are alone
 - To learn about different forms of agency (personal and collective)
 - To create a safe learning environment where young people can have experiences of reflecting on their own thoughts and emotions

M3 – Storytelling and perspective

Creating learning experiences using storytelling and embodied practices to support young people to develop a sense of empathy and insight about their own and others’ stories. To understand that any situation can be viewed through several different perspectives depending on one’s worldview and life experiences.

- To experience different methods of storytelling such as drama games, story triads, constellation storytelling
- To reflect on their own story through the paradigm of the hero’s journey
- To understand multiple perspectives that we bring to situations and develop empathy and compassion for others’ perspectives and experiences
- To develop ideas for project-based learning activities

Creativity, compassion

<p>M4 – Systems thinking</p> <p>Understanding complexity and systems thinking and learning 'soft systems' methods to map, understand and intervene in systems. Support experiences of personal and collective agency through designing interventions and safe-to-fail experiments within these systems.</p>	<ul style="list-style-type: none"> - To understand the difference between complex and complicated problems - To learn and practice systems thinking methods such as rich pictures, stakeholder mapping, and root cause analysis (15 whys). - To apply systems thinking methods to student-led complex real-world challenges - To develop skills in prototyping and safe-to-fail experiments - To develop an understanding of agency and their sphere of influence within complex systems 	<p>Agency, interbeing</p>
<p>Module 5 – Futures thinking</p> <p>Exploring emerging practices such as futures thinking and transition design and learning methods to apply in their project work. Engaging in hands-on activities of designing and prototyping assets to visualise future scenarios.</p>	<ul style="list-style-type: none"> - To play with and consider different possible futures for themselves individually and as a generation of change-makers. - To identify and develop perspective around different future narratives and reflect on what future they want to help co-create. - To learn about futures thinking methods and 	<p>Adaptability, creativity</p>

-
- consider how to apply them to their team's learning experience design process.
 - To integrate learning experiences to date and reflect on what has been significant
-

The pilot program created a unique opportunity to test and validate the framework of relational meta-competencies and understand how they can contribute to resilience. Each learning module focused on developing several specific meta-competencies through experiential learning (Table 14). The following chapters analyse in more depth each of the meta-competencies by addressing the following questions:

- Why is the meta-competency necessary right now?
- How does Western psychology define the meta-competency?
- How can we understand the meta-competency from a beyond-Western perspective?
- How do I define and understand the meta-competency for this inquiry?
- What learning experiences and practices are used to support this meta-competency and why?
- Thick descriptions, observations and insights from the pilot program related to the meta-competency.
- Analysis and discussion on whether the learning experiences supported the meta-competency and
- Findings concerning the meta-competency and resilience.

Each meta-competency is detailed in Chapters 8-13, with observations and findings based on the participants' responses and feedback on the learning modules. These findings are then synthesised in Chapter 14.

Chapter 8: Meta-competency – Adaptability

8.1 Introduction to chapter

This chapter is the first of six to explore and analyse the relational meta-competencies for resilience in more depth during PAR Cycle 3, the pilot program. Each chapter begins with an overview of the meta-competency and a rationale for its timeliness for young people. Then, I explore the definition of each meta-competency from Western psychological, Buddhist and First Nations perspectives. Drawing on these knowledge systems, I articulate my understanding of the relational meta-competency and identify key learning objectives related to experiential learning for each. The term ‘relational’ is used for these meta-competencies to distinguish them from more individual interpretations as personal traits. Moving away from a focus on ‘separate self’ model of development to one of capacity for connection and relationship in developing these competencies. (Jordan, 2023)

Next, I briefly introduce what pedagogies and experiential learning objectives can support each relational meta-competency and how these were integrated into the design of the pilot program. The bulk of the chapter is an in-depth analysis and interpretation of the meta-competency through a series of thick descriptions based on the pilot program. Finally, using my identified experiential learning objectives, I reflect on and analyse whether these learning experiences helped the participants develop the meta-competencies.

8.2 Why is the meta-competency of adaptability needed now?

Adaptability is a relational meta-competency that can be developed through experiential learning to support young people in developing resilience in response to uncertainty and change. Adaptability is necessary right now due to the level of uncertainty and change young people are experiencing that are likely to impact their quality of life, work, and personal lives into the future. These changes, outlined in Chapter 2, include the impact of adapting to peak resilience events such as COVID-19, climate-induced natural disasters, and broader socio-economic and cultural changes.

While much of the research in the field of psychology related to adaptability and resilience has focused on the capacity of individuals to respond to change in this thesis I seek to extend this to integrate relationships with friends, teachers, family, community, place and culture as being essential for developing adaptability and resilience.

Research has found that 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, which is a time of significant change as a young person develops their identity and personality. Along with the personal, social, and hormonal changes during adolescence, young people in a contemporary context are also adapting to rapid changes in the world of work, socio-cultural changes, and climate disruption.

Adaptability in work and careers is considered increasingly important as this generation of young people in Australia is predicted to experience more job insecurity and greater financial vulnerability (Foundation for Young Australians [FYA], 2020). The Foundation for Young Australians New Work Standards Report (2020) estimates that Australian young people might have five different careers with 17 different jobs during their lifetime. The report found that young people are increasingly impacted by a lack of job security and are most impacted by the growing 'gig economy' and the casualisation of the workforce (Foundation for Young Australians [FYA], 2020). Adaptability and adaptivity (readiness) have been found to increase an individual's ability to manage changes in their careers and workplaces (Tolentino et al., 2014). Futures orientation refers to a young person's perception, ideas and plans for their future and their ability to envisage multiple possible pathways or scenarios (Ginevra et al., 2016; Hirschi et al., 2015). Some studies with adolescents have found that futures orientation can improve career adaptability to respond to changing job markets and conditions (Ginevra et al., 2016).

The impacts of climate disruption on young people can include direct physical and mental impacts due to natural disasters or environmental impacts, as well as indirect

impacts such as climate anxiety and poor mental health (Australia Institute for Disaster Resilience [AIDR], 2020; Ojala, 2012). Improved adaptability can better prepare young people for increasing climate disruption, resulting in increased extreme weather events and natural disasters (Liem & Martin, 2015; Verlie, 2021). Higher levels of adaptability have resulted in young people being more proactive in seeking out information about environmental issues and having more emotional capacity to deal with these issues (Liem & Martin, 2015).

8.3 How does Western psychology define and understand adaptability?

I begin here by outlining a Western psychological perspective on adaptability, then consider what we can learn from the relational worldviews of Buddhism and First Nations knowledge systems and propose an approach to experiential learning to help young people develop this relational meta-competency. Western psychology is chosen as a default analysis for meta-competencies as it has been a primary influence in a contemporary educational understanding of mental health and resilience from a Western perspective.

Adaptability is defined and understood in Western psychology as the capacity of an individual to modify or adjust behaviour in response to new or changed circumstances (Martin et al., 2013; VandenBos, 2007). The American Psychological Association (APA) defines adaptability as “the capacity to make appropriate responses to changed or changing situations; the ability to modify or adjust one’s behaviour in meeting different circumstances or different people” (VandenBos, 2007, p. 17). These responses can be cognitive, behavioural or affective (Martin et al., 2013).

Within psychological studies, adaptability has been found to support young people's academic and personal development, including psychosocial wellbeing, motivation and engagement with learning (Holliman et al., 2021; Martin et al., 2013, 2021). The role of adaptability as a personality trait for secondary school students has been found to improve both academic and non-academic outcomes. Martin et al. (2013) found that students with higher levels of adaptability experienced more positive academic

(positive experiences and engagement at school) and non-academic (self-esteem, sense of meaning and purpose) outcomes. This finding was reinforced by research during the COVID-19 lockdowns when students had to adjust rapidly to changed and novel circumstances with their learning moving online (Beames et al., 2021). Australian secondary school students with stronger adaptability scores could better adjust to the demands of online learning and achieve stronger academic outcomes despite these rapid, unexpected changes (Beames et al., 2021; Martin et al., 2021).

8.4 How can we understand adaptability from a beyond-Western perspective?

In this thesis, I posit that Buddhism and First Nations' knowledge and worldviews can contribute to our understanding of adaptability from a more dynamic and relational perspective. Furthermore, this revised understanding and learning activities informed by these worldviews can support young people to develop greater resilience. Both worldviews encourage understanding ourselves as a small part of a constantly changing series of relationships with our inner self, others, and the natural world.

From a Buddhist perspective, a conceptual understanding of impermanence and practices such as mindfulness and contemplating paradox and uncertainty can contribute to a more relational understanding of adaptability. The need for adaptability in Buddhist psychology is related to the concept of impermanence, described earlier in Chapter 3, as a realisation that our world is in a constant state of flux and change. This realisation of impermanence, and thus increased adaptability, can be developed through meditation and mindfulness practices. According to Buddhism, the challenge arises when we see ourselves and our environments as stable, permanent entities separate from this ever-changing context. Thich Nhat Hanh (1999, p. 124) recommends "nourishing our insight into impermanence every day to avoid the suffering that comes from this misconception of reality." Mindfulness is also relevant to adaptability in terms of how we think about ourselves in the future. Thich Nhat Hahn (2010, p. 22) describes this process of adaptive thinking as follows, "We produce ourselves; we produce our own future. We have to offer our best thoughts, speech, and

actions. Mindfulness helps us to know whether we're producing the right things for the future and helps us remember that what we produce is us, is our continuation.”

Many Buddhist practices and meditations are used to develop greater adaptability through understanding impermanence, including meditation practices on the stages of death, mindful analysis of constant change within the body and external environments, noticing changing sensory experiences and contemplating paradoxes. Contemplating paradox and ambiguity is central to critical teachings in Mahayana Buddhism, such as the Diamond Sutra and The Heart Sutra (Bhattacharjee, 2022). This contemplation of paradox and ambiguity is an antidote to our human desire for certainty and stability and enables greater mental and emotional flexibility (Bhattacharjee, 2022; Nhất Hạnh, 1999). Research in workplace practices and management has found that integrating Buddhist mindfulness practices can reduce stress and increase adaptability and creative problem-solving (Coll, 2021; Johnstone & Wilson-Prangley, 2021; Kabat-Zinn, 2003). Similarly, research into mindfulness practices in school has found significant benefits for students' mental health and resilience (Felver et al., 2016; Zenner et al., 2014).

The connection between adaptability and impermanence is also evident in First Nations' worldviews and knowledge systems. Aboriginal and Torres Strait Islander people in Australia have adapted to life on this continent for over sixty-five thousand years and have been forced to adapt to the destructive impacts of invasion and colonisation over the past two hundred and thirty-five years. This ability to adapt and survive as a culture is described by Yunkaporta (2009, p. 1), “Aboriginal culture has not been lost – just disrupted. Our ways of knowing, being, doing, valuing and learning remain in an ancestral framework of knowledge that is still strong.” This continuity of values, particularly around stewardship and relationship to Country, community and cultural connections, is evident in the survival of Aboriginal culture and communities across Australia. Adaptability, according to Yunkaporta (2019, p. 49), is inevitable due to the dynamic interplay within living systems: “You have to move and adapt within a system that is in a constant state of movement and adaptation.”

Cultural connection, language, art, and storytelling are considered essential to adaptability for First Nations peoples. Goreng Goreng (2018) and Yunkaporta (2009) emphasise the importance of cultural practices such as storytelling, learning language and art to strengthen cultural and community connections. A review of resilience interventions for Aboriginal young people in Australia indicated that cultural connection, cultural identity and knowledge of cultural heritage and language were important sources of resilience and wellbeing (Jongen et al., 2020). In its many forms, storytelling helps Indigenous people adapt to challenging contexts (Kirmayer et al., 2011). According to Goreng Goreng (2018, p. 170), stories can contribute to adaptability by providing a "framework for members of a culture to construct, organise and interpret experience." The importance of storytelling and narrative through words, gestures, visual representations and physical movement is embedded in the Eight Ways of Aboriginal Learning (Yunkaporta, 2009).

8.5. How do I define and understand adaptability for this inquiry?

In this inquiry, I draw on and integrate the strengths of both a Western psychological perspective alongside Buddhist and First Nations worldviews to explore adaptability as a relational meta-competency for resilience in the pilot program. I define adaptability not as a static personal trait but rather as a complex, relational meta-competency that can be practised and developed during times of adversity and change. I identify three key learning objectives for strengthening adaptability, which are integrated into the learning experiences of the pilot program and documented in the thick descriptions below.

- Shaping future stories: being able to actively engage with possible future stories and narratives personally and collectively.
- Embracing paradox and ambiguity: being able to hold paradoxical ideas simultaneously and recognise the discomfort of this; and
- Contemplating flux and stability: noticing continuity and change within us and the systems surrounding us.

8.6 What learning experiences and activities are used to support adaptability and why?

Based on a relational understanding of adaptability - integrating both Western and beyond Western knowledge systems - I designed and curated a series of experiential learning activities for the pilot program. This section outlines the relevant pedagogies used to integrate adaptability practices into the pilot program.

Most activities, described and analysed in the thick descriptions below, refer to activities in *Module 5: Futures thinking*; however, these practices promoting adaptability were also interwoven into other modules in the pilot to various degrees. Indeed, adaptability became an unavoidable lived experience for all of us during the research when, in 2021, in response to the COVID-19 pandemic, we experienced extended periods of lockdown. The experiences of students' adaptability during the COVID-19 pandemic are discussed below.

The experiential learning activities draw on methods from futures thinking and the Designing Your Life program, developed through Stanford Life Design Lab (Burnett & Evans, 2016). Future thinking is a creative process that uses specific methods and practices to explore possible and preferable future scenarios. It is described by Susanne Pratt (2023) as a process that does not set out to predict or forecast the future but rather to “ask questions about the present and consider possible pathways into alternative futures.” As a form of experiential learning, it provides an opportunity for students to imagine and envisage different future scenarios and outcomes, promoting adaptability in thinking about the present and the future (Gidley et al., 2009). A range of futures thinking methods were introduced to students in *Module 5: Futures thinking*, including speculative future scenarios, creating artefacts representing the future and backcasting.

Storytelling and narrative are used in futures thinking to imagine, engage with and analyse potential future scenarios (Inayatullah, 2008; Miller, 2007). Odyssey Planning, adapted from the Designing Your Life framework (Burnett & Evans, 2016), was used as

a way for students to contemplate different future narratives. Each student mapped out three potential five-year plans (Figure 27); the first was their current plan, the second was a blue-sky plan where they could do anything they wanted, and the third was another alternative plan if the first two were impossible. For each plan, students considered the resources required, how much they like it, what level of confidence they have in it and its perceived coherence with their purpose in life, and any questions they might have about it. This method encourages the consideration of many possible future scenarios, promoting adaptability of thinking regarding perspectives of the future (Burnett & Evans, 2016).

Figure 27: Design your life template

TAYLOR PHYLLIS M. TAYLOR CENTER
FOR SOCIAL INNOVATION AND DESIGN THINKING

**6 WORD
DESCRIPTIVE
TITLE:** _____

THE CURRENT PLAN

	1 year from now: Date _____	2 years from now: Date _____	3 years from now: Date _____	4 years from now: Date _____	5 years from now: Date _____



*Adapted from Burnett & Evans (2016) "Designing Your Life"

QUESTIONS:

- 1.
- 2.
- 3.

In *Module 5: Futures thinking*, the students were introduced to the concept of speculative future stories by exploring the digital Museum of Futures (Marshall & Rumble, 2021). The Museum of Futures is an interactive digital exhibition that highlights our roles in creating different futures and uses speculative fiction to challenge narratives about the future (Marshall & Rumble, 2021). One of the curators, Claire Marshall, was a co-facilitator for *Module 5: Futures thinking* and introduced

their digital exhibition, *Pandemic Pivots*. Claire, a talented media producer and storyteller, also led the students through an experiential learning practice of creating their own future artefact by folding an Origami butterfly while exploring emotions around climate change. Claire interwove her own stories and prompted students to reflect on their hopes and fears for the future and write notes to themselves on each fold of the Origami butterfly.

Students were introduced to backcasting, a futures thinking method, developed to identify a desirable future goal and visually map the strategy and steps back to the present. Students used backcasting to envision what they wanted to achieve with their project-based learning and then worked their way back in steps to see how to achieve this goal.

Embracing paradox and ambiguity, drawing on Buddhist philosophy, was practised in the pilot through activities that encouraged students to contemplate and analyse their responses to challenging situations from a sensory, mental and emotional perspective. For example, the Origami butterfly activity integrated the themes of paradox and ambiguity in its design as one side of the butterfly represented feelings of stress, anxiety and worry about climate change and the future and the other represented hope and empowerment. Claire's storytelling and process encouraged the students to try to sit with this paradox and understand that both perspectives are valid responses to a context such as climate change.

Inspired by Buddhist and First Nation perspectives, another practice in *Module 5: Futures thinking* focused on understanding our values as a constant during times of change. This practice promoted an awareness that things change at different rates, and while some appear to change quickly, others are more enduring and change more gradually. The stability and continuity of things that stay the same - such as core values - were foregrounded as helping to adapt to change by remembering what is important to us. Students identified and mapped their core values using an online card-sorting exercise to identify their three core values (Public Interest Research Centre, 2015; Schwartz, 2007).

8.7 Thick descriptions, observations, and insights

The learning activities, described and analysed in the thick descriptions below, refer to activities in *Module: 5 Futures thinking*. Adaptability became an unavoidable lived experience for all involved during the pilot in 2021 when this module was rescheduled several times due to lockdowns and school lessons moving online. The use of 'I' in these descriptions refers to the author, and 'we' refers to the team of co-facilitators of the module or module participants. Pseudonyms are used for participant names.

8.7.1 Scene 1 - Planning in the liminal zone (30th September, 2021)

(DIGITAL: ZOOM CALL ONLINE, THREE FACES)

We meet online as a co-facilitator team to plan the last one-day workshop focusing on futures thinking. I feel like we are living in a strange liminal zone, having been in lockdown for ten weeks, where our lives have shrunk to the confines of our homes with an occasional walk around the block and only essential trips to the shops allowed for food and medication. We talk about feeling like we are in cocoons, feeling stuck in the in-between and how Zoom fatigue is a real thing we are experiencing. We reflect that we spend much time living in the past because of how constrained we feel in our present and how the future looks unclear and uncertain. We discuss our experiences juggling work and supervising our children's schoolwork from home. We worry about our own and our children's mental health and the pressure this lockdown is putting on families, teachers, schools, and the health system.

I ask how we might try to find ways to help the students connect the past to the present (strange as it is) and also possible futures (which also seem highly uncertain at this time) to give a sense of stability alongside all this change and uncertainty. Establishing this continuity both for ourselves as facilitators and for the participants feels essential before jumping into our final module on futures thinking. After our regular circle check-in, I suggest beginning the module with a retrospective slideshow of images and music from past modules to connect to where we have been and the

connections we have formed. We want to help the participants find threads of continuity amidst the change but also to acknowledge their adaptability and resilience in navigating these significant, unexpected changes in their lives. A metaphor emerges in our discussion of seeds from the past, things that have nourished us, and how they can be brought into the present and planted for the future. I want to help students find seeds to nourish them during these lockdowns. We reflect on the role of values that are more constant over time, which inform how we respond to change. We are curious about how we might experiment with online communication despite the constraints of experiential learning in this medium. It is not how we wanted to deliver this module, but we must adapt and make the most of it.

8.7.2 Scene 2 - Continuity of values and the value of continuity (22nd November, 2021)

(DIGITAL: ZOOM CALL ONLINE, SEVENTEEN FACES, MODULE 5: FUTURES THINKING)

Meeting online rather than face-to-face for our last module feels disappointing initially. The students seem quiet, and some have their cameras turned off (we find out most students keep their cameras off during class). We start with a check-in where we all share something that has been nourishing or supporting us during the lockdowns. For some, it is a favourite food; for others, it is an online series on Netflix; others show us a soft toy or memento that they keep on their desk as a reminder of happier times. Then, we show an animated slideshow from our previous modules with a soundtrack of the music we have played during those times. The girls seem to warm up a bit, and more of them put their cameras on and are laughing at the photos of themselves.

Next, I introduce the plan for the module and explain what futures thinking is and why we are learning about it. I introduce the idea of values as a thread that holds past, present and future together. I reflect on my values and how they inform how I respond to situations and change and how I often notice my values when they are challenged, for example, if someone is disloyal. The students look through a series of fifty-eight visual value cards on Mural (Figure 28) and individually identify their top ten values. Next, they refine this down to just three core values (Public Interest Research Centre,

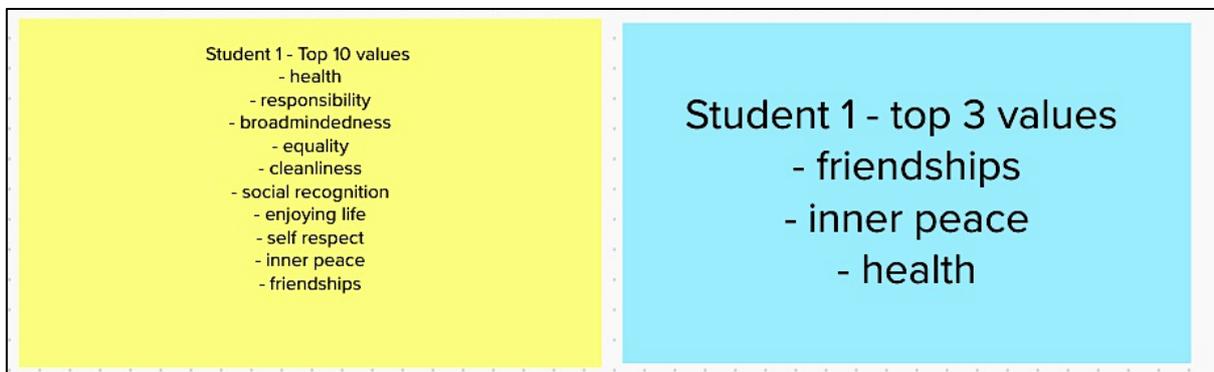
2015). They record their selections on post-it notes on Mural where we can see each other's values (Figure 28 & Figure 29).

Figure 28: Values card sorting activity



Note. Source of cards (Public Interest Research Centre, 2015)

Figure 29: Student value cards sorting activity



After each student selects their top three values, we come back together to reflect on the process. Several more cameras have turned on. In reflecting on their experience of the values card sorting, one student comments on being surprised by how different each of their core values are. She thought they would be more similar, given the many life experiences they have in common. Another student says she was curious about "How your life experiences and your upbringing can affect the values that you have." We talk a bit about where our values come from, and a few students comment that they feel like the values come from their families and parents. One student observes that she thinks her values change due to her life experiences and may be different from her family's and culture's values.

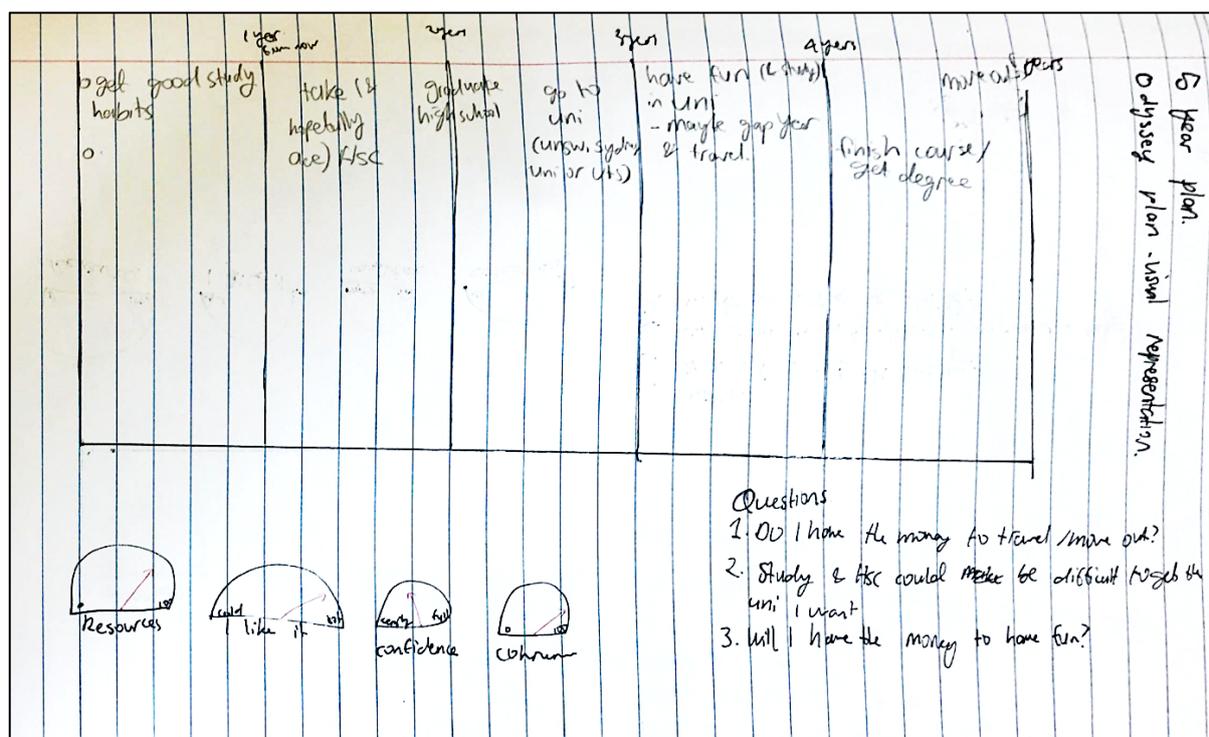
8.7.3 Scene 3 – Design your life (22nd November, 2021)

(DIGITAL: ZOOM CALL ONLINE, SEVENTEEN FACES, MODULE 5: FUTURES THINKING)

To begin playing with future scenarios, we introduce the students to the method of Odyssey Planning. I describe it as an exploration of future scenario planning where they will map out three possible pathways for the next five years. As we are all working from home, some students print out the template while others sketch them by hand in their journals or notebooks. First, I ask the students to draw their expected plan. "What do you think is the most likely plan over the next five years?" I prompt. We give the students 15 minutes to consider this and fill out the template, with music playing in the background.

One student, Astrid, shares her first five-year plan that maps a path from graduating high school with the Higher School Certificate (HSC), going to university and having fun, and maybe taking a gap year to travel before completing her degree (Figure 30). She has also dutifully copied a series of four gauges on the template into her notebook. Using these gauges, she indicates the quantum of *resources* needed for her plan (high), how much she *likes it* (a lot), her *level of confidence* (medium) and the *coherence* of this plan with her values and worldviews (strong). She has also responded to the prompt to add some questions about this plan. Her questions are: "Do I have the money to travel/move out?" and "Will I have money to have fun?"

Figure 30: Student odyssey planning, five-year plan most likely and expected



Next, I encourage the students to imagine their best possible future or dream scenario for their second plan. "If you could wave a magic wand and do whatever you wanted, what would you want to do for the next five years?" I ask. The students smile. We give the students another 15 minutes to consider and map their dreams in their notebooks or on the templates. In Astrid's second plan, she buys a house after graduating, then rents it out and travels for a year, then goes to study at uni, finds a job and maybe buys another house. Using the gauges, she indicates resources and confidence being very low while liking it is as high as it can go, and coherence is also high. She asks, 'Where will I get the money?', "Will COVID finish by then so I can travel safely?" and "Will house prices be alright?" While the two plans have some similarities in that they both involve going to university and getting a degree and a job, the dream plan also includes being able to buy a house (something that many young people are worried they might never be able to afford) and the freedom of travel. Another student shares her dream scenario, which she has had since childhood, to become a famous singer. While she feels it would probably never happen, she enjoys imagining the possibility

This same student's third plan involved studying architecture as she had discovered doing work experience that she really liked the creative aspect of this work.

After completing their three five-year plans, students meet in breakout rooms on Zoom in pairs to share and discuss them. When we meet again in the main plenary room, some students say they found it hard to come up with alternative scenarios because they were uncertain about their goals and because of the pressure to follow the path set out for them by their families. One student explained, "I found this exercise a pretty hard one because I don't really know exactly what I want to do...I've always had that external pressure from family to follow this one path."

8.7.4 Scene 4 – Origami butterflies in the sky (22nd November, 2021)

(DIGITAL: ZOOM CALL ONLINE, SEVENTEEN FACES, MODULE 5: FUTURES THINKING)

For our following activities, we are joined by Claire, who introduces herself and takes the students on a virtual tour of the Museum of Futures. The students jump into the virtual Museum of Futures, where they digitally browse a collection called *Pandemic Pivots*, where artists working with diverse communities have designed artefacts reflecting their preferred post-COVID future scenarios. In one corridor, the students peruse digital artefacts from a picture book for children called *What People Do All Day*, which has been redesigned from the original 1970s book to reflect a humorous, modern take on how people spend their time. Instead of building roads (as in the original) they are pulling up roads and planting edible gardens. Claire talks to the students about how and why they designed this virtual museum to raise awareness that we can create our futures through the stories we tell. The students seem curious.

Next, Claire invites the students to prepare their paper for the origami activity and says this activity explores themes of connection, belonging, and storytelling, where they will create their own story about the future. As part of her framing for the activity, she explains that there are no miracle cures to stop us from having anxiety about the future and climate change. She says they are about to jump into the deep end with her and explore how they think about the future, both good and bad. Claire

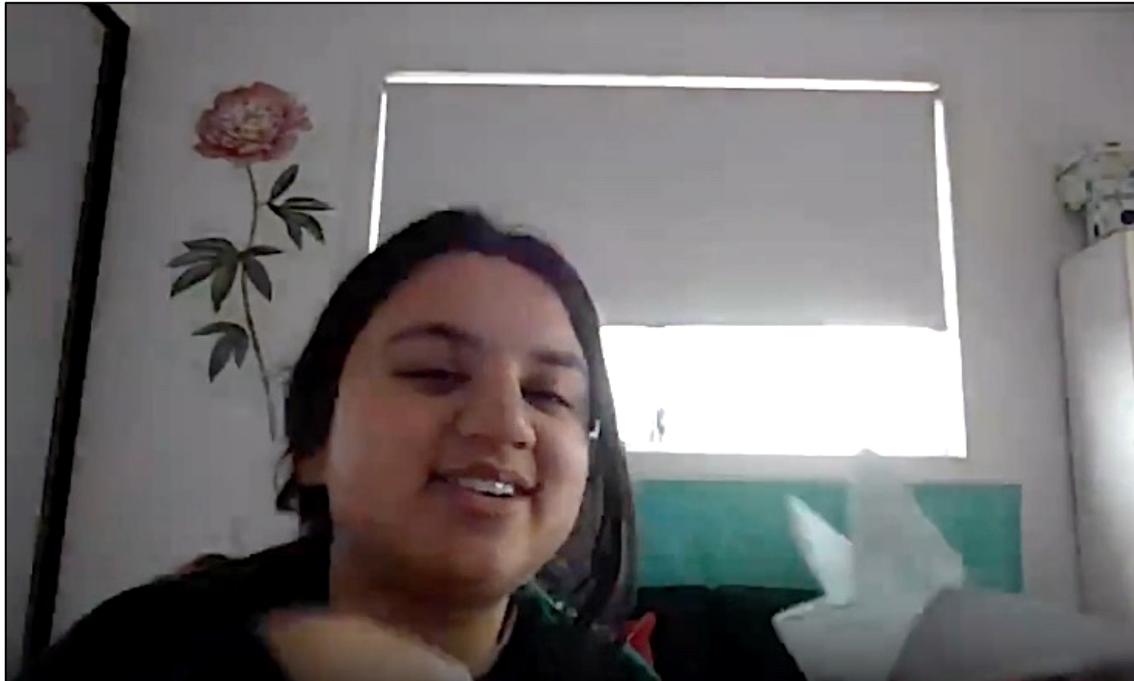
has two cameras set up: one focused on her hands so the students can follow the folds she makes in the origami and one on her face as she talks them through the process. The students start to follow Claire's instructions as they fold and label different parts of the paper structure with letters A, B, C and D on one side, then E, F, G and H on the other side. With their first fold, Claire asks them to think about something that makes them feel stressed out when they think about the future, whether it is getting a job or climate change, and write it down in the section marked A. Then, on the other side, they write something that makes them feel hopeful and empowered about the future.

The storytelling and folding start to intertwine as Claire tells her own stories of resilience and adaptability and what creates joy and fear for her about the future. Each student creates their own story as they follow along and make notes with each fold. Claire tells a story about training hard to be a ballerina until a sudden injury ended her ballet career at the age of eighteen. She explains that it made her who she is today and that while it was very painful, she got through it and realised how strong she is. She shares, "It's the hard things that transform us, not the easy ones." Claire discusses how we can develop empathy for our future and present selves. As we reach the end of the folding and storytelling, we tweak and push our paper creations into a butterfly (some more successfully than others). Claire encourages the participants to show their butterflies on the screen (Figure 31). Finally, Claire encourages the participants to embrace ambiguity and paradox, saying there is no right or wrong way to think or feel about the future and that we might see things quite differently on different days. She suggests keeping their butterflies near their desks as a reminder to become more conscious about our ways of thinking about the future, adding:

Some days, when you look at your butterfly, you'll look to the front, you'll feel empowered, you'll see the things that you are good at. You will see the things that are core qualities of yourself...But some other days, we can flip over our butterfly, look at the back, and see the things that potentially aren't doing us so well at the top, things that give us stress about the future. And down the bottom, it should give you some things that will make you come alive again, that when we're

feeling those things, there's something that we can do. (Claire, module co-facilitator)

Figure 31: Student showing an Origami butterfly on Zoom call



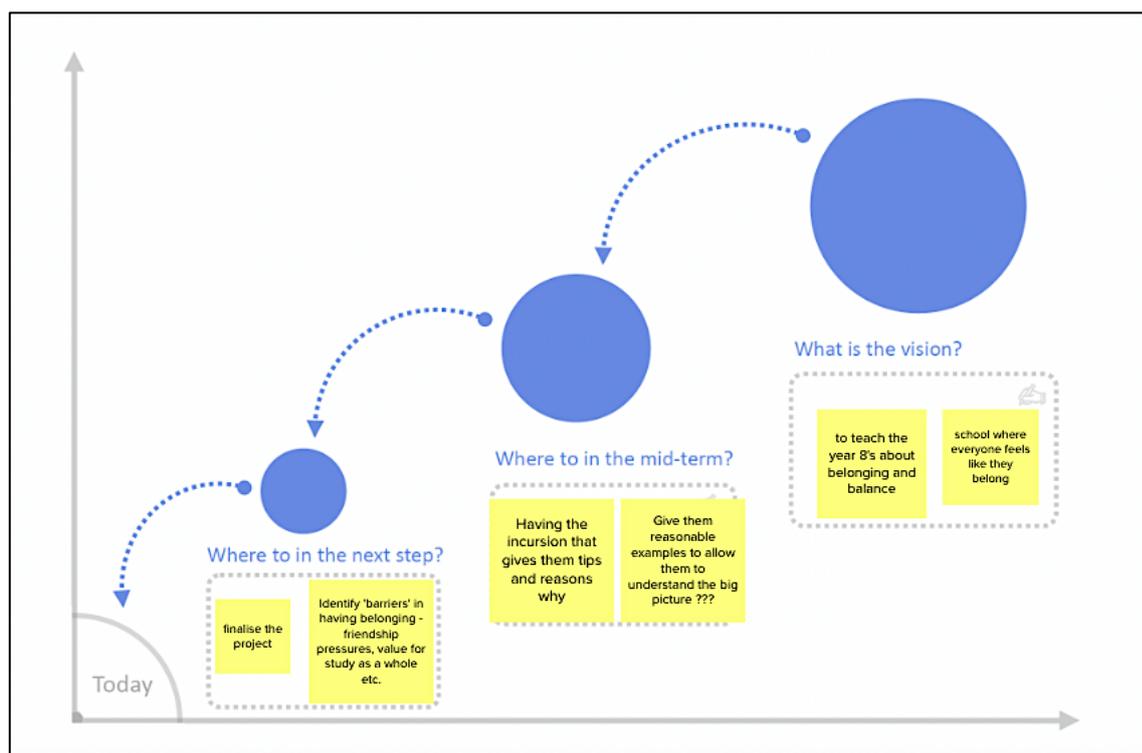
8.7.5 Scene 5 – Working our way back from a desired future (22nd November 2021)

(DIGITAL: ZOOM CALL ONLINE, SEVENTEEN FACES, MODULE 5; FUTURES THINKING)

After a lunch break, the students return to focus on their student led projects, designing learning experiences to improve the resilience and wellbeing of younger students. One team, *Belonging*, wants to improve belonging and connection for younger students. They explain that these students, who started school during COVID-19, had missed out on being properly welcomed into the school community. I introduce the backcasting method used in futures thinking and explain that it is a way to articulate a desired vision of the future, then map the steps back from this to the mid-term and then to the present. I also acknowledge that while achieving a vision is rarely linear, backcasting encourages us to think back from desired possibilities rather than using the standard planning approach of starting in the present to plan and strategise.

Working on the online Mural board, each team works back from the desired outcome of their project to the present day. Team *Belonging* describes their final vision as "teaching Year 8's about belonging and balance" and having a "school where everyone feels they belong" (Figure 32). As a mid-term goal, they propose an incursion (or in-school excursion) using the Minecraft game they have designed with challenges based on their own stories of belonging. They plan to use the game to give younger students tips and encourage them to discuss connection and belonging in small groups. As a next step of their project, they plan to identify 'barriers' to belonging, such as friendship and study pressure and see how these can be integrated into their game scenarios.

Figure 32: Backcasting visualisation of the student-led project on belonging



As the end of the 'school day' approaches, the participants look tired and lose energy. After five hours online, we are all starting to feel the effects of 'Zoom fatigue'. We decide to wrap up and call it a day after a short check-out.

When we reconvene as a co-facilitator team a week later for a debrief, we reflect on the challenge of keeping the students engaged online compared to face-to-face. We agree that face-to-face is much better, but we also feel it was worthwhile to do the module online and that the feedback from the student survey was generally positive.

8.8 Analysis and discussion of supporting adaptability

In this reflection and discussion, I explore the changes in adaptability demonstrated by students, including indications of change in cognitive, behavioural, and emotional responses. This discussion is structured around the three learning objectives identified for developing the relational meta-competency of adaptability: shaping future stories, embracing paradox and ambiguity, and contemplating flux and stability. Based on participants' responses, I also consider the challenges and perceived barriers to developing adaptability.

8.8.1 Shaping future stories

One of my aims for the futures thinking module was for the students to be able to play with and consider different possible futures for themselves individually and collectively. Activities analysed above in the thick descriptions of the Odyssey Planning and Origami butterfly were identified by students as allowing them to consider alternative future scenarios, even though this experience was sometimes uncomfortable. Being encouraged to consider alternative future stories and pathways seemed to decrease stress and anxiety and open new ways to think about their future, shifting cognitive and emotional responses. One student reflected that it had changed the way she thought about the future and stress, saying, "I have learnt unique ways to think about the future - it has changed the way I think with the help of activities such as the Origami butterflies, which helped me to learn more about the relations between stress and the future."

An increase in cognitive and emotional adaptability related to having different possible stories about the future and a resulting reduction in stress was reflected in the following comment from the post-event survey:

It made me think about the future in different ways and taught me how to approach it from different angles (E.g., Odyssey planning, backcasting). It made me less worried about the future and showed me that there are different ways to get where I want, and I am less time pressured than I think I am (Student participant, 15 years).

This cognitive and emotional adaptability also extended from personal future stories to collective future possibilities, as expressed by one student, "Futures Thinking is a reasonable way to deal with the concerns and worries over the future, and it has helped make me feel calmer over the uncertainty it holds." This increased adaptability for some students was also associated with an increase their sense of agency in shaping one's future. As one student commented, "I've learnt that the future is very diverse and not set in stone." At the same time, another said, "It has widened how I think about the future. I used to think that there was only one possible future that would be 'acceptable'."

The theme of developing empathy for one's future self, which Claire introduced in the Origami butterfly activity, seemed to resonate with some students. For one student, developing greater self-empathy when thinking about her future and expectations helped her to adapt her study plan, as she explained:

I have learnt that if you are unable to empathise with your future self...you are quite likely to set unrealistic expectations. This drastically changed my study planning, as I make sure to set less than I think I can do (Student participant, 15 years).

This ability to adapt to changing circumstances and alter one's expectations of performance and behaviour was important during the COVID-19 pandemic when students reported reducing their expectations taking into account the extra stress and challenge of the circumstances, as discussed further in Chapter 14. In other words, the

meta-competency of adaptability is interconnected with the meta-competency of (self) compassion.

The invitation to think about possible future five-year plans in the Odyssey Planning activity made a few students feel uncomfortable, as articulated by this student who was focusing hard on a particular pathway and outcome, "I've always had this one path set out in my mind, and it was hard to try to look for the other paths that might branch off from where I am at right now." Another participant said the activity made her realise that she might have different pathways, saying:

I don't have to stick to the one that's always been in my head. And what I'm still curious about is exploring the stuff that I really want for myself rather than stuff that I hear people telling me and kind of differentiating the two (Student participant, 15 years).

This comment reflects a developing cognitive ability to differentiate her needs and desires from those identified by others and an alignment of the meta-competency of adaptability with the meta-competency of agency.

8.8.2 Embracing paradox and ambiguity

In creating an activity to enable embracing paradox and ambiguity, I drew on practices of mindfulness and storytelling to create an opportunity for the participants to engage with potential cognitive and emotional dissonance around complex future scenarios such as climate change. The Origami butterfly activity, for example, encouraged students to identify different aspects of their cognitive, emotional, and behavioural responses to climate change, acknowledging both excitement and hope as well as fear and grief as a valid continuum of responses. The Origami butterfly activity created emotional adaptability, with a new sense of hope for some participants, as can be seen in the following post-event survey reflection:

It made me realise that I can also be excited for the future. Because before, I've always just been scared of the uncertainties. So, I guess it's

brought a new perspective into how we can actually be excited for it to be beautiful, thank you (Student participant, 15 years).

Improving mindfulness of paradoxes helped a number of students improve their cognitive adaptability. One student commented that it gave her insight into how our hopes and fears about the future are connected, saying the activity "made me think deeply about the future and the anxieties and hopes I had regarding it while also creating something beautiful."

8.8.3 Contemplating flux and stability

Recognising flux and stability or noticing what is changing and what is more constant resonated with the students regarding values that might inform their attitudes and behaviour over time. Understanding your values was introduced as something constant to hold on to during change. However, students also noted that their values were changing over time, as one commented, "You as an individual change over time as different experiences impact you...you kind of need to think about how those affect you...how they change your values, what kind of person do you want to be?"

Mindfulness of flux and stability in the natural environment was also evident in the nature immersion activity as part of the place-based learning day, which is further discussed in Chapter 12.

8.9 Findings concerning adaptability and resilience

The observations and analysis outlined above in the thick descriptions show the benefits of experiential learning to develop adaptability and resilience. It was clear from the students' feedback and reflections that these learning experiences provided clear benefits in terms of cognitive and emotional adaptability in reducing stress and anxiety when thinking about the future. Behavioural changes were also noted in students managing their workloads and expectations of themselves, particularly during times of stress such as during the COVID-19 pandemic.

During the pilot program, I observed first-hand the importance of adaptability as students adjusted to school closures and moved to online learning. This increased

adaptability was evident to me as a researcher during and after the COVID-19 lockdowns. In my final small group interviews with students, we discussed the challenges of adapting to lockdowns and learning from home online. They talked about the stress of social isolation, studying and taking exams online, and the difference between their experiences of the first and second lockdowns. One student commented that while learning online was a considerable change during the first lockdown, there was not as much academic pressure. In contrast, during the second lockdown, they had to do exams. A student reflected that this brought new challenges, as they would usually be with and talk to their friends after the exams to debrief, whereas in lockdown, "it was just you and your thoughts." One student reflected on what they had learned about resilience during the pilot program as, "Adapting to change, to be able to keep a good headspace, while completing all of your exams and doing as well as you can." Another student explained her decision to moderate her academic expectations of herself during lockdowns, saying she had been thinking about what they learned about having empathy for our future selves.

There were also challenges in encouraging adaptability, particularly in the Odyssey Planning activity, where a few students felt it was a waste of time as they already knew what they wanted to do and felt they had to live up to their own expectations and those of their families to get into particular university degrees. Another potential challenge and barrier to engaging with the future and climate change is the need to provide psychological support for students if they need it, as these are difficult subjects that can cause anxiety and concern for young people. On further reflection, I would ensure there were specific opportunities for checking in and supporting students after an activity such as the Origami butterfly. In the next chapter I analyse the relational meta-competency of agency.

Chapter 9: Meta-competency - Agency

9.1 Introduction to chapter

In this chapter, I analyse the relational meta-competency of agency at a personal and collective level. Following a similar pattern to the previous chapter, I begin with an overview of the concept of agency and why it is necessary for young people now. Agency is then defined from a perspective of Western psychology and beyond-Western worldviews which are integrated to propose a relational meta-competency of agency for developing resilience. I identify experiential learning objectives related to agency, along with relevant pedagogies and learning approaches for supporting agency. Next, in the thick descriptions, I interpret students' responses to learning activities in the pilot program related to agency. Finally, using my identified learning objectives, I reflect on and analyse whether these learning experiences helped the students develop agency and what limitations and constraints were observed.

9.2 Why is the meta-competency of agency needed now?

In the context of uncertain futures and climate disruption outlined in Chapter 2, both individual and collective agency are vital for young people to maintain a sense of wellbeing and resilience (Delbosc & Vella-Brodrick, 2015; Melendro et al., 2020). Agency is commonly 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). In a society that is increasingly volatile, uncertain, complex and ambiguous, or VUCA (Bennis & Nanus, 1985) agency becomes a contested issue as a young person's ability of influence broader societal change is often limited. Agency has been identified as an essential protective mental feature for resilience in young people (Deakin Crick et al., 2015; Luthar, 1991; Melendro et al., 2020; Rutter, 2013). Again it is important to note that agency is a complex phenomenon and while much of the analysis of young people, agency and resilience has focused on individual agency in this study I aim to extend this to a more relational or collective understanding of agency where young people are supported within their socio-cultural systems (such as a school) to develop and enact agency to influence change.

Learning environments and schools that promote a sense of agency can play a preventative role for young people at risk, according to Rutter (2013, p. 482). Deakin Crick et al. (2015, p. 121) found that ‘resilient agency’ supports students in learning by regulating flows of energy and information “in order to engage with challenge, risk and uncertainty and to adapt and change positively.” Learners with this learning disposition were more likely to persist with learning and respond effectively to open-ended and complex learning challenges with the “capacity to respond profitably to risk, uncertainty and challenge over time” (Deakin Crick et al., 2015, p. 149).

Many young people in Australia want greater agency to influence action on climate change and other world issues, as discussed in Chapter 2. Feelings of frustration and powerlessness in the face of climate change are common, with 93% of young people in one study believing the government was not doing enough to address climate change (Chen et al., 2021). According to Bandura (1982), the inability to influence events and social conditions that significantly affect one's life can give rise to feelings of futility, despondency, and anxiety. In the theory of learned helplessness, people become inactive and depressed if their actions cannot affect what happens to them. However, combining a high sense of self-efficacy with environmental unresponsiveness tends to generate resentment, protest and collective efforts to change existing practices (Bandura, 1982). Young people taking direct action in the climate protest movements in Australia are experiencing the limits of their self-efficacy and being treated as criminals or, in some cases, as terrorists (Richie, 2023). Young people require personal and collective agency to feel they can influence change within their own lives and the broader society, with climate change directly impacting their future (Stanley et al., 2021; Verlie, 2021).

9.3 How does Western psychology define and understand agency?

Agency is defined by Bandura (2017), a seminal influence on the development of agency theory, as the “human capability to influence one's functioning and the course of events by one's actions.” He identifies four core properties of human agency: intentionality, forethought, self-reactiveness and self-reflectiveness (Bandura, 2006).

Intentionality refers to people making action plans and strategies for achieving those plans. Forethought pertains to future-directed plans that influence decisions and actions in the present. Following intention and forethought, self-reactiveness provides the motivation and action to achieve the intended goals. Finally, self-reflexiveness enables a person to reflect on past events and assess the actions' effectiveness. This understanding of agency from social cognitive theory recognises people as active contributors to their life circumstances while also being enmeshed and influenced within complex social systems and structures (Bandura, 1989, 2006).

The concept of agency is closely related to that of autonomy and self-efficacy. Autonomy is generically defined as a state of being independent or self-governing. Autonomy can refer to cognitive, behavioural or emotional aspects of independence for a young person. The concept of self-efficacy, developed by Bandura, is central to understanding agency in an educational setting. Self-efficacy involves judgements about whether one can successfully complete a challenging task. A strong sense of self-efficacy influences what one chooses to attempt and how well one can achieve it (Bandura, 1977, 1982).

Similarly, collective efficacy is a shared sense that people can solve problems and improve their lives through concerted effort. Bandura found that perceived collective efficacy can influence how much effort people make as a group and their ability to persevere in the face of setbacks (Bandura, 1982). A sense of agency and strength of self-efficacy has also been found to predict behaviour change, which is essential to making the significant changes needed for an ecologically healthy future (Bandura, 2006; Williams & McEwen, 2021).

Agency cannot be taught or given; instead, it is an "emergent property of the recursive interaction between self and context" (Deakin Crick et al., 2015, p. 151). Education, however, can create the conditions for students to develop a sense of agency and autonomy through their individual and collective learning experiences. Most psychological studies with young people focus on personal agency, with limited attention given to the importance of collective agency.

9.4 How can we understand agency from a beyond-Western perspective

Here, I examine what new light Buddhist and First Nations knowledge systems can bring to understanding agency as a relational meta-competency. Agency and autonomy have been identified by Aboriginal elder and scholar Mary Graham as being essential to education for children and young people (Graham, 2009). During an online webinar I attended, I asked Mary how to best support young people's mental health and resilience in school. Her reply focused on the importance of schools providing places for young people to experience agency, autonomy, and self-determination. One example Mary recommended was having a school garden or eco-learning area that students knew was 'their place' where they could play, chat, or even argue if they needed to (Graham, 2021).

According to Graham, human agency from an Aboriginal perspective can only be understood in relation to place. Place becomes an 'ontological compass' for human agency and behaviour, which informs not only where we are but also who we are (Graham, 2009, p. 5). Therefore, human agency, action and behaviour cannot be separated from place and our obligations as stewards and guardians of Country. While one has some autonomy as an individual, it is always within "complex patterns of relatedness and communal obligations" (Yunkaporta, 2019, p. 94). This individual autonomy is reflected in the phrase Yunkaporta describes as being used regularly in his community: 'Nobody boss for me!' indicating no centralised control or hierarchy (Yunkaporta, 2019). Within Aboriginal communities, a series of what Graham (2009) describes as 'soft hierarchies' enable a balance of power and authority between genders and ages. In this way, individual agency and autonomy are always located within a relational field of obligations and community.

This understanding of agency and autonomy being located within a relational field is also described in the Eight Ways of Aboriginal Learning as follows:

Relational responsiveness is a protocol of attending to relational obligations to the field you are working in, relating and responding

holistically to people, land, culture, language, spirit and the relationships between these with integrity and intellectual rigour (Department of Education and Training New South Wales, 2021).

Graham (2021) calls on educators to look beyond an individual 'survivalist mode' (for example, how can we as a species survive climate change) and instead focus on a relational ethos of our connection with the land and each other and our obligations arising from these relationships. Learning experiences that help us remember and notice these relationships with each other and Country can help develop a sense of both personal and collective agency (Graham, 2009).

Agency takes more of an internal focus in Buddhism, emphasising coming to know and understand one's mind and noticing how one reacts to external circumstances and environments (Cassaniti, 2012). Reflecting on how one acts and reacts, and refining behaviour based on this self-reflection contributes to a greater sense of personal agency. Rather than having God as a creator or causal agent, such as in Christianity, a Buddhist worldview emphasises the self as a causal agent (Cassaniti, 2012). However, this natural agency of the self is always held within the natural order of karma or cause and effect. An individual is encouraged to act ethically and compassionately in the world to collect 'merit', which may then, through karma, positively influence their future environment and circumstances (Marques, 2010). In this way, agency is expressed through positive actions in the world that can contribute to future happiness. In the following section, I explore how these relational perspectives on agency contribute to a relational meta-competency of agency that can be promoted through experiential learning.

9.5. How do I define and understand agency for this inquiry?

In this inquiry, I extend a Western concept of agency to incorporate relational concepts from beyond-Western worldviews. My relational definition of agency encompasses both personal autonomy with collective agency through understanding and influencing change within complex systems. A strong sense of personal agency

can provide the confidence for young people to navigate the uncertainty around their future, while a sense of collective agency is empowering to help them feel they might influence their future. Based on this definition, I identify three key learning objectives for developing greater agency, which are integrated into the learning experiences of the pilot program and analysed in the thick descriptions below.

- Experiencing autonomy and self-efficacy: being able to act independently and decide one's future;
- Seeing the value of lived experience: reflecting on one's lived experience and the value of what has been learned; and
- Creating change within complex systems: learning to map and understand how complex systems work and how to influence change within them.

9.6 What learning experiences and activities are used to support agency and why?

The learning experiences and activities integrated into the pilot program to promote a greater sense of personal and collective agency include learner-led inquiry, project-based learning, systems thinking and user-centred design practices.

In the pilot, I integrated opportunities for students to experience autonomy and self-efficacy through learner-led inquiry and project-based learning. Students worked in small teams of three to four students over six months to identify, design and implement a learning experience related to wellbeing and resilience for younger students. Project-based learning is an inquiry-based form of learning where the students lead the focus of the inquiry. Learners construct their own knowledge by exploring real-world problems "through asking and refining questions, designing and conducting investigations, gathering, analysing, and interpreting information and data, drawing conclusions, and reporting findings" (Blumenfeld et al., 2000, p. 150).

Learner-led inquiry requires active engagement of students to determine the focus, carry out the inquiry and then present their findings. Students applied user-centred design methodology and worked through the stages of empathising, defining, ideating, prototyping, and testing their learning experiences with younger students.

The key liaison teacher supported this pedagogy as an opportunity to promote 'student voice' with these projects being presented to the school's Wellbeing Committee at the end of the research.

Students were encouraged to draw on their own stories and lived experiences in designing learning experiences for younger students. They were asked to reflect on their experience beginning secondary school and identify what they would have liked to have known when they started that they know now. They were then asked to use this lived experience to design a learning experience for younger students to promote their resilience and wellbeing. The intention of using this style of participatory design was for students to develop a sense of confidence and agency in the value of their own lived experience to support younger students.

Systems thinking was another methodology to promote collective agency for students. Understanding how a complex system works can develop a greater sense of agency for actors within that system (Matoba, 2021; Meadows, 2008). Students applied soft systems methodologies in their project-based learning during the pilot program (Checkland, 1989), including rich pictures, causal loops analysis, and identifying boundaries and interventions. The students then applied this system mapping and analysis to inform the design of an intervention using safe-to-fail experiments. Safe-to-fail experiments are multiple small experiments or interventions in a system to see how the system responds using the 'probe, sense respond' approach from the Cynefin framework (Snowden & Boone, 2007).

9.7 Thick descriptions, observations, and insights

This section provides a series of thick descriptions that delve into and interpret learning experiences where students have displayed a sense of agency during the pilot program. The first scene in the thick description is from *Module 3: Storytelling and perspective*, held at the university. The second two are from *Module 4: Systems thinking*, held online, and the final scene is from a presentation at the end of the pilot program to the school's Wellbeing Committee and senior leaders. Following on from

the thick descriptions, I analyse and discuss them, articulating findings concerning agency and resilience.

9.7.1 Scene 1 – Finding a focus (15th June, 2021)

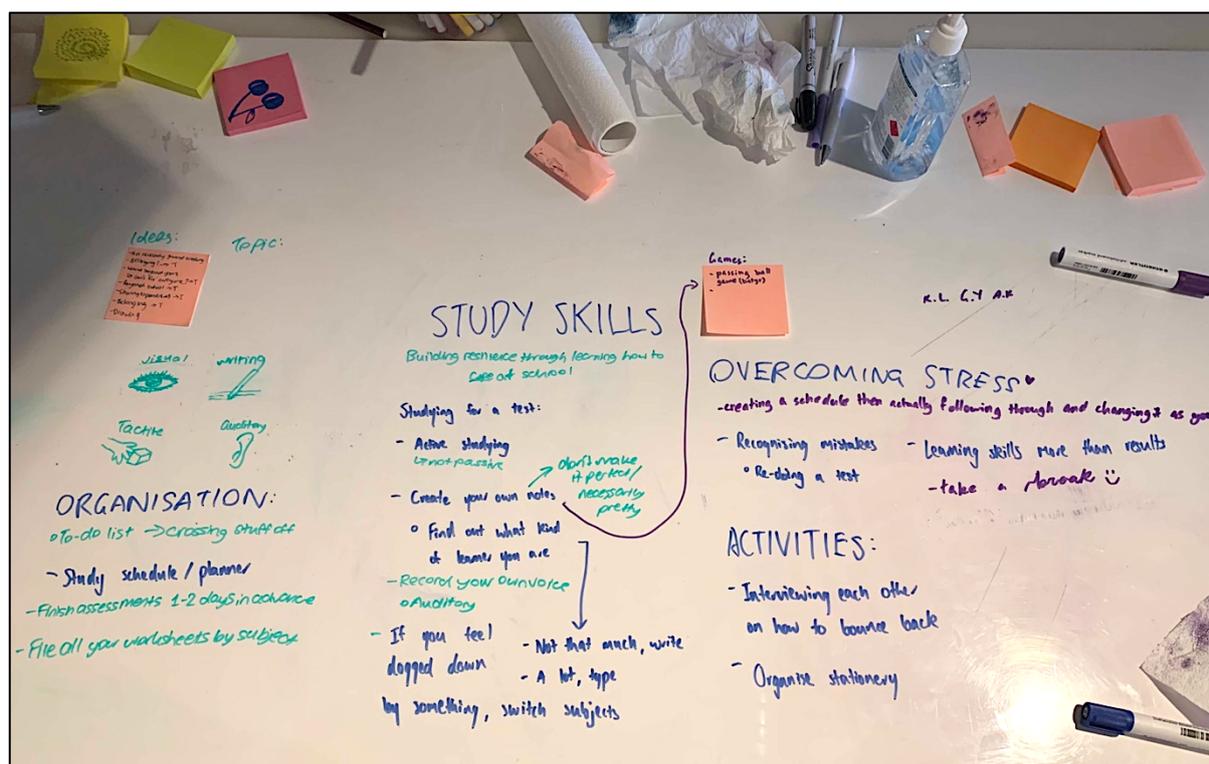
(INTERIOR: DESIGN STUDIO IN UNIVERSITY, MODULE 3: STORYTELLING AND PERSPECTIVE)

Students are working in the studio space at the University of Technology Sydney, which has a colourful, messy, chaotic vibe. Clustered in small groups around their tables, they are designing a learning experience for Year 8 students to help them develop resilience and wellbeing (Figure 33). One team appears very happy to be able to write directly on the tabletops, and they are busy chatting, writing, and planning their projects (Figure 34). Each team is responding to the questions, 'What did you wish you knew in Year 8 about resilience and wellbeing that you know now?' and 'What have you learned that you would like to share, and how might you share it?'

Figure 33: Students working in creative studio space.



Figure 34: Student team project planning on the table



After working for a while in the teams, we come back into a larger group to hear students' project ideas. The three teams give the following outlines of their proposed projects. The first team calls themselves *SLYS*, standing for 'Stress Less Yes Success'. They want to focus on helping younger students with study skills and recognising what learning style works best for them (kinaesthetic, visual, auditory or reading and writing) (Figure 34). The team explains that this helps them as learners to overcome stress and be more organised, and it is something they wish they had known earlier at school. One student shares that she found out recently that she is an auditory learner, and as a result, she now likes to record revision notes and listen to them. Other ideas the team thought could be helpful for younger students include how to create a study schedule, note-taking, and learning from feedback. Using this reflection on their lived experiences and realising that this could be useful and relevant for helping younger students seems to bring them alive, and they talk animatedly about how they might achieve their goals.

A second team, calling themselves *Belonding* (a humorous name after my typo on Belonging), want to focus on connection and belonging. Firstly, they explain their motivation that they feel younger Year 8 students have had a rough time starting high school during COVID-19 and missed out on mentoring programs with older students. The team is concerned that these younger students didn't have the same experience they had starting school and may feel like they don't belong. The team wants to create 'belonging, connection and trust' with older students as mentors. Some ideas they discuss are running a co-design workshop with the younger students and organising a special day for these younger students to spend time with more senior students. One student talks about the importance of not 'sugar-coating' the experience for younger students and normalising feelings of isolation and loneliness by telling them about their stories from when they started at the school. In talking about using their own stories to inform and support the younger students, I noticed a sense of confidence and agency in the team.

The final team, called *Snoozzz*, are interested in improving the culture around sleep in the school. They talk about the unhealthy sleep culture, where it has become a 'badge of honour' to get the least sleep and how students like to brag if they get no sleep. They identify that stories get passed on from older to younger grades, and it starts to feel like there is no choice, and you end up "running around in circles, not getting enough sleep." From their own experience, they identify lack of sleep as a problem negatively impacting their mental health. The key liaison teacher, sitting at their table, encourages them, saying this is a big issue at the school impacting the wellbeing and resilience of students. The teacher tells them that the school has organised information sessions with teachers and experts; however, nothing seems to improve the culture around sleep. She feels that learning about it from older students might have more impact on the younger students. The team seem buoyed and more confident by this discussion. When they report back, they believe they can make a difference, as they have experienced the impact of poor sleep culture themselves and can share their experiences. In the break, the teacher comments on how excited she is about this team's work and how it can help give the students a voice and agency within the school.

9.7.2 Scene 2 – Exploring the why (20th July, 2021)

(DIGITAL: ZOOM CALL ONLINE, SEVENTEEN FACES, MODULE 4: SYSTEMS THINKING)

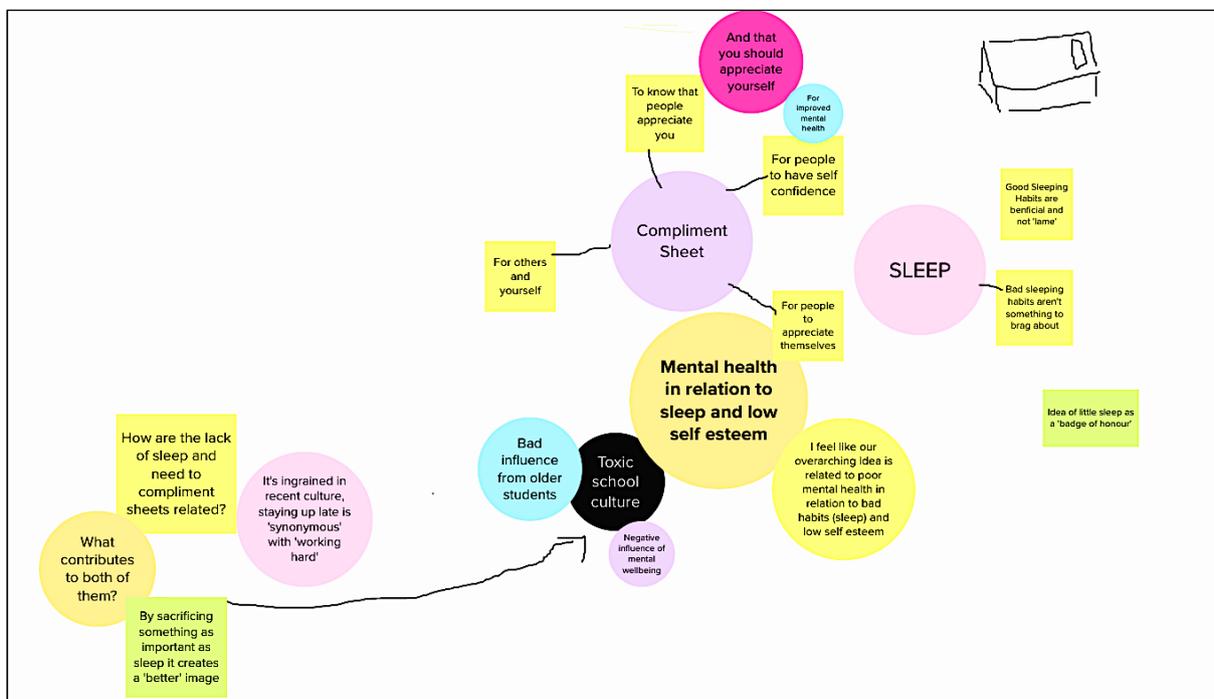
Today, we meet again online, joining each other virtually from different parts of Sydney and beyond. For the check-in circle, students share something from their home environment that has helped them stay resilient during the COVID lockdowns. Some students bring soft toys, some their pets, and others have photographs that make them feel more connected and saner. As co-facilitators and teachers, we also join the show and tell, bringing something special from home. I bring my cat, Lila, who likes to jump through the skylight and surprise me while I work in the attic. The students seem a bit quieter and more reserved than the last time we met; however, they start to warm up as we go around and share what we have each brought. I lead a mindfulness practice with a full body scan, relaxing each part of the body and inviting each person to imagine and visualise our energetic connections even though we are geographically separated.

Next, I introduce systems thinking and discuss how and why we use it. In the first activity, students draw a visual map of where their breakfast came from, with as many elements and connections as possible. The students draw their maps on Mural, an online visual collaboration tool. They show their self-efficacy and digital skills by quickly learning to operate on this new platform. Their maps become complex very quickly. Chatting as they draw, one student comments on the interconnectedness of systems and how the shortages of items in the supermarkets during COVID-19 demonstrate how interdependent we all are.

Following this, I remind the students of the method of rich pictures they learned in the co-design workshops to map complex systems visually. Each team then works in a Zoom break-out room, using Mural to map the elements and dynamics of their project's system. Team *Snoozzz* reports on their system mapping and rich picture, identifying critical dynamics and insights influencing sleep culture at school (Figure

35). This method helps them think more about why there is a toxic culture around sleep in the school; as one student explains, "Staying up late is synonymous with working hard because you're sacrificing something important. So that it creates like the better image of a hard-working student." Their map has a central element labelled 'mental health in relation to sleep and low self-esteem', which overlaps with 'toxic school culture' and 'bad influence from older students'. A student explains how the map has helped them see how their role as older students gives them more influence in the system and that sharing their stories might influence younger students to develop healthier habits around sleep.

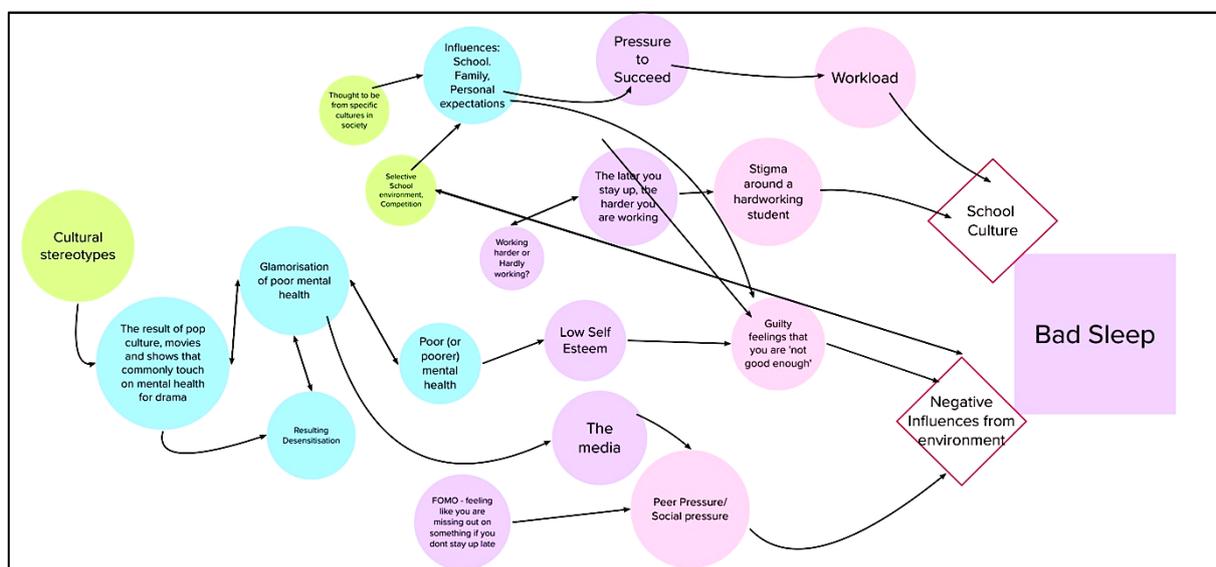
Figure 35: Team Snoozzz rich pictures visualisation of school sleep culture



The following learning activity is the 15 whys adapted from the five whys method for root cause analysis. This method is used to find the underlying or root cause of a problem by repeatedly asking why. Again, the teams move into break-out rooms in Zoom, where they work on Mural to map the 15 whys contributing to their challenge. Team Snoozzz proudly presents their 15 whys analysis (Figure 36) identifying two root causes for school sleep issues: ' school culture' and 'negative influences from the environment'. Firstly, they explain all the contributing factors to the 'school culture',

including pressure to succeed, being influenced by school, personal and family expectations, guilt, peer pressure, and idolising hard-working students. I am surprised by the level of complexity in how they talk about these contributing factors, such as social media, fear of missing out and 'glamorising' poor mental health. We discuss why students don't change their behaviour if they know this. Then the conversation moves to a deeper and more personal level, and one student reveals that she sometimes feels guilty and like she is 'not good enough,' which she associates with family expectations and low self-esteem. It feels like a sensitive and vulnerable disclosure.

Figure 36: Team Snoozzz 15 whys analysis



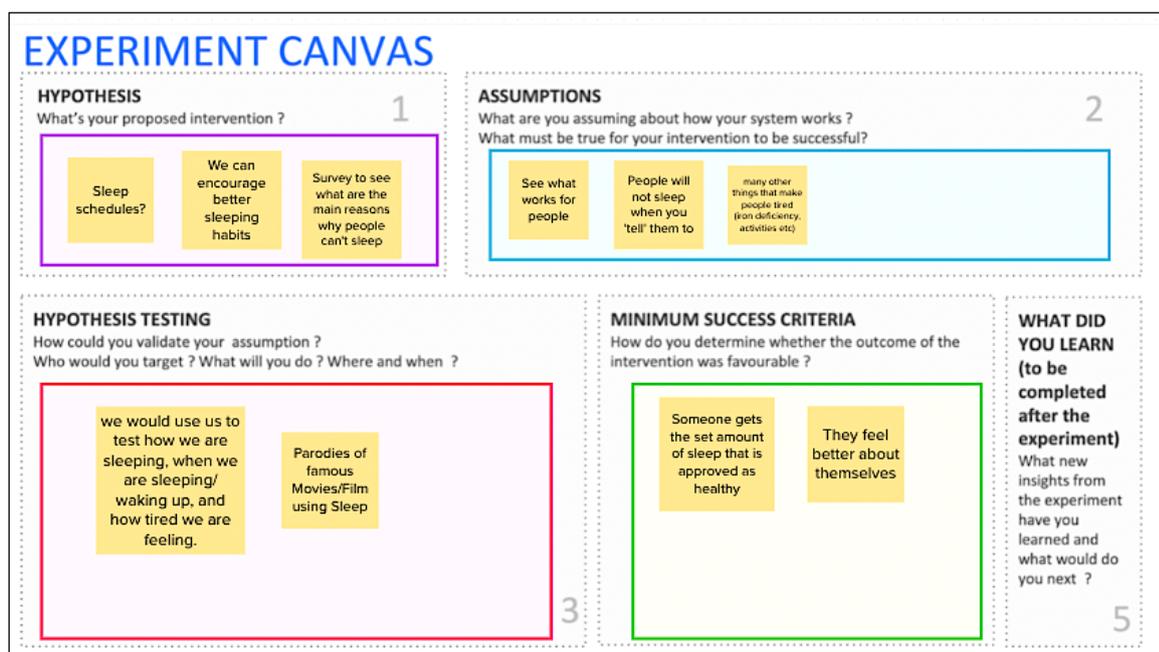
9.7.3 Scene 3 – Experimenting and prototyping (20th July, 2021)

(DIGITAL: ZOOM CALL ONLINE, SEVENTEEN FACES, MODULE 4: SYSTEMS THINKING)

In the second part of the systems thinking module, students continue working in their teams in Zoom break-out rooms, designing safe-to-fail experiments to intervene in their system and see how it responds. Each team uses an experiment canvas (Figure 37) to help shape their experiments to be run over the next few weeks. When we return to the main Zoom room, each team explains what they plan to do with their experiments. The *Snoozzz* team share their experiment canvas and talk about their

hypothesis on how to encourage better sleeping habits. They think it will be important to help younger students question their own assumptions and have their own experiences, as "people will not sleep if you 'tell' them to." Some possible safe-to-fail experiments they want to try include recording their own sleep habits with a daily sleep diary "to test how we are sleeping, when we are sleeping/waking up and how tired we are feeling." At this point of the day, we all feel tired from being online for five hours, and we agree to wrap up. I thank the students for persevering and showing their resilience despite the challenges of learning online.

Figure 37: Team Snoozzz experiment canvas



9.7.4 Scene 4 – Teaching the teachers (9th December, 2021)

(INTERIOR: SCHOOL HALL, FINAL PRESENTATION)

The students stand nervously at the side of the stage in the school hall while the teachers settle in their chairs in the audience. There is a massive screen behind a lectern where their work will be presented to the senior leaders of the school and the staff on the Wellbeing Committee. A few students are madly making final edits to slides as the Principal introduces the research project and the teams that will be presenting. It is a hot and humid day close to the Christmas break, and there is a sense

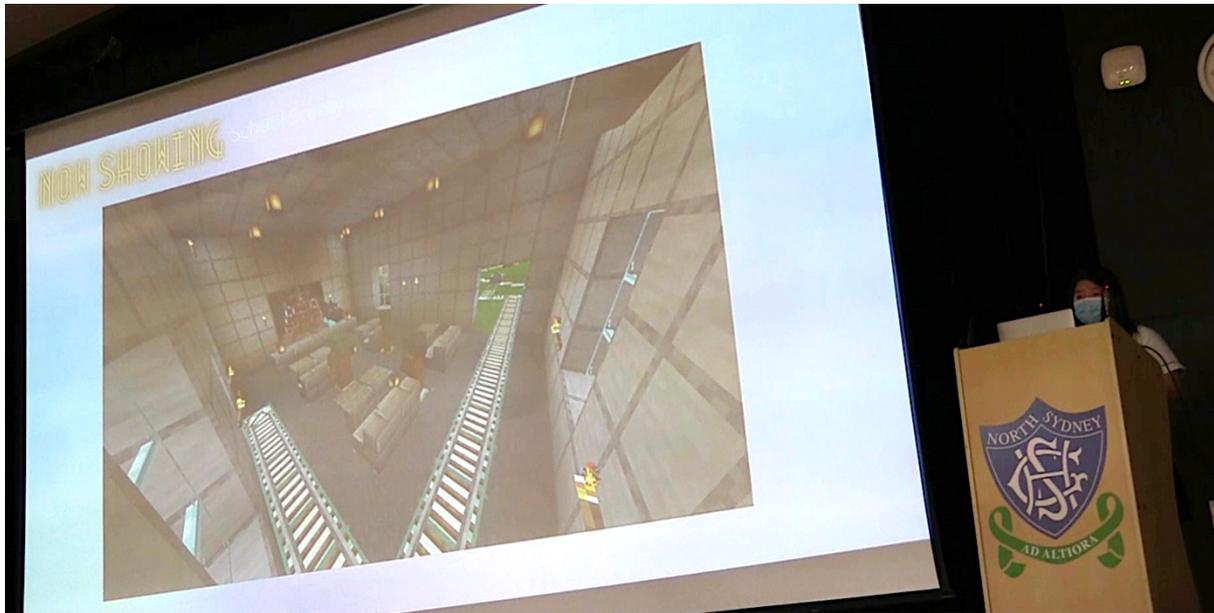
of relief in the air that this challenging year, with its lockdowns and disruptions, is nearly over. Our key liaison teacher is excited that the students have been asked to share their work and sees this as a breakthrough in students having more input into strategy around wellbeing and mental health.

Each team comes up and presents their projects to the Wellbeing Committee. They talk about the learning experiences they have designed and run with the younger students and what they have learned about resilience and wellbeing. Team *Belonging* aims to "foster a sense of belonging and connection" through digital gaming using Minecraft, where players choose their own learning adventures. The first presenter starts with a personal story of how hard it was starting high school, even with the 'super cool program' they had with two weeks of intensive bonding and mentoring from older students. The current cohort of younger students, she says, have yet to feel this connection due to COVID-19 disrupting their start at the school. She identifies this younger cohort's three main problems as "change, connection, and competition." Then expands by stating, "the selective school culture that we have - the stigma, the competitiveness - makes it difficult for people to make a connection with each other."

The teachers in the Wellbeing Committee are listening attentively despite the heat and humidity. The next team member talks about how the students have used their own experiences and challenges with connection and belonging to create a series of scenarios that have been animated in the Minecraft game. The purpose, she explains, is for the game to be played in small groups so that the students can discuss and make decisions together about which path to choose and why. These small group discussions also aim to help build connections between the students. The following speaker is the designer of the Minecraft game, and she shows one of the scenarios that looks fabulous on the big screen (Figure 38). This scenario, she explains, is set late at night when you have an exam the next day; you can choose to study or play a game with a friend, with each decision leading to different outcomes. The presenter explains that the purpose is "to see how students react to the simulation, how they take what they have learned into situations and build onto what they can do in the future." The

game designer says she plans to further test the game with younger students and continue developing it based on their feedback.

Figure 38: Team *Belonging* Minecraft game scenario



Following the student presentations, the Wellbeing Committee congratulate and thank the students for all their hard work and discusses how valuable it is to design and share these experiences with younger students. The teachers talk about how challenging the past few years have been for the wellbeing and mental health of students and encourage the students to continue with these peer projects next year. They believe that younger students will be much more open and receptive to initiatives from their peers, particularly more senior students.

9.8 Analysis and discussion of supporting agency

The pilot program effectively created opportunities for students to develop personal and collective agency, although this was impacted to some degree by the COVID-19 lockdowns. In this section, I refer to the three experiential learning objectives identified above for the relational meta-competency of agency to analyse and discuss cognitive, emotional and behavioural changes in students relevant to agency and

resilience. I also highlight challenges and questions about agency and suggest changes for future programs.

9.8.1 Experiencing autonomy and self-efficacy

The learning experiences of the pilot program, in particular the project-based learning component, were effective in creating opportunities for students to develop their agency and experience a degree of autonomy and self-efficacy within the school system. Participant feedback demonstrated that these student-led projects increased student confidence and a sense of collective agency in influencing change within the school system. This change was both cognitive and behavioural, as reflected in feedback from this student, “You can come up with solutions: there are things you can do. You don’t just have to sit and take it.”

This sense of increased agency and collective self-efficacy was also evident in the post-pilot interviews, where one student reflected:

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 be this way. It doesn't always have to stay this way. We can change things. And I think that this program has really helped with my perception of that (Student participant, 15 years).

From this quote, the ability to 'change things' within the school system reflects a cognitive belief that collectively, students can overcome challenges in the school's culture. For students to have this sense of agency to make changes, it required not only self-efficacy of the students but also a supportive environment where the teachers, school leaders and Wellbeing Committee recognised the value of students' ideas and initiatives. The students expressed a strong sense of purpose in being able to help the younger students and were motivated to work on their projects outside of the pilot program's allocated times. Emotionally, the experience developed confidence in their abilities to effect positive change in the school community.

9.8.2 Seeing the value of lived experience

Creating learning opportunities where young people are seen as experts in their own lived experiences effectively promoted a more robust sense of agency. Students appeared to be inspired cognitively by being asked to reflect on and bring their own experiences to the design of their projects and were emotionally committed to improving the situation for younger students. As a 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." Another student wrote in the post-pilot survey, "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."

In learning from their difficult experiences (such as the student who spoke about her challenges starting secondary school), students demonstrated increased confidence when discussing how they might help younger students, connecting with the meta-competency of compassion. This increased confidence was reflected in a comment in the post-pilot survey, which said, "Talking to my group about how to potentially help the younger students has helped to improve my confidence." Feedback from students in the final group interviews also showed increased agency and confidence that sharing their experiences and stories could help improve the wellbeing and resilience of younger students.

9.8.3 Creating change in complex systems

Systems thinking and soft systems methods, including rich pictures, root cause analysis (the 15 whys), and safe-to-fail experiments, were used by students to understand the dynamics of the school system that they were looking to create change within. These methods effectively created an opportunity for students to locate themselves within the school system and identify potential points of change or intervention. For example, in the thick descriptions above, team *Snoozzz* identified issues impacting problems with sleep in the school system such as school culture, the pressure to succeed and negative influences from the environment, such as social

media. This mapping and awareness of factors influencing lack of sleep informed their approach to designing experiments such as the sleep diary. Students showed confidence and autonomy in designing and trialling their safe-to-fail experiments, such as the sleep diaries, and then iterating the design based on their experiences.

Understanding the dynamics of relationships within the school system was also influential in developing greater confidence and self-efficacy in validating the influence senior students might have on the behaviour and attitudes of younger students. This understanding of roles and dynamics can be seen in the presentation team *Snoozzz* made to the Wellbeing Committee when they stated:

This is probably going to be more effective because this advice is coming from other students. It will feel less like you are being talked down to and more like someone is like just 'yeah this is a cool thing I do, and it might help you'. And they are more likely to think that this will actually help as it is being used by someone who is in their situation and seems a lot like them, which means they are more likely to take the advice and do it (Student participant, 15 years).

9.9 Findings related to agency and resilience

These learning experiences showed that it is possible to expand students' experience and understanding of relational agency, i.e. agency of themselves as individuals and as a collective, to change the complex situations within which they find themselves. Developing confidence and self-efficacy through project-based learning combined with systems thinking was an effective approach to promoting a stronger sense of agency, enabling students to experiment with creating change within the school system. The group project-based learning aligned with key characteristics of learning for uncertainty (Table 3) being student-led, embodied (in some cases), interconnected, experimental and exposing students to novel and ambiguous situations. Students expressed a growing sense of agency when encouraged to map and understand their school as a complex adaptive system and develop safe-to-fail experiments to see how they might shape and change this system as can be seen in the comments above. In

stark contrast I observed a situation where a student team preparing to present their findings were critiqued by staff for spelling errors, which appeared to then undermine their confidence and agency.

Creating an environment for 'student voice' issues impacting students resilience and wellbeing required the support of teachers and school leadership in recognising the value of the students' lived experiences and their ability to design learning experiences for younger peers. The student projects demonstrated the potential for building relationships between different age groups in the school to strengthen a sense of collective agency, connection, and belonging. In future versions of this program, I would encourage student teams to run multiple rounds of prototyping and testing their experiments while building stronger relationships across ages and cohorts. These same methods could be used for students to engage with challenges and design interventions within the broader community.

Some challenges and constraints experienced in developing a sense of agency were due to the COVID-19 pandemic, where students felt a loss of agency during the lockdowns and online schooling. Another constraint was finding suitable times for different student age cohorts to work together, which was challenging both during and after the COVID-19 lockdowns. In the next chapter, I focus on the meta-competency of compassion.

Chapter 10: Meta-competency - Compassion

10.1 Introduction to chapter

In this chapter, I explore compassion, the third relational meta-competency for developing resilience for young people. I explain why compassion is necessary and summarise a Western psychological understanding of compassion. Then, I distil Buddhist teachings and First Nations worldviews on developing compassion and explain how I have integrated this into my thinking about designing learning experiences for developing compassion in the pilot program. I interpret students' experiences in the pilot program regarding self-compassion and compassion through thick descriptions. Finally, I analyse to what extent compassion has been experienced in the pilot program using experiential learning objective, and how this could be extended further.

10.2 Why is the meta-competency of compassion needed now?

In Chapters 2 and 3, I explore and analyse the increased mental health challenges and the need for greater resilience for young people in response to more complex and challenging contexts. Understanding both one's own and, hence, other people's experiences of suffering and psychological distress with compassion is essential for developing a more compassionate and caring environment in schools and the broader community. While empathy is essential for successful social cohesion, excessive empathy has also been found to lead to emotional overwhelm, distress and burnout, as evidenced in caring professions (Bird et al., 2010; Klimecki et al., 2014). Conversely, compassion, which accompanies the recognition of suffering with the desire to act and help, has been found to foster emotional wellbeing, positive emotions and pro-social behaviour (Fredrickson et al., 2008; Klimecki et al., 2014). The meta-competency of compassion, for this reason, is closely connected to the meta-competency of agency.

Compassion and self-compassion have been found to positively impact resilience and wellbeing for young people (Bluth et al., 2018; Breines & Chen, 2012; Neff & McGehee, 2010). Developing self-compassion can act as a buffer against stress, improve mental health and increase resilience (Bluth et al., 2018; Breines & Chen, 2012). Kramlich &

Beck (2021, p. 28) found that some benefits for young people of self-compassion (2021, p. 28) include "greater ability in perspective-taking and more emotional stability and calmness." According to Neff and McGhee (2010), self-compassion provides an alternative model for thinking about how young people view themselves, which may promote resilience. They describe self-compassion as the "ability to hold one's feelings of suffering with a sense of warmth, connection and concern" (Neff & McGehee, 2010, p. 226). Research on self-compassion among adolescents has found that those with high self-compassion report less depression, anxiety, and stress, less self-injury and risk-taking (Bluth et al., 2018; Bluth & Blanton, 2015; Marsh et al., 2018; Xavier et al., 2016). Meditation and mindful self-compassion programs for young people can positively affect mental health and provide a buffer against stressors and mental health challenges (Bluth et al., 2018). With education and learning, students who have greater self-compassion have been found to respond more 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).

10.3 How does Western psychology define and understand compassion?

Compassion is a more active or pro-social form of empathy that extends this capacity to relate to others' emotional states with the motivation to act or help (Singer & Klimecki, 2014). The exploration and practice of compassion have been mainly in the domain of religious education both in society and schools. In the late 20th-century, it was integrated into secular ethics and began to be studied from the perspective of social and developmental psychology and neuropsychology (Singer & Klimecki, 2014). Compassion has become a focus of neuroscientific research, which has demonstrated that meditation practices can increase experiences of compassion in young people (Klimecki et al., 2014).

Neurological studies have found that different parts of the brain are activated by empathy and compassion (Klimecki et al., 2014). One study that compared the neurological responses of the same participants to both empathy training (showing

images of people suffering) and compassion training (using contemplative techniques aimed to cultivate feelings of kindness and care) found marked differences in both psychological and neurological changes after a short period of training in each competency (Klimecki et al., 2014). The parts of the brain activated by compassion are typically associated with reward, love, affiliation and care (Klimecki et al., 2014). The research demonstrated that the “plasticity of adaptive social emotions” within relatively short periods of training in compassion can result in functional brain plasticity (Klimecki et al., 2014, p. 878). After two weeks of regular mindfulness training in developing compassion, participants showed increased pro-social behaviour, positive emotional responses and better coping strategies (Singer & Klimecki, 2014).

10.4 How can we understand compassion from a beyond-Western perspective?

Buddhist and First Nations worldviews offer a complementary perspective to Western psychology, with Buddhists having studied and practised methods to develop compassion for thousands of years. Buddhist practices such as mindfulness of loving kindness, Tong Len and self-compassion are integral to Mahayana Buddhist philosophy and psychology. Aboriginal scholars stress the importance of interconnectedness as a motivation for compassion.

Mahayana Buddhists describe wisdom and compassion as the two wings of a bird, meaning that to practice compassion effectively, a person first needs wisdom to know how to best respond compassionately to another's needs (Siegel & Germer, 2012). One of the foundational Buddhist practices for developing compassion is loving-kindness meditation. This is a form of mental practice carried out in meditation where one cultivates feelings of love and kindness for others through a series of methodical steps (Kumar, 2002; Singer & Klimecki, 2014). In one common practice, the first step is to imagine someone for whom you have an uncomplicated feeling of love, such as a pet or a child, and generate a strong feeling of love towards this person or being. The next step is to imagine people you do not know very well, for example, strangers who serve you in a shop, and imagine directing this loving kindness towards them. The final step

is to imagine people who have hurt you or you find it challenging to be around and generate the same loving kindness for them (McDonald, 2005). This practice aims to cultivate feelings of benevolence and love for all sentient beings (Singer & Klimecki, 2014). As well as generating a warm heart and loving-kindness, this practice also incorporates the practice of equanimity (or equalising oneself with others) based on the understanding that just like us, all living beings want to be happy and not suffer (Kumar, 2002; McDonald, 2005). Developing self-compassion is an essential first step within Mahayana Buddhist practices for developing compassion.

Another practice of compassion in Mahayana Buddhism, with origins in Tibetan medicine, is called Tong Len, meaning 'sending and receiving' (Pagliaro et al., 2016). In this meditation practice, one receives the suffering of other beings and transforms it via breathing techniques into feelings of love and compassion (Pagliaro et al., 2016). This practice integrates self-compassion with compassion for others, using one's lived experiences of suffering as a catalyst to develop compassion for others experiencing the same emotions or challenging situations. For example, suppose one suffers from stress and anxiety because of financial troubles. In that case, the practice is to think of all the other people who might be experiencing the same thing and breathe in their suffering as black smoke, then imagine converting it to light in one's energetic heart centre and breathing out abundance and security. Clinical trials of a regular mindfulness practice of Tong Len with cancer patients showed reduced depression and anxiety (Pagliaro et al., 2016).

Several Aboriginal scholars describe the concept of compassion as closely related to ways of knowing and being in the world that embraces interconnectedness and spirituality (Goreng Goreng, 2018). In her seminal thesis, exploring the process of becoming an Elder in Aboriginal communities, Goreng Goreng (2018) describes the learning as a lifelong practice, requiring a deep understanding of the nature of interconnectedness between self, community and Country. It is an embedded learning practice that begins as children learn to imitate and embody *Kanyini*, described by Goreng Goreng (2018, p. 77) as “the embodiment of the power of harmony and harmonising the self with everything around you so that you are full of love and peace”

or “the unconditional love and responsibility towards all things” (Goreng Goreng, 2018, p. 71). In her research, Goreng Goreng spent extended periods with Anangu Elder Kummunara (Bob) Randall, who describes Kanyini and this compassionate way of being in the world in the following passage:

The way in which one can live in Kanyini harmony and unconditional love with all around us. The Kanyini principle applied in my life means that I relate in harmony with myself, my family and my Country, and this sustains my Tjukurpa – my belief system or spiritual sacred life (Randall in Goreng Goreng, 2018, p. 74).

This profoundly compassionate way of being in the world, says Goreng Goreng (2018), requires an awareness of the impact of one’s behaviour, actions, feelings and ways of living on everything around you. Maori scholar Tyron Love (2019, p. 239) explores concepts of care and compassion in the work domain. He refers to the Maori value of *whanaungatanga*, meaning to “commit...to the wellbeing of the group, thereby embracing a relational view of work, and focus attention on making connections between people” (Love, 2019, p. 239).

10.5 How do I define and understand compassion in this inquiry?

I define and understand compassion in this inquiry as integrating Western, Buddhist and First Nations perspectives. Compassion is understood here as being based on a foundation of self-compassion through which one recognises our common humanity and experience of suffering and seeks to actively help others. It is based on understanding a deep, relational interconnectedness with others and all of life. Synthesising the perspectives above, I identify three experiential learning objectives for developing greater compassion, which are integrated into the design of the pilot program:

- Developing self-compassion: recognising and accepting difficult emotions and practising self-kindness;

- Seeing from multiple perspectives: developing compassion by being able to see someone's behaviour and actions from different perspectives; and
- Understanding the backstory: getting to know a person's history to understand what motivates and challenges them.

10.6 What learning experiences and activities are used to support compassion and why?

A range of learning experiences were integrated into the pilot program to develop the relational meta-competency of compassion, including practices of self-compassion inspired by Buddhism, storytelling to see a situation from multiple perspectives, and understanding a person's backstory to understand their behaviour and actions better.

Developing self-compassion and compassion towards others is regarded as significant in transformative learning (Kramlich & Beck, 2021; Taylor & Cranton, 2013). Skills and competencies related to developing compassion and self-compassion include reflection, active listening, perspective-taking, mindfulness, understanding what one is thinking and feeling and having the capacity to show understanding for what others are feeling and experiencing (Kramlich & Beck, 2021; Taylor & Cranton, 2013). During the pilot program, a range of activities focused on developing self-reflection, self-awareness, active listening and mindfulness skills helped to promote compassion. A mindfulness practice for self-compassion, RAIN (Recognise, Allow, Investigate, Nurture) (Brach, 2020), was introduced to students in *Module 2: Self-awareness, resilience and personal agency*.

The co-design practice of empathy interviews and mapping described earlier in Chapter 6 aimed to develop empathy and compassion with their peers. The method of empathy interviews is used to listen to what a person is saying and how they are feeling, what they are doing and what they are thinking (Nelsestuen & Smith, 2020). The practice requires using open questions, focusing on feelings, observing body language, encouraging stories, and noting what people say, do, think and feel (Nelsestuen & Smith, 2020). Listening to short video stories from other young people who had experienced mental health challenges in *Module 2: Self-awareness, resilience*

and personal agency also provided opportunities for students to develop compassion and better understand what other people around them may be experiencing.

Students learned about each other's back stories, including personal stories, family histories, motivations, and challenges throughout the pilot program, particularly during *Module 3: Storytelling and perspective*. During this module, students worked in triads (groups of three) to tell a story about a time when they had to show courage, emphasising active listening, witnessing and compassion. A handful of these stories were then enacted using a constellation storytelling practice where a student invited their peers to act as characters in their story.

10.7 Thick descriptions, observations, and insights

These thick descriptions document and interpret experiential learning activities, methods, and interactions during the pilot program to promote the relational meta-competency of compassion. The first thick description or scene is from *Module 0: Student co-design workshops*, followed by two scenes from *Module 2: Self-awareness, resilience and personal agency*, and a final scene from *Module 3: Storytelling and perspective*. After the thick descriptions, I analyse and discuss experiential learning objectives related to compassion and outline the findings concerning resilience. Pseudonyms are used for participant names.

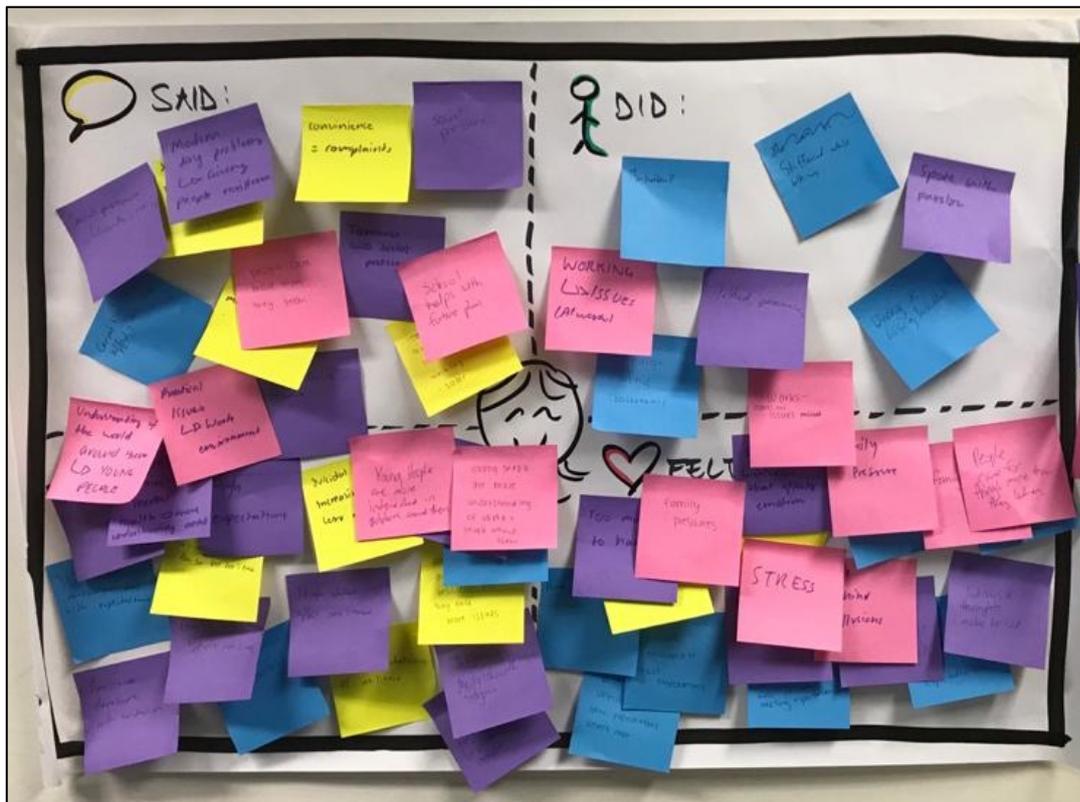
10.7.1 Scene 1 – Empathetic listening and mapping (31st March, 2021)

(INTERIOR: MULTI-PURPOSE CLASSROOM IN SECONDARY SCHOOL LIBRARY,
MODULE 0: STUDENT CO-DESIGN WORKSHOP)

We meet together in the second of our co-design sessions. The students have brought notes from their empathy interviews during the week where they interviewed their peers about the issues impacting their wellbeing and resilience. Working in pairs, the students have interviewed at least two of their peers and are now working in small teams to map what they learned onto a large empathy map on the wall (Figure 39). During their empathy interviews, students noticed not just what was being said but

also what their interviewees did, felt and thought. They have used their journals to take notes during their empathy interviews and refer to these notes as they map their findings. As each pair talks about what they learned from their interviews, the others write post-it notes based on what they hear and add them to the empathy map on the wall.

Figure 39: Student empathy maps of their peers' experiences of resilience



As I wander around and listen to what the groups are saying, there is lots of talk about expectations, pressure, and stress—thinking about whether they will be good enough and get high marks and comparing themselves to others. Their interviewees talked about feeling pressured by parents and teachers and feeling anxiety and stress. Next, all the teams cluster their notes to look for emerging themes or patterns.

As each team reports back, similar themes around pressure, stress and expectations start to reveal themselves. One team comments that when students talk about expectations and family, it can be a ‘double-edged sword’, that parental expectations

can encourage them to do their best but can also create anxiety and stress. Another team identifies a theme around peer pressure and needing to 'fit in' and 'not be weird'. I noticed the students laugh when being weird is mentioned, and they seem relieved to hear that other people feel worried about being weird too.

10.7.2 Scene 2 – Stories from the front line (18th May, 2021)

(INTERIOR: MULTI-PURPOSE CLASSROOM IN SECONDARY SCHOOL LIBRARY, MODULE 2: SELF-AWARENESS, RESILIENCE AND PERSONAL AGENCY)

In *Module 2: self-awareness, resilience and personal agency*, we are joined by co-facilitators from batyr, an organisation run by young people for young people to promote awareness and education about mental health. In their school programs, batyr often have young people coming in as speakers to tell their stories about mental illness. However, in this session, they want to test some short video stories to see how the students respond. We listen to the video stories of two young women, Maddie and Mel, about their mental health journeys. Maddie, whose family moved to Australia from Indonesia when she was young, tells her story about struggling with her mental health in secondary school and university. She talks about the pressure to perform at school and the cultural challenges in discussing mental health issues with her family. When the video finishes, the facilitators ask the students what they noticed about Maddie's story and if there were any turning points in her story. One student answers that a turning point was when Maddie had strong physical symptoms and a panic attack at school that she couldn't hide it anymore. Another student mentions a turning point was when Maddie had an open conversation with her mother and was surprised that her mum was empathetic and willing to change her perceptions about mental health. The students say that they can relate to the cultural stigma around mental health, with one student saying her parents don't really talk about feelings and that "it's really hard to change how they think because the culture is so traditional."

We then watch a second video of Mel talking about her mental health challenges as a teenager after her Dad and her Nanna died. Mel says she tried to keep up the appearance of being happy and fun, and it was only after a friend checked in on her

that she broke down and asked for help. After hearing this second story, the students comment on how people's experiences can be unique, and you don't know what someone might be experiencing. In a follow-up discussion, students point out the similarities in the two stories regarding how they both felt isolated and were afraid to ask for help. They talk about how it is important to check on people as this gives them a chance to open up, and even if they are not ready to share with you, it is still helpful as it shows that someone cares.

10.7.3 Scene 3 – Mindfulness and RAIN (18th May, 2021)

(INTERIOR: MULTI-PURPOSE CLASSROOM IN SECONDARY SCHOOL LIBRARY, MODULE 2: SELF-AWARENESS, RESILIENCE AND PERSONAL AGENCY)

As part of the self-awareness module, the batyr team engage the students in a conversation about self-care, encouraging them to think about what it means to them and how they might practice it. Some of the ideas the students suggest around how they practice self-care include listening to music, baking, painting, exercising, watching movies and reading. One student talks about going fishing with her Dad, having to leave early on the weekend in the dark to get out before the wind picks up. Another says she likes to walk down to the beach and "just chill out with the wind blowing." This leads into a conversation about mindfulness and how all these are ways of practising mindfulness where you are focused in the present moment. This discussion prompts a student to talk about how she likes to destress by analysing stories, looking at the characters' narrative arcs and figuring out what is happening. Another student comments that everyone has such different ways to destress and be mindful.

One of the facilitators from batyr, Peter, talks about a self-care technique called RAIN (Recognise, Accept, Inquire, Nurture) and how he tries to use this when he feels strong, overwhelming emotions. He talks about how listening to the messages from your body and visualising them can be an excellent way to recognise that something is going on emotionally. Peter gives an example of having a tight feeling in his chest, saying, "I know this feeling is anxiousness for me. I have this weird oval shape in my

chest that sits between my lungs and takes up space, and that's why I can't breathe. And maybe has, like, a silvery kind of colour to it." The next step, Peter explains, is to accept that we feel like this and try not to judge ourselves. Then, to inquire what might be happening in our life or our head making us feel like this, suspending the self-judgement and just being curious. He compares this process to finding an unusual animal that has just wandered into your backyard and being curious to discover what it is. The final step, Peter explains, is to nurture yourself and find a way to practice self-care. Acknowledging his feelings, he tries to "develop a relationship with it as opposed to feeling like it's trying to take you down." Students have a go at practising the RAIN technique and write in their journals about their experiences and feelings. A student reflects afterwards that "it can help to get these out of your head and onto paper."

10.7.4 Scene 4 – Getting the backstory (15th June, 2021)

(INTERIOR: DESIGN STUDIO IN UNIVERSITY, MODULE 3: STORYTELLING AND PERSPECTIVE)

We are in the studio, in the university, where we are learning about constellation storytelling. Earlier, students worked in triads to tell stories about when they have shown courage or stood up for themselves or someone else. Now, students are being asked to share their stories through a practice of constellation storytelling. I'm feeling nervous, as I don't know if anyone will be brave enough to step up and share their story. It feels like a big ask to be vulnerable and share a story in front of everyone.

We sit in a circle of couches, and the centre becomes the stage for acting out their stories of courage. Each new storyteller explains who the significant characters in their story are and nominates a peer to play each role. Once all the characters are positioned, a dialogue between characters is gingerly and tenderly coaxed out by inviting the characters to speak from their perspective and position in the story. The storyteller can speak to these characters and move them relative to each other and the person playing themselves (Figure 40). Each story is documented through note-taking and visual representation of the relative positions of the characters.

Figure 40: Constellation storytelling activity



One of the more confident students, Valerie, steps up to tell her story about a time when she was in primary school in Canberra. In the story, her favourite teacher leaves the school suddenly, without any explanation to the students. The children feel like the adults know something but are not telling them what has happened. When telling the story, Valerie recalls how she felt she had to step forward and represent the other students to object to this change and demand an explanation. The two facilitators help her identify the characters in her story, and one by one, she chooses other students who will play these characters. Her peers step into the physical story space to represent different people and elements in her story, including the school, her teachers, her classmates, her parents, the school principal and herself. Valerie directs each person to their location in relation to the other characters, either close or far away, facing them or facing away. As this is the first story being replayed in front of the whole group, the girls are a bit nervous, but the facilitators are reassuring and encouraging.

The facilitator invites Valerie to speak directly to the person representing the school. Valerie asks for an explanation and expresses her frustration of not being listened to or being told what was happening. She gets to thank her favourite teacher, whom she never had a chance to say goodbye to and tells her how she felt when she left so suddenly. In the constellation, the student playing the teacher replies to Valerie, "Don't let anything stop you. Keep asking how and why." This response from the other student struck me as significant as it validated Valerie's backstory while recognising the value of her ability to speak out on behalf of others and question why things were happening.

10.8 Analysis and discussion of supporting compassion

This selection of scenarios from different workshops and activities in the pilot program demonstrates the potential for programs that intentionally seek to develop the meta-competency of compassion and self-compassion. The analysis and discussion of compassion are discussed below, focusing on three learning objectives related to compassion and experiential learning: developing self-compassion, seeing from multiple perspectives and understanding the backstory.

10.8.1 Developing self-compassion

As discussed above, self-compassion was promoted throughout the pilot program using techniques such as mindfulness, RAIN, journaling and other self-care activities. Students were encouraged to actively care for themselves when experiencing difficult emotions, stress, and anxiety. Students seemed keen to engage with these activities, with many nominating the RAIN technique as something they wanted to use at home. Several students reported using journaling during the COVID-19 lockdowns as a method of self-care and self-compassion.

This sense of self-compassion and understanding was also demonstrated after students watched the short videos of the young women discussing their mental health challenges. The students could relate to the young women's experiences in the videos. They showed compassion for their situation and saw themselves and their friends'

challenges represented in these stories. This understanding is also evidenced in the feedback from students in the post-event survey, with one student reflecting, "I really liked watching the videos of people who have gone through difficult situations and used self-care to really get themselves out of their situation. It was especially useful because most of their experiences happened at our age and were very relatable." Another commented that it made her realise, "We are never alone, and someone else is likely going through the same thing, which we only find out about once it is explicitly discussed."

10.8.2 Seeing from multiple perspectives

The ability to see stories and people's experiences from multiple perspectives was a powerful theme throughout the pilot program and is particularly relevant to compassion and resilience. Kramlich and Beck (2021) propose that perspective-taking is particularly important in embodying self-compassion and compassion for others. The ability to listen and observe multiple perspectives and then show compassion was evident during the empathy interview exercises described in 10.7.1. In general, the students found the empathy interviews with their peers enjoyable and valuable, with a student noting, "It gave me an opportunity to really listen and ask questions with detailed answers. It also allowed me to learn more deeply about a person's certain perspective and their real-life experiences."

The constellation storytelling exercise allowed students to embody and enact stories from these different perspectives. Valerie, who volunteered to have her story played back by the group, noted afterwards, "I learnt about how by taking a mutual witness perspective on your own story, you are able to gain insight on the events and obtain a deeper understanding of the situation and the characters involved." These insights appeared to help her develop compassion for herself and others involved. One student reflected on how the constellation storytelling created a greater experience of empathy and compassion as she realised everyone sees situations from their own perspective, saying, "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."

10.8.3 Understanding the backstory

The students showed care and compassion for each other which grew during the pilot program as they worked closely together as a cohort. In our final group interviews, one group reflected on the benefits of knowing their friends' and peers' backstories from the deeper connections created during the pilot program. A good example of this is during the constellation activity (Section 10.7.4) where Valerie's peers talked about her story from primary school and that this helped explain a lot about how she can speak up to teachers and ask for explanations. They discussed how knowing someone's backstory helps you know how to respond best to support them if they are stressed or having a hard time. 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." Students commented that knowing these backstories helped support each other during the COVID-19 lockdowns.

10.9 Findings related to compassion and resilience

I found the pilot program learning experiences did help foster compassion; in particular, the constellation storytelling, empathy interviews and student-led project-based learning for the younger students demonstrated the capacity of students to develop compassion. Throughout the pilot program, students demonstrated an ability and preparedness to support each other actively, which was also evident during COVID-19. As one student commented in her final post-pilot survey:

I think I will take what I did from this program throughout my life just in assisting people if they come and ask for something really small, or in school projects or even as I grow older into my real life. I think that's the most beneficial thing (Student participant, 15 years).

Interestingly, the students tended to use the term empathy and refer to connections rather than compassion to describe their experiences. While we didn't intentionally foreground the concept of compassion in the modules for students, many students

expressed preparedness to take action to support and help others following the pilot, as can be seen in the following reflection:

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 (Student participant, 15 years).

The benefit of working with a smaller cohort over a more extended period, I believe, was significant in building these more compassionate relationships between students. I wondered how these relationships and friendships developed after the pilot and if the same impact could be expected in larger year groups working together for shorter periods. I was interested to know how regular mindfulness practices such as loving-kindness meditation and Tong Len might impact the students' sense of connection, compassion, and resilience. The meta-competency of compassion is closely related to the meta-competency of agency in the confidence and ability to take action to support others. In the next chapter, I explore the relational meta-competency of creativity.

Chapter 11: Meta-competency - Creativity

11.1 Introduction to chapter

Creativity had been identified as a crucial future-focused meta-competency (Deakin Crick et al., 2015; Hennessey, 1996; Le Hunte, 2020; OECD Future of Skills and Education 2030, 2020). My research identifies it as one of the relational meta-competencies for young people to develop resilience in times of uncertainty. To be creative, a person engages with the unknown or uncertainty in bringing something new into being. While the field of creativity in education has been well-researched and analysed, very little research to date has addressed the role of creativity in developing resilience in young people. In this chapter, I explore creativity from a Western psychological and beyond-Western perspective to reach a new understanding of creativity as a relational meta-competency and identify relevant experiential learning objectives. Next, I articulate what learning experiences and activities were used to develop creativity in the pilot program and interpret a series of thick descriptions focused on creativity. Finally, I analyse and discuss the findings of these activities related to creativity and resilience for young people.

11.2 Why is the meta-competency of creativity needed now?

Creativity, emphasising adaptability, iteration, multiple perspectives and imagination, is an essential meta-competency for young people growing up in uncertain times. 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). Creativity is a relational meta-competency that supports young people to proactively respond to problems or challenging situations through adapting, refining and iterating (Gardner, 2011). Taking a relational perspective of resilience as a dynamic process of interactions between a young person and their environment, creative practices offer significant opportunities to strengthen resilience by highlighting multiple perspectives, thinking divergently, developing flexibility and adaptability, and reimagining and remixing ideas.

Creativity and resilience are both associated with adaptability, flexibility and the ability to engage with complexity and ambiguity. Csikszentmihalyi (1997) posits that creative personalities have an inherent ability to engage with complexity and, hence, have a higher tolerance for ambiguity. Characteristics associated with creative practice involve holding multiple paradoxical perspectives, which can develop a higher tolerance for ambiguity or flexible thinking (Meneely & Portillo, 2005). Flexibility and the ability to withstand ambiguity are essential for developing resilience in a complex and challenging external environment (Metzl & Morrell, 2008). Creativity is also associated with divergent thinking, self-awareness and problem-solving (Metzl & Morrell, 2008). According to Deakin Crick et al. (2015), creativity is instrumental to seeing problems with a 'different lens', which is essential when attempting to shift paradigms and worldviews.

As a creative practice, art therapy has demonstrated how creativity can build resilience. This type of creative practice can be undertaken on a personal level and a collaborative or collective one. Engaging in creative practice has been used to promote resilience through individual and group art therapy (Carr & Vandiver, 2001). The use of art therapy has been found to encourage understanding of ambiguity and complexity, promote expressiveness and playfulness and, therefore, resilience through divergent thinking (Metzl & Morrell, 2008). Art therapy and creative practices have been used with children and young people who have experienced trauma and loss due to climate-related natural disasters such as floods and bushfires. Through the Creative Recovery Network and other networks in Australia, artists and health practitioners are partnering to support children and young people who have experienced natural disasters in their communities. One example is a project with primary school students in Cobargo Public School, a town devastated by the 'Black Summer' bushfires of 2019/20. In this project, students designed and wrote a book called 'The Day She Stole the Sun' as part of their process of recovery and healing (Littlescribe, 2021).

11.3 How does Western psychology define and understand creativity?

The term 'creativity' is sometimes considered 'slippery' and hard to define. Its accepted meaning has shifted from an initial focus on individual traits and characteristics to a

more nuanced understanding of creativity being responsive to and integrated within socio-cultural contexts and environments. During the 1950s, creativity studies focused on trying to understand the psychological characteristics of individuals who displayed high levels of creativity. Certain character traits were identified and studied with creative individuals. This focus on individual traits emphasised finding ways to define measurable outcomes and evaluate creative capacity, such as those developed by Ellis Paul Torrance (1974). The Torrance Test of Creative Thinking (TTCT) assesses how creatively a child's mind works, assessing fluency, flexibility and originality (Torrance, 1974).

During the 1970s, according to Spendlove (2008), the focus of creativity research shifted towards imagination and began to integrate greater situational awareness of how the environment might impact creativity in education. Rather than creativity being associated with exceptionally talented individuals or students, it became more broadly associated with approaches to education, which enabled greater exploration, play, experimentation, and student-led learning. Creativity in education came to be seen as a capacity that could be facilitated and nurtured to help children develop the capacity to “restructure their own world” and develop self-efficacy (Spendlove, 2008, p. 9). Some researchers distinguish between ‘little c’ creativity, which relates to an ability to adapt and adjust to change and solve problems, and ‘big C’ creativity as highly novel responses that influence how people think and live (Gardner, 2011; Simonton, 2000; Spendlove, 2008). However, even this distinction tends towards a specific preference for product over process in creative practice.

Vygotsky (1991) encourages a more relational approach to creative and collaborative processes where learning and creating new knowledge and insights is itself seen as a creative process. According to Vygotsky, adolescence is a time when imagination (seen as the origin of creativity) can combine with abstract thinking to generate creative approaches (Kim, 2006; Vygotsky, 1991). This creative and collaborative knowledge construction is often used as a theoretical underpinning for project-based learning (Kim, 2006). Play is closely associated with creativity and imagination in learning, opening up new spaces to engage (Hennessey & Amabile, 1987).

The role of intrinsic versus extrinsic motivation in creative practice has been explored by Hennessey (1996), who found that intrinsic motivation is highly conducive to creative acts, whilst extrinsic motivation is rarely conducive. She identified five 'sure-fire' killers of creativity and intrinsic motivation within a classroom setting, including expected reward, evaluation, surveillance, time limits and completion (Hennessey, 1996). Unfortunately, many of these elements form the basis of standard high school education and limit the capacity to integrate creativity into curriculum areas, even in areas that require high levels of creativity, such as Design and Technology (Spendlove, 2008).

11.4 How can we understand creativity from a beyond-Western perspective?

There is much to be learnt from a beyond-Western perspective of creativity and resilience in understanding the value of a process-oriented, relational understanding of creativity. Here, I outline key insights from Buddhist and First Nations worldviews relevant to this inquiry around creativity and resilience for young people.

Buddhist philosophy and practice hold a relational understanding of creativity, where our state of mind can shape our perspective and the stories, we tell ourselves about the world. Much of the research on Buddhism and creativity focuses on the effect of mindfulness and meditation on creativity. Studies have shown that practising particular types of mindfulness, such as open-monitoring meditation, can improve divergent and convergent thinking processes (Capurso et al., 2014). Regular meditation and mindfulness practice can improve the capacity for critical reflection (Dawson, 2003). Studies exploring the benefits of mindfulness for leaders in VUCA (volatile, unpredictable, complex and ambiguous) environments have found that regular practice can reduce anxiety and stress, increase promotional regulatory focus, marked by enhanced creativity and greater likelihood of taking chances, and increased resilience (Brendel et al., 2016). Other areas of Buddhist practice, including art, painting, and sculpting, involve the application of creative practice to develop the mind.

From an Aboriginal cultural perspective, Yunkaporta (2019a) describes an approach to creativity as engagement with a highly dynamic, interconnected world where symbols, patterns and rituals reflect complex multi-dimensional relationships between people, Country, ancestors, animals, time and space. According to Yunkaporta, reality shifts according to the observer's perspective and divergent thinking enables the capacity to understand multiple perspectives. He encourages developing the creative capacity of divergent thinking, as this collective diversity can help us navigate a way forward through collective challenges such as climate change (Yunkaporta, 2019a). Promoting and integrating diverse perspectives is seen as an essential aspect of society as "every viewpoint is useful, and it takes a wide diversity of views for any group to navigate this universe, let alone to act as custodians for it" (Yunkaporta, 2019b, p. 55).

Storytelling plays a vital role in creativity for many First Nations cultures and has been connected with resilience and identity for young people (Goreng Goreng, 2018; Kirmayer et al., 2011). According to Goreng Goreng (2018), the foundations of Aboriginal culture are in storytelling, art, music, song and dance, which bring together the symbolic, spiritual and material worlds. Indigenous artists and storytellers can help navigate the world in new ways, according to Evans:

Indigenous artists are navigators and leaders of the twenty-first century. They see and feel the world and interpret it in novel ways. They traverse time and space through bodily and cognitive engagement with both. They connect the past, present, and future through practices and outcomes of their work, sharing with us visions of their world(s) (Evans, 2014, p. 179).

Storytelling has a strong connection with creation in Aboriginal culture, including creation stories, says Goreng Goreng, "We hold the creation stories, and the symbols, ceremonies, stories of the creation Ancestors in our knowing of the dreaming, the creation time and we pass them down from generation to generation" (Goreng Goreng, 2018, p. 71). An essential element of learning in Aboriginal culture, according

to Yunkaporta (2019), is through storytelling and 'yarning'. Yarning is a playful process with a “ritual that incorporates elements such as story, humour, gesture and mimicry for consensus building, meaning making and innovation” (Yunkaporta, 2019, p. 141). It is highly context-dependent and relies on shared experience and knowledge while incorporating active listening and divergent non-linear branches that form connections and correlations that might not be found in more analytical modes of dialogue. The endpoint of yarning is a shared understanding and loose consensus that includes diverse perspectives.

Finally, creative expression and communication through non-verbal forms are highlighted in the Eight Ways of Aboriginal Learning by Yunkaporta (2009, p. 5), who stresses the importance of “Knowledge that can be understood or acquired without words, including gestures, inference, expressions, eye movement, kinaesthetic learning, images and revealed knowledge (for example dreams, insight, inspiration, reflection).” Using symbols and images in creativity and learning is significant in Aboriginal culture, says Yunkaporta, as “Aboriginal thinking is often done in images or shapes rather than words.” These images can be complex in the form of painting, visual maps, artwork or as simple as a shape drawn in the sand. Integrating non-verbal ways of learning encourages creativity, which engages all the senses and the body in the creative process.

11.5 How do I define and understand creativity for this inquiry?

In this inquiry, I integrate a Western perspective of creativity as generating value through collective learning with relational worldviews that emphasise collective mindfulness, divergent thinking, storytelling and play.

Based on this definition of creativity as a relational meta-competency, I have interwoven three experiential learning objectives for creativity into the pilot program activities and modules:

- Appreciating diverse perspectives: recognising the value of diverse perspectives for creative thinking;
- Transforming our own perspective: using stories to create new ways of seeing and transforming our perspective and worldviews, and,
- Appreciating non-verbal ways of thinking, knowing and being using audio, gesture, symbols, and pictures to create more profound meaning.

11.6 What learning experiences and activities are used to support creativity and why?

A wide range of creative practices were integrated into the pilot modules. These included visual storytelling, music and listening experiences, design thinking, storytelling, art and craft, and embodied practices such as dance and constellation storytelling. Appreciating diverse perspectives was integrated through transdisciplinary approaches to problem-solving, storytelling and encouraging students to express their unique perspectives through creative activities.

Storytelling was integrated as an approach to foster creativity to promote divergent thinking, narrative engagement, and the ability to see things from diverse perspectives. In *Module 3: Storytelling and perspective*, students were introduced to the 'hero's journey' narrative arc and asked to describe their own hero's journey. Stories can be transformative as they 'keep channels of curiosity and awe open' and facilitate deep questioning (Lange, 2018, p. 295). Experimenting with constellation storytelling in the pilot aimed to encourage this ability to see a story from diverse perspectives and potentially re-interpret stories based on these diverse perspectives.

Art and craft practices integrated into most modules aimed to develop confidence in creative skills and practice. Many students talked about not having time for creative activities and missing this, having been encouraged to take maths and science subjects in school. Students were encouraged to engage with visual representations and symbols using a pack of CSR photographic cards to represent their thoughts and emotions. These creativity practices also had the capacity to touch all learning

objectives - appreciating diverse perspectives and transforming their own perspectives and non-verbal ways of thinking, knowing and being.

Embodied practices that engage multiple senses were integrated into the pilot to provide a link between creativity and different ways of being and knowing. These embodied practices included movement, yoga, improvisation, theatre games and constellation storytelling. Such activities encourage engagement with the wisdom of our bodies, and insights gained from embodied experiences support self-reflection and integration of new experiences and perspectives (Bentz et al., 2022; Leavy, 2020). Craft activities were used as a way to connect head, heart and hands in creating artefacts to represent abstract but deeply personal concepts such as identity and connection. Using sound and deep listening activities also supported non-verbal ways of thinking and knowing.

11.7 Thick descriptions, observations, and insights

The following thick descriptions provide an insight into the relationship between creativity and resilience through a selection of experiential learning activities, methods, and interactions during the pilot program. The first thick description or scene is from the initial co-design module, while the following scenes are from *Module 1: Place-based learning* and *Module 3: Storytelling and perspective*. Pseudonyms and initials are used to represent participants.

11.7.1 Scene 1 - The surprise of diverse perspectives (16th March, 2021)

(INTERIOR: MULTI-PURPOSE CLASSROOM IN SECONDARY SCHOOL LIBRARY, MODULE 0: STUDENT CO_DESIGN SESSION)

We meet in a room in the library, sitting in a circle on chairs for our first student co-design workshop. The room is bright and airy, with modular furniture of different colours scattered around the room. The students seem a bit nervous and shy, perhaps uneasy about what will be asked of them. In the centre of the circle is a large round rug with a small plant in the centre and a vaporiser with a 'grounding blend' of oil

We are all surprised by the diversity of images chosen and the explanations of why. Some students choose nature-related images that are described with phrases such as “nature influences creativity,” “a unique new rising sun, new beginnings,” and “nature has a design for things.” Others choose images based on the presence of colour, saying that having more colour for them represents “open-ended perspective, colourful,” “expression that adds colour,” and “throwing ideas together, diversity, colour.” Others refer to creativity's mysterious and unknowable quality, referring to “pathway, journey, mystery” and the “power to make the unreal real.”

One student chooses a very mundane image of checked black and white squares, saying that the image drew her attention to “finding beauty in the mundane” (Figure 42). For another, a symbol with four directions represents “multi-directional process, U-turns, tangents.” Emotion is the criteria for other students who choose an image that reflects their feelings about creative expression, for example, an image of a young child showing “the vulnerability to express” or a roller coaster ride being “scary and exciting.” Figure 42 shows a selection of these images and accompanying comments. The students comment on the diversity of perspectives and say they thought there would be more similarities given their shared life experiences in going to school together.

Figure 42: Images selected by students and accompanying reflections



11.7.2 Scene 2 - Weaving Memory and Colour (27^h April, 2021)

(INTERIOR: COMMUNITY CENTRE LEARNING SPACE, MODULE 1: PLACE-BASED LEARNING)

In *Module 1: Place-based learning* as the afternoon heats up, we retreat to the main room for some quiet craft time. Before we begin, the students spend 15 minutes in the garden and grounds to find some natural objects to incorporate into their craft work. They are invited to make a piece that represents *their sense of self in the environment*. They come back with small flowers, twigs and feathers and gather craft material from the centre of the circle such as beads, wool, twine, paper and scissors.

The students work quietly, twisting and plaiting, cutting and weaving. After this they share their craft work and what it represents for them in pairs and then with the wider group. Students show their craftwork and talk about what it represents for them. Common themes of memory, family and place emerge from their musings. Students

use colour to represent different people and different stages in their lives; one student chose different colour beads to represent both her sisters and her own temperament (Figure 43), saying “one is for me, one is for my sister. These colours (for me) are really earthy...like the green...my sister is really temperamental; I can ground her and we kind of balance each other out.”

Figure 43: Student artefact representing connection with sister



Another student describes how she has used different coloured beads (Figure 44) to represent different stages of her life and places saying “each bead represents a part of my life. From kindergarten to year 2 my favourite colour was purple...Now my favourite colour is blue, so this is my colour currently and yellow is for home.” Memories of people and places, in particular family members, are described by students in their representations of themselves in their environment. One student explains her plaited bracelet represented her connection with her father and a beach where they went together when she was younger. Another student reflected on how the motion of plaiting for her represented how “everything is interconnected.”

Figure 44: Student artefact representing connection through life stages



11.7.3 Scene 3 - Back to country (15th June, 2021)

(INTERIOR: DESIGN STUDIO IN UNIVERSITY, MODULE 3: STORYTELLING AND PERSPECTIVE)

For *Module 3: Storytelling and perspective*, the students have come to spend the day at the UTS in the centre of the city, where we meet in the studio space. The building is a former warehouse converted into a colourful studio workspace with decorations on large pillars and years of creative student projects posted around the walls. While still shy, the students seem excited to be at the university and away from school. A few students are missing as their English teacher has mistakenly told them they needed to be at school to prepare for exams.

We begin with an immersive listening activity where students listen to a multi-layered audio piece called 'Back to Country', a rich sound-based acknowledgement of country. I want to play this audio piece as an alternative to a spoken 'acknowledgement of country' to bring in a sense of history and relationship with the land, connecting back to *Module 1: Place-based learning*. An Aboriginal scholar and Wiradjuri woman,

Tamara Power, from the university has written and recorded this piece in collaboration with others (2021). It has been recorded to be played in a high-end, 360-degree immersive media space with great production quality. We lounge in a circle on couches and follow the instructions to close our eyes. As we listen, we are taken on a journey back through time to imagine the land before colonisation and listen to an Elder's voice speaking in Dharug language. We are taken on an aural and imaginative journey. We see the land before colonisation with children playing and people gathering, moving through to the present day with the roads and buildings and the sound of traffic and the city. The commentary urges us to remember that learning has taken place here for over 60,000 years and the learning that takes place here today is not more or less important because it happens in 'buildings of glass and steel'.

Engaging our sense of hearing and closing our eyes encourages an embodied experience of being in this place and opens new ways of knowing this place. At first, I sense some discomfort in the room when students are asked to close their eyes. Then, as the story develops, I notice the students seem to relax more into the listening experience. Ten minutes later, it is time to come back to the room. They yawn and stretch as they open their eyes.

11.7.4 Scene 4 – The hero's story (15th June, 2021)

(INTERIOR: DESIGN STUDIO IN UNIVERSITY, MODULE 3: STORYTELLING AND PERSPECTIVES)

In the next session, we are fortunate to be joined by academic and novelist Bem Le Hunte, who describes the archetypal story of the hero's journey. She outlines the narrative arc where the hero or heroine responds to a call to adventure, passes from the known to the unknown, finds a mentor or helper, faces a crisis or abyss from which one is transformed, then achieves atonement (or 'at-one-ment') and receives a gift and returns home. Bem challenges the students to consider if their story might be a hero's journey and asks, "What would it be like if you could witness it as it was happening?"

The students explore their own hero's journey during the session, and the idea of being the main character of their own story seems to capture their imagination. In telling their own story, they are encouraged to identify 'mentors or helpers', 'gifts' acquired through facing challenges and experiences of 'at-one-ment'.

11.7.5 Scene 5 - The power of three in storytelling (15th June, 2021)

(INTERIOR: DESIGN STUDIO IN UNIVERSITY, MODULE 3: STORYTELLING AND PERSPECTIVE)

In this storytelling activity, we use the concept triads, where each student gets a chance to play the role of the storyteller, listener, and witness. The story prompt I give the students is “Tell us about a time when you have stood up for yourself or someone else (or when you wanted to but didn’t). How did you feel? What did you notice?” I explain each role in the practice; the storyteller is the one telling the story, the listener is listening actively and prompting the storyteller, and the witness observes and does not speak until afterwards when they reflect on what they noticed. Each storyteller has three minutes to tell their story, with two minutes for reflection before swapping roles.

As the storytelling begins, I move between the groups to observe stories being told animatedly with much laughter. Afterwards, when we debrief on the activity, some themes emerge, which are documented on the wall. Many stories are about family, siblings, friends, and teachers with a common theme of actual and perceived expectations. Another common thread identified by the students is the presence of a guide or mentor in the stories whose help or advice stays with them. Finally, students discuss how external factors such as significant challenges at home, sports or school can push us past our boundaries and can be character-building.

11.7.6 Scene 6 - Constellating our stories (15th June, 2021)

(INTERIOR: DESIGN STUDIO IN UNIVERSITY, MODULE 3: STORYTELLING AND PERSPECTIVE)

Following on from our storytelling in triads, we move into our story constellation session, and Viviane asks if anyone has a story they would like to explore using this method. After some initial nervousness, three brave students volunteer to have their stories brought to life through working with facilitators and groups.

One of the participants, Janine, tells a story of a time when she had been taken to a park by her father as a nine-year-old and had been playing on a high flying fox supervised by her grandfather. She had a dramatic fall off the flying fox on this day while moving at high speed. She explains that this event had a significant impact on her as she was terrified at the time that she might die; however, her father and grandfather didn't seem particularly worried or concerned.

Some of the roles assigned and interpreted in this story were her father, whom she described as doing his job and fulfilling his responsibility to her but lacking understanding of how traumatic this experience was for her, and her grandfather, who had given her advice on what to do if she ever fell and how to protect her neck. Janine attributes her survival that day to this advice and says she had never really thanked him for this. The facilitator prompts her to see if she wants to thank the person standing in for her grandfather. She thanks her grandfather for teaching her to protect her neck and preparing her for possible danger. Some other characters Janine identifies are friends of the family they ran into after the fall. Janine felt ashamed because her father and grandfather seemed to brush off her close call, and she felt she was not taken seriously by the family friends. When asked what role the family friends played, she replies, "I think the family friends played an important role in *creating the new me*." This 'new me' joins the constellation alongside the 'pre-accident' persona. Janine explains that this 'new me' is more courageous, and her body feels stronger. After the story, each character steps out, and the facilitators debrief with Janine, asking how she feels now after telling her story. Janine says replaying this story helps her put other stressful events into perspective. She jokes that compared to this near-death experience; nothing should worry her now.

11.8 Analysis and discussion of supporting creativity

Throughout the pilot program, we aimed to cultivate a space where creative collaboration was valued and recognised. The thick descriptions above provide a glimpse into the range and forms of creativity explored in the pilot program to support resilience. These creative activities are analysed and discussed with three experiential learning objectives: appreciating diverse perspectives, transforming our own perspective, and appreciating non-verbal ways of thinking, knowing and being.

11.8.1 Appreciating diverse perspectives

One theme that stood out clearly from the first activity of the co-design module, where students chose an image to represent design and creativity (Section 11.7.1) and continued throughout the pilot, was the importance of appreciating diverse perspectives. While the students identified that they had much in common, they were fascinated by their different stories, perspectives, and experiences. It seemed there was little opportunity at school to hear each other's views and perspectives, as a student commented this was “not a common occurrence in most classroom group activities.” Students were surprised in the visual check-in activity about how diverse their interpretation of design and creativity was, with one student commenting in the post-event survey, “I liked to see how our ideas were similar and different and what influenced these. I liked sharing my ideas and listening to the ideas that others shared as well.” This interest in diverse perspectives extended to learning about each other's life stories as one student reflected after the storytelling and perspective module, “I think the thing that stunned or stood out to me most was the way that everyone is living their own life's story...some realise this earlier than others.”

Appreciating these divergent perspectives, viewpoints and life experiences helped with “stretching my mind to deepen my thinking”, according to one of the students. In the storytelling triads, students experienced playing the different roles of the storyteller, listener and witness, causing one student to reflect:

It's a diverse thing, and many people look at things differently and see things from different perspectives. When we were sharing

experiences, the witness saw a different perspective to the listener for all the stories. (Student, 15 years)

These diverse perspectives were encouraged as students designed the learning experiences for younger students and were also present in the themes the groups chose to focus on, for example, the team exploring how students have different learning styles.

11.8.2 Transforming our own perspective

The theme of transforming our own perspective was reflected in *Module 3: Storytelling and perspective* in the triads, constellation storytelling and learning about the narrative of the hero's journey. In telling their own stories about a time when they had to step up or demonstrate courage, the students noted analogies in the hero's journey of finding mentors or helpers and receiving gifts through hardship. This creative act of telling their own stories encouraged students to recognise their resilience, as articulated by one student's comment afterwards, "We all have our own stories, stories that follow the hero's journey. There's always a gift at the end, no matter how hard you're struggling."

In one of my final small group interviews with students at the end of the pilot program, one group talked about their experiences of COVID-19 lockdowns using the metaphor of the hero's journey. These reflections showed the power of stories for critical reflection and transformation. We were discussing whether things they had learned in the pilot had helped them during the lockdown experience; one student referred back to the hero's journey, saying:

Do you remember the time when we went to UTS...where we talked about how not to focus on the present that much, especially when you're going through that time, because most of the time in the future, it will be better somehow. I think, personally, that really stayed in my head, and it definitely did help me (through) that lockdown (and) even just throughout normal days, where I wasn't

feeling the best. Like, 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, and in the end, it would all end up being ok.
(Student, 15 years)

Each of the stories enacted by students in the constellation storytelling had a strong theme of transformation. For example, in Janine's story described above (Section 11.7.6), she identifies herself as two different characters, the 'pre-accident me' and the 'new me', who was stronger and more resilient. Telling this story through constellation storytelling helped Janine put other stressful life events, such as upcoming exams, into perspective as she reflected that they were nothing compared to this dangerous experience.

11.8.3 Appreciating non-verbal ways of thinking, knowing and being

Communicating non-verbally was integrated into the pilot by using different senses to engage, experience and create. The audio experience described above (Section 11.7.3) as an acknowledgement of Country represented a non-verbal learning experience that encouraged students to engage with place and history through sound. Sounds were layered one over the other to represent the different periods of history in the place where the university stands. After listening to the audio, students talked about the power of listening with their eyes closed and how it made them experience the story differently. This deeper level of listening experience was reflected in a student's feedback, "I was surprised by the way layered sound can create a different experience in storytelling from traditional oral or written stories." Another auditory experience of 'deep listening' is highlighted in Chapter 12.

The constellation storytelling also used non-verbal ways of thinking and knowing in the embodied process of positioning the different characters in relation to each other to help tell the stories (Section 11.7.6). As the storyteller told the story, they moved people in relation to each other, and each character embodied dynamics within the story. Visual communication and symbols were used in the co-design module (Section

11.7.1) to support students in communicating abstract concepts and understanding by selecting and describing their significance. In the craft activities (Section 11.7.2) students brought in found objects from nature, art materials, colour and shapes to represent and share their experiences of identity and connection.

11.9 Findings related to creativity and resilience

These findings suggest creativity plays a role in developing resilience for young people, from enabling diverse perspectives and divergent thinking to engaging with the transformative potential of stories and art practices. During the pilot program, I noticed students were most engaged when they were learning through creative processes and practices, whether crafting, storytelling or designing the learning experiences for younger students. The role of trust and vulnerability was significant in asking students to express themselves creatively. We tried to create a space that felt psychologically safe for creative expression and to role model taking creative risks and being vulnerable and authentic as facilitators, for example, sharing our stories of from our lives. The relationships built through spending time together regularly seemed to help build this trust and feeling of safety. After the storytelling module, one student commented, "I enjoyed the storytelling as it allowed for our personal experiences to be shared in a safe and collaborative environment."

Upon reflecting on the experience of this pilot, a key question I have is how to make a stronger connection evident for participants on the connection between creativity and resilience, whether through reflective practices, journaling or other methods. Another question I had was how we could increase awareness of learning as it happens and how to understand the impact of activities such as the constellation storytelling, both short-term and longer-term. I was also curious about how to engage the quieter students in the storytelling activities to give them more confidence in participating.

Chapter 12: Meta-competency – Interbeing

Chapter Introduction

This chapter focusing on the relational meta-competency of interbeing is in the form of a journal article titled 'On Learning Interbeing', which I wrote and co-authored with Bem Le Hunte and Katie Ross. This journal article was published during my candidature in 2023 in the *Journal of Transformative Learning* (ISSN 15413446231177632). Its publication demonstrates an original contribution to knowledge in the field of transformative learning. Please see the declaration of authorship at the beginning of the thesis. Please excuse any minor repetition or variations in language in this chapter as it was written and published prior to the thesis.

Potts, M., Le Hunte, B., & Ross, K. (2023). On Learning Interbeing. *Journal of Transformative Education*, 15413446231177632.

On Learning Interbeing

I learnt that if you listen closely, you can discover small connections in everything - in places, in people. I would describe connection as a warm feeling, as I felt like I belonged when I found these places and people (Student participant, 15 years old).

This article explores why *interbeing*, or an experience of interconnectedness, is a vital meta-competency for young people growing up in the shadow of climate disruption and uncertain futures. The concept of *interbeing* originates in many ancient wisdom traditions. It recognises the intricate set of interdependencies that connect us to our inner selves, each other and the land that supports our existence. In this article, 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).

While this meta-competency of *interbeing* has been explored in the context of transformative learning in graduate studies for sustainability leadership, adult learning and in some selective elite secondary school environments (Burns, 2016; Hampson & Rich-Tolsma, 2015; Ross, 2020), we have seen only limited application of this transformative meta-competency integrated into Western secondary school programs for resilience and wellbeing (Potts, 2021a).

In this paper, we propose that the process of taking part in a series of learning experiences curated to challenge the dominant cultural paradigm and create conditions for experiencing *interbeing* has the potential to transform secondary students' frame of reference to become more inclusive, differentiating, permeable, critically reflective and integrative of experiences (Mezirow, 1991). To begin, we argue for the urgency of this work given the context of poor mental health and the experience of isolation of many young people (Hathaway & Boff, 2009b; Headspace, 2020a; Tiller et al., 2021; Uhlhaas et al., 2021) and imminent climate disruption. Next, we explore the notion of *interbeing* from a range of worldviews and integrate these perspectives into the design of transformative, place-based learning experiences for students in secondary school. Finally, we present preliminary insights and questions arising from a pilot program co-designed with Sydney secondary school students and teachers in 2021 to foster a meta-competency of *interbeing*.

Philosophical and Temporal Context

What is the Context of this Study?

This research takes place in Australia, where young people are experiencing increasing levels of mental illness, with more than one in four people aged 15–19 reporting serious psychological distress in 2020 (Headspace, 2020a; Tiller et al., 2021; Uhlhaas et al., 2021). Critical concerns identified as contributing to this distress and anxiety include a sense of disconnection, in particular, personal and physical disconnection; a lack of belonging and sense of identity; a loss of 'grounding'; a disconnection between online and in-person communication; and a pervading sense of uncertainty (Brennan et al., 2021; Headspace, 2020a; Potts, 2020). Increasing levels of anxiety and depression for

young people in Australia have been contributed to by climate-related disasters of bushfires and floods, along with extended COVID-19 lockdowns in many cities (Brennan et al., 2021; Headspace, 2020a; Li et al., 2021; Ross, 2020; Tiller et al., 2021). Globally, the World Health Organisation estimates that one in seven (14%) of 10–19-year-olds experience mental health conditions, with anxiety and depression being the most common challenges (World Health Organisation [WHO], 2021).

This sense of distress and disconnection is exacerbated by complex social dynamics, such as the impact of social media, reported by teachers and students as contributing to a sense of isolation and low self-esteem when comparing oneself to others (Potts, 2023). Other factors reported as contributing to this sense of distress and disconnection include changes in boundaries and roles of parents and teachers, changes in traditional institutions such as family, community and religion and changes to career pathways and life (Potts, 2023).

How can Learning and Education Adapt to this Context of Anxiety and Uncertain Futures?

The significance of this increased level of uncertainty and ambiguity in young people's lives and its impact on their mental health invites a rethink of the role of learning and education. Students' mental health becomes critical in how we think about 'value' in an educational setting. In our research, we suggest the aim of learning is no longer to contain uncertainty or the resulting anxiety but to develop self-awareness and reflexivity to understand better how we respond to it (Barnett, 2012; Hathaway & Boff, 2009b; Mezirow, 1997).

Amidst growing complexity and uncertainty, many educators call for focusing on *ways of being* alongside knowledge-based pedagogies. For example, Ronald Barnett (2012) contends that the world is becoming 'radically unknowable'. As such, learning becomes more of an ontological task focused on *ways of being* rather than an epistemological task focused on *ways of knowing* (Barnett, 2012; Le Hunte, 2020b; O'Neil, 2018; Ross, 2020). Barnett (2012) describes a *pedagogy for the unknown* and a *way of being for uncertainty*, characterised by carefulness, thoughtfulness, humility, receptiveness, courage, stillness, purpose and resilience. This transformative approach

to learning through experience is also a key concept in Le Hunte's (2020b) work in the *Curriculum for Being*, which privileges being over knowing and aligns with non-Western practices and ways of knowing. This ability to engage in a more 'care-ful' way of learning is also relevant for educators, teachers, and administrators, many of whom are struggling with burnout and feel unprepared to deal with the increasing demands of supporting the mental health needs of students (Pandori-Chuckal, 2020; Willis, 2022).

How does *Interbeing* in Education Respond to this Context of Uncertainty?

The importance of connection and belonging for supporting resilience and wellbeing for young people is well documented by both transformative educators (Dewey, 1963; Kolb & Kolb, 2005; Mezirow, 1997; Orr, 2013; Taylor, 2001) and psychologists (Masten, 2009; Rutter, 1999; Ungar, 2011) alike. Many transformative education scholars call for transformative pedagogies that foster a sense of *interbeing* and interconnectedness to help students recognise the complex ecological systems we are part of and thrive in uncertain futures (Hampson & Rich-Tolsma, 2015; Hathaway, 2011; D. W. Orr, 2002).

What is *Interbeing* as a Meta-competency?

The meta-competency of *interbeing* is deeper and richer than common Western understandings of connection and belonging. To convey the similarities, yet greater richness of *interbeing* – or *interconnection* – we explore the concept through a lens of Buddhist philosophy and the perspective of Australian Aboriginal elders and scholars.

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. 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). In this worldview, relationships are constantly in process: "All relationships are patterns of interaction. So, they are, by

definition, dynamic; they are patterns of change” (Robins, 2010, p. 39). This interdependence extends to the natural world, where we have a mutually dependent relationship with all other living beings.

Over the past few years, we (the authors) have been fortunate to meet, listen and learn from Aboriginal Elders and scholars, including Mary Graham, Tjanara Goreng Goreng, and Tyson Yunkaporta. Aboriginal Elder and academic, Mary Graham, explains the importance of relationship to the land as follows, “The two most important relationships in life are, firstly, those between land and people and, secondly, those amongst people themselves, the second being contingent on the first” (Graham, 1999, p. 107). Graham sees this connection with Country and 'custodial ethic' as essential to building resilience and a sense of collective spiritual identity for children and young people in an educational context (Graham, 1999).

Many Indigenous and First Nations peoples have a sophisticated understanding of *interbeing* and interdependence with the land and living systems, often related to a custodial responsibility to care for the land (Graham, 1999; Yunkaporta, 2019a). In many cultures, a series of rites of passage designed for transformative learning experiences were developed for young people to explore this relationship with the land and each other as they grew into adulthood (Groff, 1996; Lertzman, 2002). These experiences for young people helped develop resilience, with many lessons being learned through connection with land, animals, spirits and *more-than-human world* (Abram, 2013; Lertzman, 2002).

In Buddhism, *interbeing* can be practised through meditation, chanting and ritual, while in Aboriginal communities, according to Yunkaporta (2019a), it can be practised through song, stories, rituals and ceremonies that serve to nourish relationships and interdependencies. These diverse practices lead to the question of what learning environments and experiences might be created for young people within Western school systems to support the development of such a relational worldview and *interbeing* as a meta-competency?

What Pedagogies are Explored in this Study for Fostering *Interbeing*?

The *Resilience 2030* pilot program was designed as part of the primary author's doctorate research to incorporate practices and activities that might increase students' awareness of a sense of interconnection with their inner selves, each other, nature and place. The design incorporates transformative learning processes, such as critical reflection, non-verbal learning through body and emotion, and inner and outer processes involving personal, social and ecological change (Hathaway, 2011; Potts, 2023). It recognises and encourages intuition, affective learning, spirituality and somatic experiences as ways of being and knowing (Taylor, 1994). The program is designed to develop a combination of attention, imagination, storytelling and art while immersed in local places of nature (O'Sullivan et al., 2002; Potts, 2023; York, 2014).

Place-based pedagogies can foster connections to inner-self, each other and nature—connections essential for strengthening the meta-competency of *interbeing* (Orr, 2013; Ross, 2020). These transformative, place-based pedagogies created the conditions for the kinds of profound, structural shifts witnessed by transformative educators, including:

- Compassion for and values alignment with place (Morrell, 2002) and the 'more-than-human' world (Abram, 2013; Barrett et al., 2017);
- A sense of "awe, mystery and a sense of connection to nature" (York, 2014);
- Ecological values such as connection, generosity, partnership and celebration (O'Sullivan et al., 2002); and
- Increased creativity, awareness, environmental sensitivity and the development of ecological consciousness (Kellert, 2002).

Can Secondary School-aged Students Experience Transformative Learning?

While transformative learning practice and theory have been developed primarily with adult learners in mind, we argue that the strengths of transformative learning are

needed at this time to transform secondary education from a primarily instrumental pedagogy to one that creates both personal and social agency where “learners work together with each other and with the educator to construct visions that are more meaningful and holistic, that lead them into deeper engagement with themselves and the world” (Dirkx, 1998, p. 9). Adolescence, a time of life when young people are developing their identity and questioning the socio-cultural norms and 'frames of reference' of their parents and society, may be an ideal time to develop the meta-competency of *interbeing*, which fosters a broader experience of connection and belonging with place, each other and their inner selves.

Within the Western education system, an awareness and cultivation of a sense of *interbeing* or interconnectedness has primarily been relegated to the field of religious education (Armon, 2021). Given the normative constraints of a traditional Western approach to secondary school education within the dominant cultural paradigm, this pilot becomes potentially disruptive and transformative as it challenges many of the dominant ways of perceiving reality and being, relying on a more relational understanding and worldviews (Ross, 2020; York, 2014).

Methodology

This research uses a participatory paradigm with a strong element of transformative research in seeking to influence change within the education system in which it is embedded (Fazey et al., 2018; Reason & Bradbury, 2008). This approach involves the active participation of researchers and participants in the co-creation and co-construction of knowledge (McIntyre, 2008). Researchers actively promote and observe the change process while engaging with students, teachers, co-facilitators and other human and non-human actors within the social field. In this research, participants include the authors, workshop co-facilitators, students who attend the workshop and the teachers who supervise the students.

As part of the *Resilience 2030* pilot program, this participatory action research project took place in a selective Sydney girls' secondary school from February to November

2021, with fourteen Year 10 students (15–16 years of age, the equivalent of high school sophomore year in the US). The primary data for this paper is from a one-day *place-based learning* workshop. The workshop was held off-site at a local community centre, a 15-minute walk from the school. The workshop was co-designed by four facilitators with experience in diverse educational practices and leadership backgrounds. It occurred just before the extensive COVID-19 lockdowns in schools in Sydney, Australia.

Qualitative data was collected through artefacts created by the students during the workshop (including drawings and photos of artworks), audio recordings of dialogue, reflections of students during and after the workshop, photographs and a post-event online survey. The facilitation team took part as co-researchers in observing and noting insights with a follow-up debrief, poetic and visual scribing and observations. The methods used to analyse these findings apply a hybrid qualitative approach, drawing on thematic and narrative analysis to integrate the range of artefacts, language and experiences emerging from the field of study (McAllum et al., 2019; Strauss & Corbin, 1998).

In secondary school education, as in higher and adult education, it is challenging to identify precisely what transformative experiences have taken place in the short term or might take place in the longer term (Acheson & Dirkx, 2021). Here, we use Clark's (1991) model of perspective transformation, identifying three dimensions of change: psychological (changes in understanding of self), convictional (revision of belief systems), and behavioural (changes in lifestyle) to identify potential changes. We also apply triangulation of data through researcher and co-facilitator observation, student artefacts, dialogue and post-event feedback survey data to identify and illustrate key findings and themes emerging from the learning process.

The predominant method in this paper of exploring the experiences of *interbeing* is a series of 'thick descriptions' that explore the "detail, context, emotion, and the webs of social relationships" (Denzin, 2001, p. 83). Thick descriptions, according to Ryle (2009), allow a researcher to both describe and interpret social actions within the

complex social context in which they occur as opposed to 'thin descriptions', which primarily describe situations on a more superficial level.

Thick Descriptions of the Learning Experience

The key observations and happenings of the place-based learning workshop are presented below as a series of thick descriptions using the performative mode of a film script (i.e. a series of scenes detailing location, time and activities taking place). The use of 'we' refers to the facilitators or workshop participants. These thick descriptions are then interpreted and analysed in the following discussion.

Scene 1 - Feeling and Connecting into Place

(Interior: room in community centre with bush and harbour shore outside)

Arriving early at the Community Sustainability Centre on the day of the workshop, we try to transform the learning environment (set up with standard educational furniture of chairs, tables and data projector) to a more homely and welcoming space, with rugs, coloured cushions, rosemary and lavender oil in a diffuser, and a plant in the centre of the circular rug as in Figure 46.

Figure 45: Informal learning environment for place-based learning



As the students arrive, they appear shy as they find a space in the circle of cushions. After a bit of chatting, we start with the question, 'How does it feel to be here in this place?' Going around the circle, it is clear the students are responding very quickly to the environment, with many saying that they felt much more 'relaxed and calm' just arriving there and that it feels very different to being at school. We had invited an Aboriginal Elder to join us and open the day, who unfortunately had to cancel.

We are joined by the Centre Coordinator, who has been active in founding the centre as part of an ongoing campaign by residents to retain the land for community use. She shares her personal journey in connecting with land and community and talk about her purpose and passion for her work. She explains the site's history, including the Aboriginal owners, industrial use for loading coal onto ships, and current use. They have an Augmented Reality (AR) app developed as an introduction to the history and culture of the land, and the coordinator invites students to explore the site using the app. Next, students decide on one of three pathways to experience (local history, wildlife and sustainability), download the app and explore by pointing their mobile

phones at the QR codes around the site to see and hear historical images, sounds and explanations. They seem surprisingly engaged and keen to listen to the audio and visuals as they wander. One group walks through coal tunnels to a soundtrack of the old carts rattling. The tunnels are dark and damp, the ground uneven; the girls laugh and ask if they can scream to hear the echo, playfully engaging with the place and developing an embodied relationship with this location.

Scene 2: Listening Deeply to Feel and Connect to Self and Others

(Interior: room in community centre with bush and harbour shore outside)

We return to the room, sit in a circle, and talk about times when we have felt connected to nature and each other. We watch a video introducing the concept of Dadirri, or deep listening, with lush images of Northern Australia and a voiceover by Aboriginal Elder Miriam-Rose Ungunmerr (1988). In the video, Miriam-Rose explains the concept of Dadirri, which is offered by the Ngan'gityemerri people as a gift to all the Australian people, inviting us to connect with the cyclical nature of life, to be patient, wait and listen deeply to nature and what is required of us.

After watching the video, students spend time in the garden, encouraged to listen deeply to the land and their inner voices. Returning to the circle, there are coloured pencils, textas and crayons. Next, we introduce the practice of 'generative scribing' (K. Bird, 2018) and how we can listen and scribe or draw at different levels, from a surface level, which describes and mirrors the content, to intuitive and generative levels, which interpret and seek to represent the essence of what is being described. Students are invited to listen deeply as the text of Dadirri is read by one of the facilitators and draw as they are listening.

As the students share their drawings and what they have heard, the different levels of listening can be seen in their work. Some students write words or phrases from the text and represent these words with literal images, as in Figure 47. Other students demonstrate a deeper level of interpretation and integration, as in Figure 48, representing a dynamic struggle or connection showing two hands next to a sunrise.

We implicitly prompted the students to reflect on at what level they may have been listening and left open the space to reflect on how this might influence a sense of connection.

Figure 46: Surface level listening and literal interpretation of Dadirri text

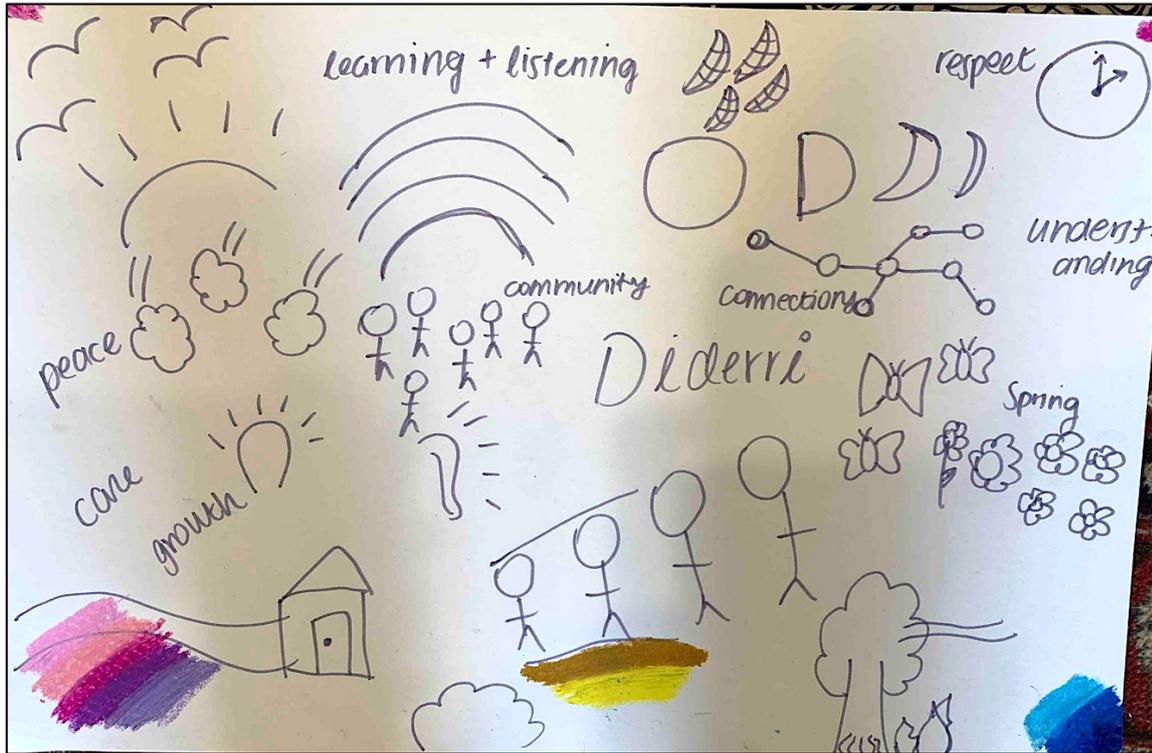


Figure 47: Deeper listening and generative interpretation of Dadirri text



Scene 3: Connecting Through Bodies and Breath

(Interior: Converted mess hall)

After a shared morning tea on the veranda, we move to another space in the Centre, the 'Mess Hall'. All the windows and doors are open to let in the light and breeze coming off the water, and there are birds chattering in the trees outside. The students collect a mat and find a space on the floor while our co-facilitator (also a yoga teacher) sets up at the front of the room.

The teacher eases the students into simple stretches and yoga movements on their mats. She then invites them to lie on their backs in the yoga posture of Savasana for the practice of Yoga Nidra, as in Figure 49. She asks the students to close their eyes and allow their bodies and minds to relax and release. Then, they become aware of the breath entering and leaving their bodies and to notice this as a way of giving and receiving in reciprocity with our surrounding environment.

As part of this practice, an exploration of 'unity and duality' is introduced through observing internal sensations in the body; for example, a feeling of heaviness, then

lightness, then experiencing both heaviness and lightness simultaneously. The practice introduces the concept of developing an awareness of thoughts and emotions and the ability to simultaneously hold two opposite ideas or sensations. Many students comment on enjoying the meditation experience in the feedback on the day, for example, “I really enjoyed the meditation and felt more peaceful and connected to myself” and “I learnt the most from the mindfulness meditation as it really allowed me to focus on myself and my surroundings.”

Figure 48: Students practice yoga nidra in mess hall



Scene 4: Tuning in to Nature

(Exterior: Bush track on headland)

The students walk very slowly in single file through a forest of Eucalyptus trees on the headland near the Centre. They look bored and a little restless, not used to moving so slowly with so little stimulation. It is a hot day, and we are tired after lunch. The line

stops moving; we don't know why or what is happening. We stay silently where we are, watching the trees sway, hearing the birds sing and the tiny insects and ants go about their daily business. We stay there for ten minutes, unmoving. The students start to fidget; we turn around and go back the way we came.

We stand in a circle to discuss what we noticed *in motion*, as instructed before the walk. One participant comments on the process of slowing down, “what I noticed is like when you go slow, you notice more things than you would. For example, when we basically stopped, I got a bit bored, and I was looking at the rock, and you notice one ant, then another ant. Then you notice, like, a trail of ants and different types of ants and all that.”

Mostly, students talk about what they noticed about the sounds and what they heard or how they have noticed the quiet and absence of city sounds. Students comment on how their sensory experiences help them feel connected with place, with one commenting, “I learnt that listening and experiencing the place helps you to build a connection between yourself and that place.”

Post-workshop Reflections: Evidence of Experiencing *Interbeing* and Transformative Learning

The thick descriptions above, alongside researcher observations and evidence from the student feedback on the workshop, were that they had experienced a sense of connection, belonging and *interbeing* throughout the workshop. This sense of connection was reflected in the post-event survey data and reflections. Students commented that they appreciated the space and opportunity to step out of their busy lives and the pressures of being high-performing students to just be and connect. When asked to reflect on what they had learned at the end of the day, the following comment demonstrates this felt sense of connection and *interbeing*, “I learnt that although a connection might not be able to be seen or noticed at first, there are hidden connections that make things belong everywhere.” Different students responded to different activities in feeling this sense of connection and belonging, some felt most connected doing the forest walk while others found the craft activity or mindfulness practice most resonant.

Students' responses indicated elements of psychological, convictional and behavioural change resulting from their experiences in the workshop (Clark, 1991). Psychologically, several students indicated changes in their understanding of self both during and after the workshop. For example, one student realised "that there is a lot about me that even I do not know, and as I grow, I realise that so many memories I thought had disappeared are always just waiting there for me to come back to." Another student reflected, "I yearn for belonging, whenever I go. However, when I feel like I belong, it influences my mood and happiness in such a positive way." This level of self-awareness demonstrates the higher-order skills involved in learning *interbeing*.

Aspects of *convictional change* (or a revision of belief systems) were also observed throughout and after the workshop, with students developing their capacity for intra-personal connection and appreciating multiple perspectives and opinions. One student reflected after the workshop, "I think I really like to learn so many people's perspectives on different issues, and the fact that so many people can have so many experiences and opinions on the same thing can be really interesting and intriguing for me." Students noted that their convictions were being influenced by their peers and facilitators' perspectives.

The third type of perspective transformation - *behavioural change* – often requires longer-term longitudinal research to determine how behaviour might be impacted. However, students commented that they would like to make changes that meant their lives were less stressful and rushed. As one student reflected, "today's program made me realise that things shouldn't be so rushed and that everything will happen in its own time."

It is important to be aware of the possible 'halo effect' or 'demand characteristics' present that might influence the students' feedback based on what they think the researchers might want to hear (McCambridge et al., 2012). This bias has been mitigated by including various data sources including student surveys, dialogue and artefacts analysis from the workshops, student journaling and researcher observations.

Another challenge is understanding whether these learning experiences might have any ongoing impact on the students' perspective transformation. A series of follow-up small group interviews were held six months afterwards. When students were asked to reflect on which learning experiences, they felt had a more lasting impact, many referred to the place-based learning day. One student reflected, "It was very calming. And sometimes if I'm stressed out, now, I try to replicate that same feeling...it was so quiet, you could hear the trees rustling and all the birds... just knowing that there is that calmness within you." Another student, in her final feedback on the pilot program, mentioned, "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."

Discussion

Creating Learning Environments to Support Experiences of Interbeing

The process of co-designing, running and evaluating the place-based learning workshop provided several insights into conditions of learning to promote a transformative learning experience of *interbeing*. The location of the workshop being held away from the school in a natural, community-based setting immediately signalled to the students that this learning experience would be different, and many students expressed an immediate sense of calm and relief on 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.

The pace of the day and learning activities invited slowing down, relaxing in the space, and valuing each other's company. In particular, students commented on the nature walk, mindfulness and craft activities as giving them a sense of relaxation. As one student commented, "I enjoyed meditating the most as it allowed me to calm down and stop, which really helped in making me relaxed and less stressed about the weeks and assessments ahead." Similarly, another student commented on the craft activity, "I enjoyed crafting the most as now I'm really busy, and if I have free time, I normally use

it on digital technology, so it was really nice to spend some time to just make something peacefully without any concerns." There was a sense from both participants and facilitators that there was a 'shift' in the experience of time that provided a greater sense of ease and flow. As facilitators, we reflected at the end of the day on the seemingly 'elastic' nature of time we could collectively experience so much in one short school day. Teachers accompanying the students commented on the value of engaging students in immersive learning experiences and their frustration at not having time within a crowded curriculum to focus on this kind of experiential learning. Their geography teacher, who initially seemed somewhat aloof, became highly animated when describing the network of termite nests and tracks he observed during the nature walk.

Offering opportunities for students to shift from a cognitive experience of learning to learning through our senses was a core design principle of the workshop, inspired by the relational learning approaches of Buddhist and Aboriginal learning pedagogies. 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 emphasise the validity of knowing through 'being' in our bodies and senses as inseparable from 'thinking'. The students seemed almost surprised by what they learned from their senses as one student commented on what they noticed most in 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 kind of like able to connect with your surroundings. And then there was one stage when everyone was silent, but when you stepped, the leaves crunched, and that sounded like a hundred times louder than anyone speaking
(Student participant, 15 years).

This kind of 'interoception' through the body and senses alongside the cognitive mind is described by Annie Murphy Paul as being like a bird building a nest, "plucking a bit

of string here, a twig there, constructing a whole out of the parts” with the parts being our thoughts, feelings, movement of our bodies, interaction with each other and our environment (Paul, 2021, p. 8). As Varela et al. (2016) observe, cognition is 'embodied action' or 'enaction' where sensory and motor processes, perception and action are inseparable in our lived cognition. This style of learning and 'knowing' reflects a more relational understanding of an individual as inextricably connected to place and each other. These connected learning pedagogies, where young people are immersed in the natural world for transformative learning experiences, have been practised by First Nations people for millennia (Groff, 1996; Lertzman, 2002).

What Further Areas of Inquiry are Opening Up?

To better understand the conditions required to experience *interbeing*, we suggest a multi-day, immersive nature-based program may provide more significant potential for transformational learning. Given the feedback and engagement of students in a one-day workshop, we propose a longer and more immersive learning experience. Spending several days in nature may provide significant transformational learning. Further research is needed to understand how students might integrate this new knowledge and experience after returning to a traditional school environment and whether these experiences continue to impact the students' perspectives. The role and engagement of teachers and school staff in this form of experiential learning would be essential for successful implementation on a broader scale.

Conclusion

This research demonstrates the importance and timeliness of integrating place-based experiential learning into educational experiences for young people to develop the meta-competency of *interbeing*. The level of engagement and reflections of students in the place-based learning workshop demonstrates the potential for creating learning environments where students can experience greater connection and belonging to their inner selves, each other, place and the natural world. This learning style enables facilitators to integrate new ways of thinking and being in the world that incorporate knowledge and wisdom from non-dominant paradigms of learning and culture. These

learning experiences, even in a short time, have enabled students to shift their 'frame of reference' to become more inclusive, differentiating, critically reflective and integrative of experience (Mezirow, 1997). The increasing focus and concern for students' mental health challenges, which impact their ability to learn, may provide a leverage for the inclusion of such programs in a secondary school curriculum in the future. With the support of the school leadership, teachers and community, these learning experiences can be integrated into existing secondary school learning and provide opportunities for developing a core future-focused meta-competency of *interbeing* to support wellbeing, resilience and mental health in a rapidly changing world.

Chapter 13: Meta-competency – Self-awareness

13.1 Introduction to chapter

In this final meta-competency chapter, I analyse the benefits of self-awareness for young people in developing greater resilience. Experiential learning that promotes self-awareness and reflexivity can support young people to understand and normalise their subjective responses to challenging events and situations. These might be day-to-day adolescent challenges such as exam stress, self-consciousness or conflict in relationships, to more significant environmental challenges such as climate disruption and uncertainty about their future. This chapter follows a similar structure to previous ones in first considering the importance of self-awareness before examining it from a Western psychological, Buddhist and First Nations knowledge system perspective. Next, I outline what experiential learning methods were used to promote self-awareness and reflexivity, followed by a series of thick descriptions, analyses and findings.

13.2 Why is the meta-competency of self-awareness needed now?

Self-awareness is identified as a protective factor for young people contributing to resilience and is associated with an internal locus of control, emotional intelligence and adaptability (Bermúdez, 2000; Flanagan, 1996; MacKenzie, 2008). As the external environment becomes more challenging for young people due to increased uncertainty and climate disruption, as outlined in Chapter 2, self-awareness supports the ability to ‘respond’ rather than ‘react.’ Greater self-awareness enables a reflexive process, noticing thoughts, emotions, and physical reactions to challenging situations. Mindfulness practices, meditation and therapies such as dialectical behavioural therapy (DBT) help to create a ‘buffer’ between experiences of the external world and our responses to them, supporting a more considered response (Panos et al., 2014; Zenner et al., 2014). Self-awareness occurs at different levels, from the surface level of noticing how we respond to daily events and interactions to deeper levels of awareness of our motivation and purpose (MacKenzie, 2008). Having a clearer sense of purpose has been found to support resilience and mental health for young people (Van Dyke & Elias, 2007).

13.3 How does Western psychology define and understand self-awareness?

Self-awareness is defined by Duval and Wickland (1972) as the capacity to become the object of one's own attention. A self-aware person "actively identifies processes and stores information about the self" (Morin, 2011, p. 808). Research and literature on self-awareness distinguish between subjective and objective self-awareness. Subjective self-awareness refers to the fact that we are the source of all our perceptions and interpretations of the outside world. The theory of Objective Self-Awareness, developed by Duval and Wickland (1972), refers to focusing attention on the self, which results in making a comparison to others and standards of behaviour. These comparisons can lead to changes in behaviour to meet the expected standard or avoidance (Silvia & Duval, 2001). However, this theory has also been critiqued due to the assumptions that self-awareness is an aversive state of self-judgement in not meeting a standard (Steenbarger & Aderman, 1979).

Some consequences of self-awareness include more accurate self-reporting, increased consistency between behaviour and attitude and decreased social conformity (Morin, 2011). Emotional intelligence has been connected to self-awareness by Goleman (1996), who describes three competencies of self-awareness as emotional awareness, accurate self-assessment and self-confidence. More recently, studies of interoception, the processing, representation and perception of bodily signals, have been found to play an essential role to play in self-awareness (Herbert & Pollatos, 2012; Khalsa et al., 2018).

13.4 How can we understand self-awareness from a beyond-Western perspective?

Self-awareness is integral to a Buddhist worldview where every living being is seen as having the potential to become fully aware or 'awake' through a deep understanding of their own mind and, thus, the minds of other living beings (MacKenzie, 2008). There are a range of practices in various schools of Buddhism to promote self-awareness and reflexivity that have been found to improve mental health and resilience (Kabat-Zinn, 2003; Nyklíček, 2020). A Buddhist interpretation of self-awareness and the model of the mind has been in development for over 2,500 years, originating from Hindu teachers in India. This body of knowledge is philosophically highly sophisticated and

based on experiential learning and practice. The term 'buddha' comes from Sanskrit origins, with the term 'budh' meaning 'to awaken' or 'to become aware'. According to Buddhist psychology, the more we understand our own minds, the more we can understand reality as it is (as opposed to how we might like it to be!). Self-awareness in Buddhism can be described as a 'many-layered phenomenon' ranging from sensory phenomena and emotional responses to more profound contemplation of our deepest nature (MacKenzie, 2008).

According to a Buddhist worldview, our mind and 'self' are an intricately woven combination of senses, mental factors and physical elements that are inherently empty of independent existence but instead are constantly being re-created through a complex series of causes and conditions. The existence of a separate, concrete independent entity or 'self', therefore, does not exist; however, a dependent self does. The primary method of developing self-awareness in Buddhism is through meditation and mindfulness practices. Mindfulness involves actively monitoring one's thoughts, emotions, and bodily reactions in response to the external environment, both during meditation and in daily life (Kabat-Zinn, 2003).

When considering self-awareness from a First Nations perspective, connection with culture and Country is integral to understanding self (Eady et al., 2021; Goreng Goreng, 2018; Hansen & Antsanen, 2016). In their research with Dene and Inuvialuit teachers in the Canadian Northwest Territories, Eady et al. (2021) identified culture as a facilitator of self-awareness, self-development and identity for Indigenous students. Using immersive and art-based practices, learning from Elders, and teachers acting as role models contributed to students' stronger cultural awareness and self-awareness (Eady et al., 2021). The process of learning in Aboriginal culture is described by Goreng Goreng as follows:

We are taught the ways of being, knowing and doing of our Spirit Ancestors and the life is then spent learning from, observing and following our teachers and Elders – who are the embodiment of the

Law and learning. We observe them and aim to become like them
(Goreng Goreng, 2018 p.79)

This process of learning can be communicated through art and culture, “embedded in storytelling, music, song, dance, cultural expression, art and performance where Elders carry on those traditions, build new ones, teach the old ones and embed training and personal development in these methodologies” (Goreng Goreng, 2018, p. 42). These embodied practices connect the inner experience of a young person with their environment, community and culture, where the self is integrated into a broader interconnected reality (Yunkaporta, 2021).

13.5 How do I define and understand self-awareness for this inquiry?

Based on my theoretical investigation, I have synthesised these complementary (i.e. distinct) philosophies to define self-awareness in this inquiry. In the context of this research, self-awareness has two key elements: firstly, an ability to observe and understand our own minds through noticing our thoughts, emotions and senses, and intuitive insights. Secondly, to become more aware of how these processes of our mind influence how we engage with our external environment, such as people, places, experiences, or events.

In my research, I translated this broad definition into three experiential learning objectives for developing self-awareness, which are integrated into the learning activities of the pilot program and analysed in the thick descriptions below:

- Listening with our bodies: noticing where and when we feel different sensations and emotions in our bodies;
- Seeing inside and out: paying attention to how our inner thoughts and feelings impact our engagement with the outside world; and
- Finding a balance: understanding our mental and emotional strengths and weaknesses and finding inner balance.

13.6 What learning experiences and activities are used to support self-awareness and why?

The pedagogies used in the pilot program for fostering self-awareness and reflexivity included a series of experiential learning activities focused on supporting students to better understand mental health while practising self-care and mindfulness. The learning experiences and activities to support self-awareness included mindfulness practices, mapping where we experience emotions in our bodies, learning about the mental health continuum, storytelling and journaling. Other activities focused on developing a stronger self-awareness around mental health and knowing when and how ask for help and support.

As mentioned above, mindfulness is used regularly in Buddhist practices to promote greater self-awareness through observing thoughts, emotions, and bodily sensations. It has started to be used in schools and education settings to promote student mental health and wellbeing. In Module 2, mindfulness was introduced using the RAIN (Recognise, Allow, Investigate, Nurture) process, as discussed in Chapter 10 (Brach, 2020). Journaling was encouraged as a form of ongoing reflexivity for students to keep track of their experiences, responses, thoughts, and emotions with journaling activities integrated into the day.

Embodied practices of creating a visual map of where we feel different emotions in our bodies encouraged students to make a more conscious connection between their physical experiences and emotions. This activity focused on bodily self-awareness and interoception, with students mapping the emotions of anger, anxiety, and happiness on an outline of the body. This process recognised that young people are 'experts' in understanding their own bodily systems, as well as encouraging them to start to notice how their bodies might respond to different situations and environments. This greater self-awareness of the connection between mental and emotional states and physical sensations has been found to support greater mental health and reflexivity (Herbert & Pollatos, 2012; Khalsa et al., 2018).

13.7 Thick descriptions, observations, and insights

In the following thick descriptions, I introduce a series of scenes that reference students growing self-awareness as they engage in learning activities during the pilot program. The scenes below occurred within *Module 2 - Self-awareness, resilience and personal agency*. Pseudonyms are used for student participants and co-facilitators.

13.7.1 Scene 1 - Creating the conditions for fun (18th May, 2021)

(INTERIOR: MULTI-PURPOSE CLASSROOM IN HIGH SCHOOL LIBRARY, MODULE 2: SELF-AWARENESS, RESILIENCE AND PERSONAL AGENCY)

We are set up in the multi-purpose learning space in the library. We all sit around a large table and discuss the day's aims and plans. Jane from batyr explains to the students that the day is as much about us as facilitators learning from their experience as them learning from us. She explains that batyr hopes to get the students' insights and feedback on the activities to help develop their school programs.

The students seem shy about having new people co-facilitating the session, although they seem comfortable in a familiar environment at school. One of the students comes in late and seems quiet and withdrawn. Her friends draw her into their circle, quietly talk to her, and put their hands on her arm. I notice the warmth and gentleness they show her.

Jane starts with an icebreaker game called *Would You Rather*. As the students slowly warm up and start to laugh, she runs through a series of bizarre scenarios where the students stand up if they like option one or sit down if they like option two. The first question is, "Would you rather live in a cave or a treehouse?" The other batyr facilitator, Peter, chips in humorously, "No judgement; if you're a cave person, we won't judge you." The students respond immediately with questions, "What is the wifi situation?" And "Is there aircon in the treehouse?" Jane goes off script and asks, "Would you rather be boiling hot or freezing cold?" As the students start to relax and play, the mood in the room lightens, and the girls start to smile and laugh, enjoying

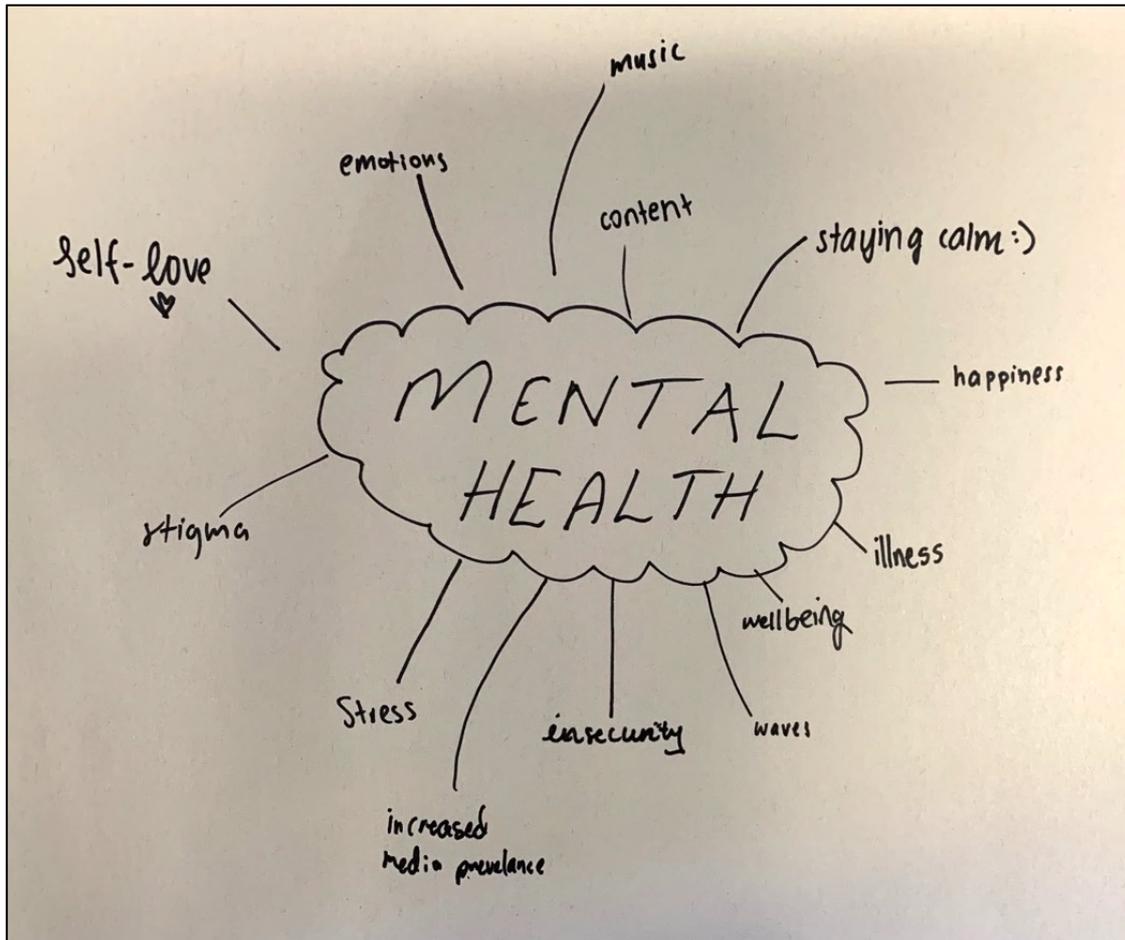
themselves. It soon becomes clear to us that Jane and Peter, both in their twenties and much closer in age to the students, can bring out a sense of relaxed playfulness and openness in the students we have not seen before. The next question gets even more laughs: “Would you rather have permanent Dorito (or cheesy corn chip) dust on your fingers or a permanent runny nose?” When asked why they chose Dorito dust, someone replies, “You have a constant snack”, and another says, “You won’t get COVID as you won’t touch anything with your fingers”, showing the concerns about the pandemic are never far from their minds.

13.7.2 Scene 2 - It comes in waves (18th May, 2021)

(INTERIOR: MULTI-PURPOSE CLASSROOM IN HIGH SCHOOL LIBRARY, MODULE 2: SELF-AWARENESS, RESILIENCE AND PERSONAL AGENCY)

Next, Jane invites the students to break into two groups and then write down all the words they associate with mental health on a bit piece of paper with a marker. She puts some music on, and the students start to chat as they write. After 10 minutes, we discuss that some words might be seen as ‘positive’, such as self-love, contentment, and staying calm, while others might be seen as ‘negative’, such as illness, stigma, and insecurity (Figure 50). I notice one of the words is ‘waves’ and if the team would like to share what they meant. A student replies, “It’s like your mental health is like the ocean sometimes, huge waves of stress and happiness crashing over you; sometimes it’s calm and still.” This descriptive metaphor of mental health coming in waves carries on through the day, with references being picked up in later activities. I notice the students are starting to form their own shared language and metaphors around their experience of mental health.

Figure 49: Students’ word association map with mental health



Jane observes that the words chosen by students seem pretty balanced and that in many schools she works in, the words tend to be a lot more negative and focused on depression, anxiety and mental illness. She asks why they might have chosen more balanced words as a group. A student replies that they have done a module on mental health in Personal Development, Health and Physical Education (PDHPE), where they talk quite a lot about mental health. The conversation turns to the word ‘stigma’, and Jane invites one of the students to describe what this means. The student responds, “It’s like a general belief around a topic, a large variety of people’s opinions. In some cases, they might not really understand.”

Following on from the word cloud activity, each team maps out their words onto a linear spectrum from mentally healthy to mentally unhealthy. On the unhealthy end, they write about skipping meds, disassociation, coaching, pain, empty, repetitive days, toxic relationships (yourself, food, friends), and family. On the healthy end is self-love,

staying calm, friendships/healthy relationships, limits, happiness, and content with yourself. Peter says this spectrum helps us to realise that mental health is not black and white and that there is a whole spectrum of experiences. He asks one group why they have put music on both ends of the spectrum. A student from the group explains, “So when you are in an unhealthy sort of phase, you can use music as a sort of escape, so that's why we put it on that end. And also, on the other end, music can be just a form of enjoyment.” In the centre of the continuum, one group had the word 'vulnerability'. When I asked them about it, they said you had to be prepared to be vulnerable to ask for help when you are not feeling well and that this can be a turning point.

To finish this activity, Peter draws a picture on the whiteboard with the linear spectrum from healthy to unhealthy on the x-axis and adds a y-axis of coping. He talks about how a young person might have depression but still be coping well and how mental health experiences are not defined solely by ill health but also by the resources and support around us and how we respond to these. The students are curious about this model and want to know more; they seem intrigued by the mathematical model and how mental health can be three-dimensional.

13.7.4 Scene 4 - Mapping the emotional body (18th May, 2021)

(INTERIOR: MULTI-PURPOSE CLASSROOM IN HIGH SCHOOL LIBRARY, MODULE 2: SELF-AWARENESS, RESILIENCE AND PERSONAL AGENCY)

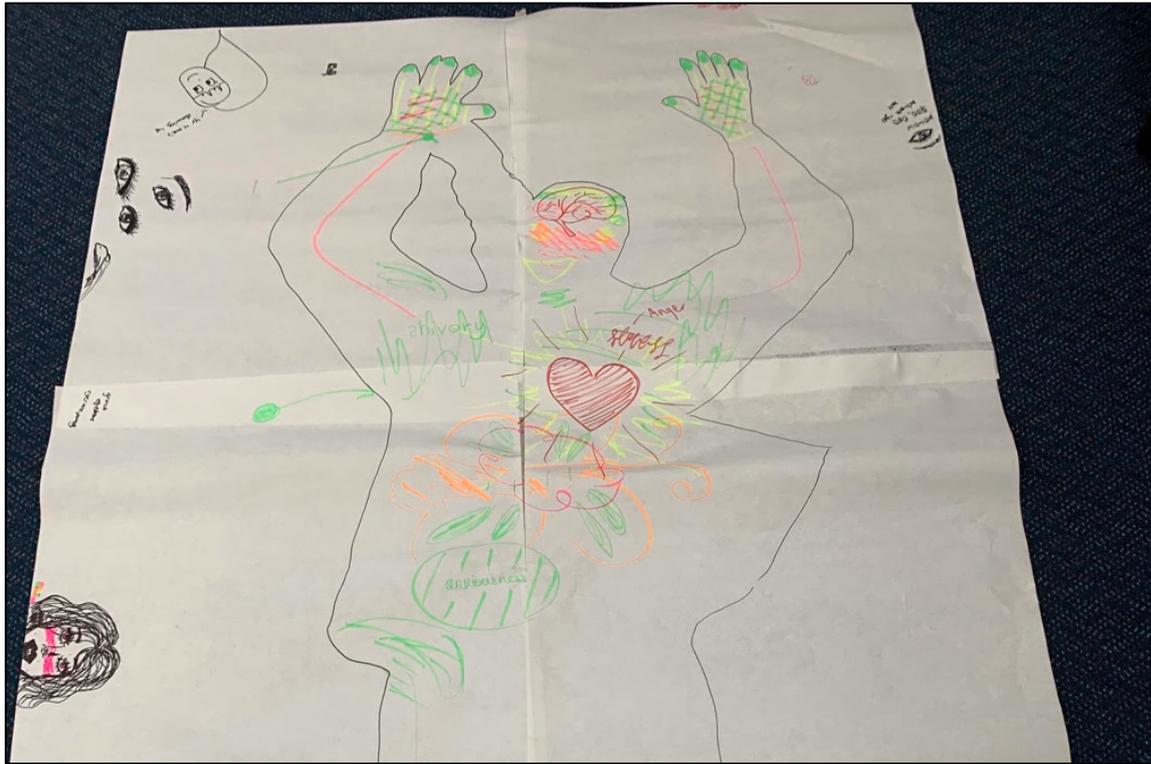
After lunch and a fun icebreaker game where students run after a ball in relays, we move into an activity where Jane talks about how we experience emotions in our bodies and says we will focus on anger, happiness, and feelings of anxiousness. The students split into groups of five and elect someone as a volunteer to lie on a large sheet of paper while the group trace around them to have an outline of a body (Figure 51). The students discuss where they experience different emotions in their bodies and draw this onto the body shape. They talk about what colours or shapes can represent these feelings in the body. Others seem less engaged and doodle on the edge paper.

Figure 50: Students create visual maps of emotions on the body



The groups work with great enthusiasm and laughter for 15 minutes, producing a full body map of where they feel each emotion (Figure 52). They decide to colour-code the emotions in some way and used different shapes and patterns to draw where they experienced these emotions in their bodies (Figure 53).

Figure 51: Visual map created by students of emotions in the body



Feelings of anxiety are associated with feet and toes (toe tapping), legs, stomach, chest (bad chest tingles, shivery, light), hands (fingers tapping, shaky, sweaty hands, cold hands), underarms (sweaty), forehead (sweaty), brain (migraines), eyebrows (furrowed) (Figure 53). As they draw, students talk about their experiences of feeling emotions such as anxiety and how they sometimes don't notice until after a situation happens how anxious they are. One student comments that it can be helpful to notice these signs while you are experiencing anxiety so you can make decisions about what to do.

Figure 52: Student illustrations of where anxiety is felt in the body



Anger is drawn on the body as being felt in the hands, heart (pains and throb), brain, eyes (clouded vision), mouth (can't say anything), as well as body shaking. In contrast, happiness is mapped to the stomach (butterflies, hurt from laughing), heart (contractions of the heart, tingles), face (smile), brain and feet. In the debrief, as we go around and look at each team's map, students comment with surprise at how many different places we can feel these emotions. Jane talks about the connection between the body and thoughts and emotions and how we can use our breath and relaxation practices to calm the body and, as a result, the emotions and thoughts.

13.7.5 Scene 5 - Coding the resilience wheel (18th May, 2021)

(INTERIOR: MULTI-PURPOSE CLASSROOM IN HIGH SCHOOL LIBRARY, MODULE 2: SELF-AWARENESS, RESILIENCE AND PERSONAL AGENCY)

Our next learning activity is more theoretical, using a model of The Resilience Wheel developed for professional development by co-facilitator Vanessa Alexander. Vanessa and I adapted the model to work with young people in this module (Figure 54). The wheel is a model for thinking about resilience through various factors, including physical wellbeing, emotional wellbeing, mental wellbeing, connection and belonging, boundaries, agency and purpose, values and strengths (Figure 54).

Figure 53: The resilience wheel model



I introduce the wheel idea, and the students break into small groups to interpret one factor per group. The students seem less enthusiastic about this activity, which they say feels more like schoolwork. We explain that the model has been adapted from one used in a work context, and we would value their input on how they interpret the different factors from their perspective. Then, each team reports on how they think each factor might relate to resilience for them and young people more generally. The team looking at the factor of agency respond to the question “What does agency mean to you?” in their notes saying, "freedom - taking your life back!!! - don't be a sheep", "making decisions based on yourself over other people" and "los(ing) external dependencies – removing blame." I notice their answers show a significant level of insight, particularly that agency might involve taking responsibility for your actions rather than blaming ‘external dependencies’.

Next, students are mapping their own resilience wheel, ranking their strength in each factor from one to ten and identifying what factors they would like to focus on strengthening. One student, a good basketballer, comments that sports contribute to her physical wellbeing in general when she has injuries or feels pressured about her

performance, which can negatively impact her mental and emotional wellbeing. Her friend responds that resilience is very personal and different for everyone and that someone looking in from the outside might not realise that sports can be helpful and stressful.

13.7.6 Scene 6 – Making a pledge (18th May, 2021)

(INTERIOR: MULTI-PURPOSE CLASSROOM IN HIGH SCHOOL LIBRARY, MODULE 2: SELF-AWARENESS, RESILIENCE AND PERSONAL AGENCY)

In the final stage of the module, Peter introduces the activity of the pledge wall and asks the students to think about what they might pledge to do following the module based on what they have learned. He says this could be something for yourself, a friend or something else entirely. Pledging, he says, is a chance to commit to an action based on what they have learned about mental health and self-awareness.

The students write their pledges on post-it notes and stick them on the whiteboard (Figure 55). Many students make pledges about self-care, such as journaling or using the RAIN self-compassion technique. Others focus on looking out for friends and checking in on them. One student pledges to “Talk to someone I trust about my mental health.”

Figure 54: Student pledges wall



13.8 Analysis and discussion of supporting self-awareness

In general, participants in the pilot program displayed a good sense of self-awareness and were interested and engaged with the idea of developing this further during the program. Opportunities for self-awareness and reflexivity were built into the structure of the modules with mindfulness, debriefing and reflection conversations, journaling, check-in and check-out circles. In this analysis, I focus on the three learning objectives of listening with our bodies, seeing inside and out and finding a balance.

13.8.1 Listening with our bodies

The activity mapping emotions onto an outline of the body was one that student reflected on as being particularly effective in developing their self-awareness and reflexivity. In the final group interviews, one team talked about how effective the mapping activity was and how they had started to notice emotions more in their bodies, particularly anxiety. A student commented, "When we did that thing where we

lay down and did an outline of a body, and then we kind of really physically engaged in looking at it. Wow, emotions like physically showed up.” The students noted the benefits of mindfulness practices, such as focusing on the breath or full body relaxation, in helping to relax the body and making them feel less stressed and anxious. As one student reflected in the post-event survey, “It just made me think about what happens when you get stressed...what happens in your mind and the physical repercussions of that.” The benefits of learning mindfulness and body relaxation were noted by one student as being helpful relaxation during the COVID-19 lockdowns, saying, “I started using the mindfulness practice because sometimes at night 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.”

13.8.2 Seeing inside and out

This learning objective refers to the ability to notice how our inner thoughts and emotions impact how we relate to the outside world and vice versa. This ability to think reflexively was highlighted by students as being something valuable that they do not talk about in school or elsewhere. As a student noted in the final group interviews, “Unlike this program, other stuff that we do at school, and in general, people don't really talk about this stuff.” Journaling was a method noted by students as helping with self-awareness and reducing stress during the COVID-19 lockdowns (see Chapter 10). Taking a step back and seeing mental health as a priority was also noted by several students after completing the Resilience Wheel activity, with one student reflecting in the post-event survey:

I think sometimes I need to just step back, focus on myself, and put my physical and mental health first. Often, I am 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 (Student, 15 years).

Students also connected an increase in self-reflection and self-awareness to the ability to support each other. For example, one student commented on the benefit of “self-

reflecting and thinking about not just me, but being more aware of emotions and experiences and stuff that people go through."

13.8.3 Finding a balance

Understanding mental health as a continuum and including coping as another axis to determine mental health was a concept students responded strongly to. In the feedback and discussions at the end of the module, they talked about how this helped them think about their own and their friends and family's mental health in a new light. In the post-event survey, a student commented, "I learnt that mental health lies on a spectrum rather than a line and that it comes and goes in waves," picking up on the shared language developed in Module 2. The way students discussed the impact of social media and music on their mental health showed a balanced perspective that these can have positive or negative impacts depending on the person and how they are used. The non-linear nature of mental health was also mentioned with getting help and support. As one student said, "I learnt that it isn't as linear as I thought, and there are a lot more ways for help that I didn't consider."

13.9 Summary and further questions related to self-awareness and resilience

I found self-awareness to be a foundational relational meta-competency that allowed young people to understand their own selves and mental health and those of their peers, families, and friends. This meta-competency had a strong connection with compassion. Learning activities that were particularly effective in supporting self-awareness included mapping emotions on the body, mindfulness, journaling and understanding mental health as a continuum.

A primary question emerging after *Module 2: Self-awareness, resilience and agency* for me was: what is the relationship between self-awareness and active compassion towards others? Based on the response of students on the pledge walls wanting to support and help each other, it appeared that the more they reflected on their own mental health and resilience, the more they wanted to support their friends and peers. This increased capacity to support others was also evident in the project-based

learning, where students were eager to apply their new skills to helping younger students. I am interested in the potential for more regular mindfulness practices in developing self-awareness and reflexivity and how this might also impact peer support within a school environment.

Chapter 14: Findings and discussion

14.1 Introduction to chapter

In this chapter, I return to my research questions to analyse and synthesise relevant findings in response to the primary research question: *How can experiential learning within a secondary school environment help develop greater resilience for young people in the context of uncertain futures and climate disruption?*

I begin with an analysis and discussion of findings in response to my secondary research questions:

1. What are the key issues impacting the wellbeing and resilience of young people in Australia in the early 2020s?
2. What meta-competencies might support young people to develop greater resilience in this context, and what can we learn from other worldviews in exploring these?
3. What learning environments and experiences in secondary school can support young people to develop these meta-competencies?

In my final chapter, I discuss my contribution to knowledge in terms of theory, practice and contribution to change in the situation and future research questions.

14.2 Findings research question 1: What are the key issues impacting the wellbeing and resilience of young people in Australia in the early 2020s?

The findings related to this question draw on a range of data and evidence across the life cycle of this inquiry, including the literature review, exploratory interviews with youth workers and educators, co-design workshops with teachers and students, and my reflections and observations as a researcher. These sources contribute to a contemporary understanding of the issues impacting the wellbeing and resilience of young people in Australia in the early 2020s. Critical issues identified in this research include a high level of uncertainty about the future (both individually and collectively), high levels of psychological distress and anxiety, a lack of connection and

belonging, confusion about identity and the impact of social media on how young people communicate and make meaning of their worlds.

My literature review highlighted the increasing levels of mental illness among young Australians and the impact on their quality of life, including their ability to engage with education and learning. Chapter 2 highlighted that young people are disproportionately impacted by peak resilience events such as climate-induced natural disasters (floods and bushfires) and COVID-19. My review of the field of resilience and young people from a Western psychology perspective includes an aggregated analysis of individual, family, and community risk and protective factors, which I expanded to include global protective and risk factors related to climate change and global events such as COVID-19 (Chapter 2).

Findings from PAR Cycle 1 interviews (Chapter 5) reinforced the findings from the literature review that young people are experiencing high levels of uncertainty about their futures due to the myriad of changes in their environment and that this is contributing to high levels of psychological distress and mental ill health. The primary themes identified in these interviews concerning the wellbeing and resilience of young people are summarised in Table 15 below.

Table 15: Key themes and insights - wellbeing and resilience of young people

Themes	Insights
Needing freedom but lacking boundaries	<ul style="list-style-type: none"> - Increasing access to unfiltered media content - Limited oversight of media use from parents and carers - Loss of boundaries to make them feel safe
Loss of connection and belonging	<ul style="list-style-type: none"> - Less connection with families and communities

	<ul style="list-style-type: none"> - Families experiencing increasing socio-economic pressures, less time to spend with children - Social media can contribute to a sense of feeling isolated and excluded
Confusion and pressure around identity	<ul style="list-style-type: none"> - Projected versus real identity online - Choices in gender identity - Body image issues - How you look versus how you feel
Changing institutions and pathways	<ul style="list-style-type: none"> - Changes and uncertainty related to traditional institutions and pathways, including religion, politics and family - Less trust in traditional pathways - Worry about the future of work and employment
High levels of uncertainty	<ul style="list-style-type: none"> - Climate change - Changes in the economy - Prospects of finding a job, buying a house and having a family
Challenges around mental health	<ul style="list-style-type: none"> - Growing anxiety and depression - Self-harm (self-medicating, eating disorders, physical self-harm) - Disengaging/disconnecting

These findings supported the literature review in identifying a complex combination of factors including personal, interpersonal and contextual factors influencing young people's mental health (Landstedt et al., 2017; Uhlhaas et al., 2021). What was

particularly striking or noteworthy in the interviews impact of technology, device use and social media on young people's mental health and resilience which was much more prominent than in the literature. Another theme that is not well addressed in the literature was the socio-economic pressure on families and the impact this has on parents having quality time to spend with their children often resulting in greater isolation and disconnection for young people. The compounding aspect of change across multiple areas simultaneously (e.g. technology, economy, family) along with high levels of uncertainty about the future (e.g. jobs, housing, climate) reinforced research findings in the literature (Brennan et al., 2021; Mission Australia, 2022).

Regarding the question of how young people develop resilience, the interviewees in PAR Cycle 1 (Chapter 5) identified the following as being beneficial for young people to develop resilience:

- Allowing young people to fall and get back up;
- Encouraging self-awareness through developing emotional intelligence and embodied experiences;
- Developing stronger communication and relational skills; and
- Experimenting with playfulness and creativity.

Educators and youth workers interviewed identified skills and capabilities critical for young people in the future, including mindfulness, self-awareness, distress tolerance and emotional regulation. These capabilities support young people to manage strong emotions and deal with uncertainty and change (Chapter 5). These learning experiences and capabilities identified by interviewees include a focus on both individual capabilities, relational skills and resources within the young person's environment to support great resilience (Masten, 2001; Ungar, 2011).

Learning about how complex systems operate and how and where young people might have agency or influence change in these systems was also considered an educational priority. Educators reflected on the challenges of supporting students within the education system who were experiencing poor mental health and generally believed

that schools had a role in supporting resilience and wellbeing. In accordance with the literature, most teachers reported that a serious lack of resources to support young people's mental health (Graham et al., 2011; Willis, 2022). Other factors identified by interviewees to support wellbeing and resilience for young people included greater engagement with communities and families, more peer-to-peer learning initiatives, training teachers and young people in mental health awareness and first-aid, more experiential learning and a greater focus on connection and belonging in school communities. Again many of the educators expressed frustration at a lack of support and resources to be able to offer students learning experiences they felt would benefit resilience and wellbeing for students. Learning pedagogies such as transformative and regenerative learning were not mentioned as a priority by most educators.

Further analysis of issues impacting young people's wellbeing and resilience occurred in the co-design workshops with teachers and students at the secondary school in PAR Cycle 2 (Chapter 6). In this research cycle, students acted as co-researchers in the inquiry into issues impacting the resilience and wellbeing of young people. The students' highest priority issues included stress, time pressure and expectations around academic achievement, mental health issues, anxiety and depression, friendship and relationship issues, body image, world problems and the 'future' (described as exams, money, jobs). Their teachers identified similar issues around parental expectations for academic success, mental health, world issues, social media, friendships, and relationships.

Overall, themes of *uncertainty* about the future, mental stress and emotional anxiety associated with this were highlighted across all data sources. This uncertainty was associated with a perception of a lack of *agency* that young people feel in influencing change in their current or perceived future circumstances. A *lack of connection and belonging* experienced by young people as isolation or not fitting in was also a key finding and particularly pertinent to resilience, as supportive relationships and connections are essential protective factors (Rutter, 1990, 2007). The impact of *digital technology and social media* changes on young people's lives was significant. The students in the pilot program generally held a more balanced view of the role of social

media and technology in their lives, recognising both the potential positive and negative impacts. At the same time, educators and youth workers tended to reflect on more negative physical and psychological impacts.

This contextual inquiry into the issues impacting young people's wellbeing and resilience informed the framework of relational meta-competencies for resilience, discussed in the next section.

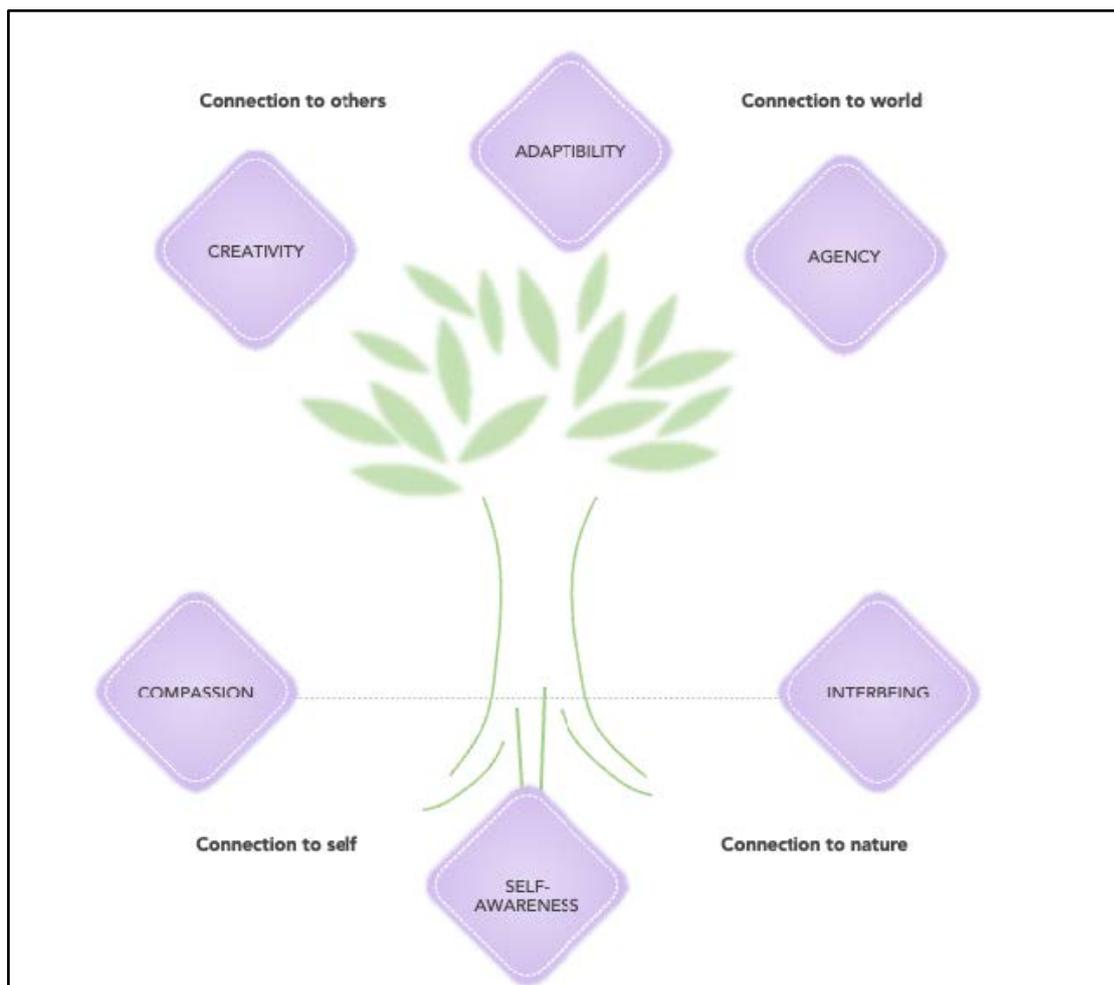
14.3 Findings research question 2 - What meta-competencies might support young people to develop greater resilience in this context, and what can we learn from other worldviews in exploring these?

In my research, I identified a framework of six relational meta-competencies that were explored within a secondary school pilot program to teach these meta-competencies. The findings suggest an increase in the perception of resilience of students participating in the pilot. Here, I summarise findings about these relational meta-competencies and discuss the contribution of relational worldviews of Buddhism and First Nations knowledge systems to their development. While these worldviews with their more complex understanding of relationality and interconnectedness have contributed to the development of the conceptual framework of meta-competencies for resilience, careful consideration is needed as to what practices and learning experiences might be relevant to integrate into school learning environments. These are discussed further in this chapter.

The six relational meta-competencies identified for developing resilience are adaptability, agency, creativity, compassion, interbeing and self-awareness. The rationale and data sources contributing to identifying these meta-competencies are outlined in Chapter 6. These six relational meta-competencies informed the design of a series of experiential learning modules that were explored and validated in the school-based pilot program. Chapters 8 to 13 provide a detailed analysis of each relational meta-competency. These relational meta-competencies are visualised below in Figure 56 using the metaphor of a tree. Self-awareness is represented at the tree's

roots, providing a solid foundation for resilience, while compassion and interbeing are positioned at the interface between inner and outer worlds, influencing how we respond to external circumstances and environments. At the level of the branches and leaves are the meta-competencies relating to our connection with others and the world: creativity, adaptability and agency.

Figure 55: Visualisation of relational meta-competencies for resilience



The pilot program demonstrated the efficacy of these relational meta-competencies in developing stronger resilience for students. The data and evidence collected throughout the pilot and documented in Chapters 8-13 suggest that students did experience a greater sense of agency, adaptability, compassion, creativity, interbeing and self-awareness. Developing these relational meta-competencies through experiential learning meant students gained skills that may contribute to their

resilience. This resilience was demonstrated during the COVID-19 pandemic when students applied the practices and methods they learned in the modules. This experience of adaptability and resilience was remarked on in the final group interviews by one student as follows:

I think resilience is not giving up in the face of hardship (it) is just continuing to try to adapt. And in terms of how the lockdowns have affected my resilience, I think because of the forced change...I was kind of forced to change and adapt. And I did also continue to try to adapt and better myself to suit the new environment I was in
(Student participant, 15 years).

Another reflection from a student after the program indicated her understanding of the potential to pro-actively develop resilience both for herself and the ability to support others to do the same:

I feel like before doing this program I felt like you had to go through something to become resilient from it. But doing this program I can see that you can cultivate resilience in people, especially with younger years, without going through an experience that like changed them. You can do this preventative sort of thing that makes them resilience so that they don't need to fall in a hole, but they can see it, they can walk over it or see it coming (Student participant, 15 years).

The framework of relational meta-competencies and experiential learning activities for resilience in the pilot program integrated pedagogies, practices and insights from Western psychology with those from Buddhist and First Nations knowledge systems. The relational worldviews of Buddhism and First Nations knowledge systems contributed practices and perspectives developed over tens of thousands of years that have been found to increase connection, engagement, resilience and wellbeing for young people (Brendel et al., 2016; Goreng Goreng, 2018; M. Graham, 1999; Groff, 1996; Kumar, 2002; Lertzman, 2002; Meiklejohn et al., 2012; F. Varela et al., 2016; Weare, 2013; Yunkaporta, 2019a). From my position as a non-indigenous researcher and

student of Buddhism I was able to bring my limited understanding of these practices and knowledge systems into the design and implementation of learning experiences in the pilot program. As a non-indigenous researcher I struggled to navigate the complex ethical considerations of referencing First Nations knowledge and wisdom in ways that were respectful and authentic. From the Mahayana Buddhist perspective, concepts and practices of mindfulness, compassion, understanding impermanence, and interdependence were found to enhance a young person's understanding of their inner selves, outer environment, and interactions. From First Nations knowledge systems practices of connection to place and Country, reciprocity, deep listening, art and storytelling were considered in the design of in the design of the pilot program. These practices supported young people to connect with their inner selves, each other and the natural world, leading to a stronger sense of connection and belonging.

There are several considerations in how First Nations knowledge systems might be respectfully and ethically integrated into experiential learning in schools. Among these are cultural recognition and acknowledgement, reciprocity and appropriateness and relevance to the context and learners. Wherever possible local Aboriginal communities, families and Elders should be invited to contribute to share relevant knowledge or practices that are more specific to the location and Country the learning is taking place on. Research has found that schools that engage and collaborate with Aboriginal families and communities are able to develop stronger learning programs based on local knowledge and histories (Harrison & Greenfield, 2011). Reciprocity is another important consideration of sharing knowledge and skills where there is an exchange of value based on the sharing of knowledge. Close engagement and collaboration with Aboriginal communities is needed to determine the appropriateness of knowledge and practices for different groups of learners (Harrison & Greenfield, 2011).

The more I learn about education at the 'cultural interface' the less I feel I know. This uncertainty and confusion is reflected through the words of Nakata (2007, p. 8) when discussing these contested knowledge spaces "Indigenous knowledge systems and Western knowledge systems work off different theories of knowledge that frame who

can be a knower, and what can be known, what constitutes knowledge.” In researching and working with these disparate knowledge systems I have been engaging in my own experiential learning as a researcher to better understand what protocols are needed to engage respectfully and ethically with diverse knowledge systems and knowledge holders. I have made numerous mistakes and oversights along the way, and am continuing to learn from these experiences.

In my consideration of what practices and knowledges were suitable to include from a First Nations perspective I sought to engage directly with First Nations people to request permission to use practices in the learning experiences. For the place-based learning workshop we engaged with traditional owners and custodians of the land through the local council and requested their attendance at the workshop.

Unfortunately, no-one was able to attend and instead students learned about the land from pre-recorded audio and media as part of the augmented reality app developed by the community centre. I also arranged for an Elder who is a colleague to come and open the place-based learning day and talk to the students, however she was unable to come due to other commitments. Where possible I have relied on my own learning experiences with Aboriginal educators and Elders and integrated practices based on what I have learned and experienced. Dadirri or deep listening is one such practice. This practice of Dadirri shared by Miriam Rose Ungunmerr is offered as a gift to the Australian people, however this said the concept of reciprocity is also stated as being important in how the practice is used (Ungunmerr, 1988). The Miriam Rose Foundation website states that if you have benefitted from using Dadirri as a practice and reflection to consider donating to the Miriam Rose Foundation, a not-for-profit organisation working to empower young people in the Daly River Region. In the spirit of reciprocity I have made a donation to the foundation. Similarly, the Eight Ways of Aboriginal Learning request a reciprocal approach to learning and knowledge exchange when referencing their framework (Yunkaporta & Kirby, 2011). I communicated with Tyson Yunkaporta one of the contributors to this framework and was given permission to reference the model within my thesis. I intend to share a copy of the thesis once completed with Tyson and the educators associated with the Eight Ways project.

14.4 Findings research question 3 - What learning environments and experiences in secondary school can support young people to develop these meta-competencies?

My research shed light on the types of learning environments and experiential learning activities that can be integrated into secondary school learning to promote resilience through developing the relational meta-competencies identified above. In this section, I identify the enablers within school systems for promoting relational meta-competencies and supporting student resilience through experiential learning. Next, I analyse the pedagogies and learning objectives found to be effective for each relational meta-competency.

14.4.1 Enabling conditions for experiential learning for resilience in schools

While every school will have a different context and dynamics for enabling experiential learning for resilience, here I outline what I have learned about these enablers from working with one school over an extended time. Next, I summarise the findings regarding pedagogies and experiential learning for each of the relational meta-competencies. Finally, I demonstrate how these meta-competencies influenced the 'source conditions', which gave rise to strengthened relationships within the school system.

The main enabling conditions for experiential learning (with a strong relational focus) for resilience in a school environment identified in my research were as follows:

- Engagement and commitment from school leadership and teachers;
- A shared understanding of the challenge;
- Willingness to explore and experiment to improve the situation;
- A conducive physical and psychological learning environment; and
- A preparedness to give students agency in their learning process.

Fortunately, the school Principal, leadership and teachers supporting this research were engaged and committed to finding time for these learning experiences and modules within a crowded curriculum. The school had prioritised resilience and mental health in its strategic plan. Even with this commitment, it took much work for

the key liaison teacher to 'carve out' the time for the five one-day workshops of the pilot program. Sometimes, individual students could not attend a workshop due to commitments to other teachers and subjects. This finding backs up other research that has found that teachers' engagement is essential to the success and implementation of mental health and resilience programs (Holmes et al., 2022; Mazzer & Rickwood, 2015). As documented in Chapter 6, co-designing with students and teachers was essential in creating a shared understanding of the challenges and learning strategies to address these. Co-design allowed the participants to identify their unique strengths, circumstances, priorities and challenges. My co-design process engaged with students and teachers separately; however, this process could be extended and integrated to involve teachers, students, parents and stakeholders in the local community, such as healthcare workers.

I found the nature of the physical and psychological learning environments to be a noteworthy enabling condition. The pilot program experimented with various venues for the physical learning environment, including a local community centre for the place-based learning workshop, a university studio, and a multi-purpose learning room in the school library. Students repeatedly remarked on the influence of the physical environment on their openness to learning. Different learning environments created opportunities for students to behave and respond differently to traditional learning contexts. A student referring to the place-based learning workshop described the importance of the physical environment, "I loved interacting with nature and making crafts and being independent with friends allowed to wander in nature." The other key finding about learning environments students identified was the need to feel 'psychologically safe' to share their experiences and feelings. Feedback from students on what constituted a psychologically safe learning environment included working in a small group (smaller than a regular class of 25-30 students), learning with the same group over an extended period, having some friends in the group and having confidentiality agreements.

The final enabling factor I identified was the preparedness of a school to support student agency both individually and collectively. The school supported student

agency by encouraging them to use their own lived experience to design learning experiences for younger students and inviting them to present their findings to the Wellbeing Committee. This opportunity gave students confidence in their ability to make changes within the school system, as documented in Chapter 9. Through the student-led group projects, they had the collective agency to decide on a relevant area of focus and identify where they might influence positive change within the school system. Students demonstrated an increased sense of collective agency to influence changes through their projects both with younger students and within the broader school system. The recognition of the Wellbeing Committee and school leadership of the value of the students' perspectives and projects contributed to their sense of confidence and agency. This agency and excitement were apparent in the final group interviews, with one student commenting that she was "really excited to possibly do something with this, like whole projects that we're doing and make it something bigger. I think all of us are really passionate about making a change. And yeah, I'm really excited for that."

14.4.2 Analysis of pedagogies and themes for meta-competency efficacy

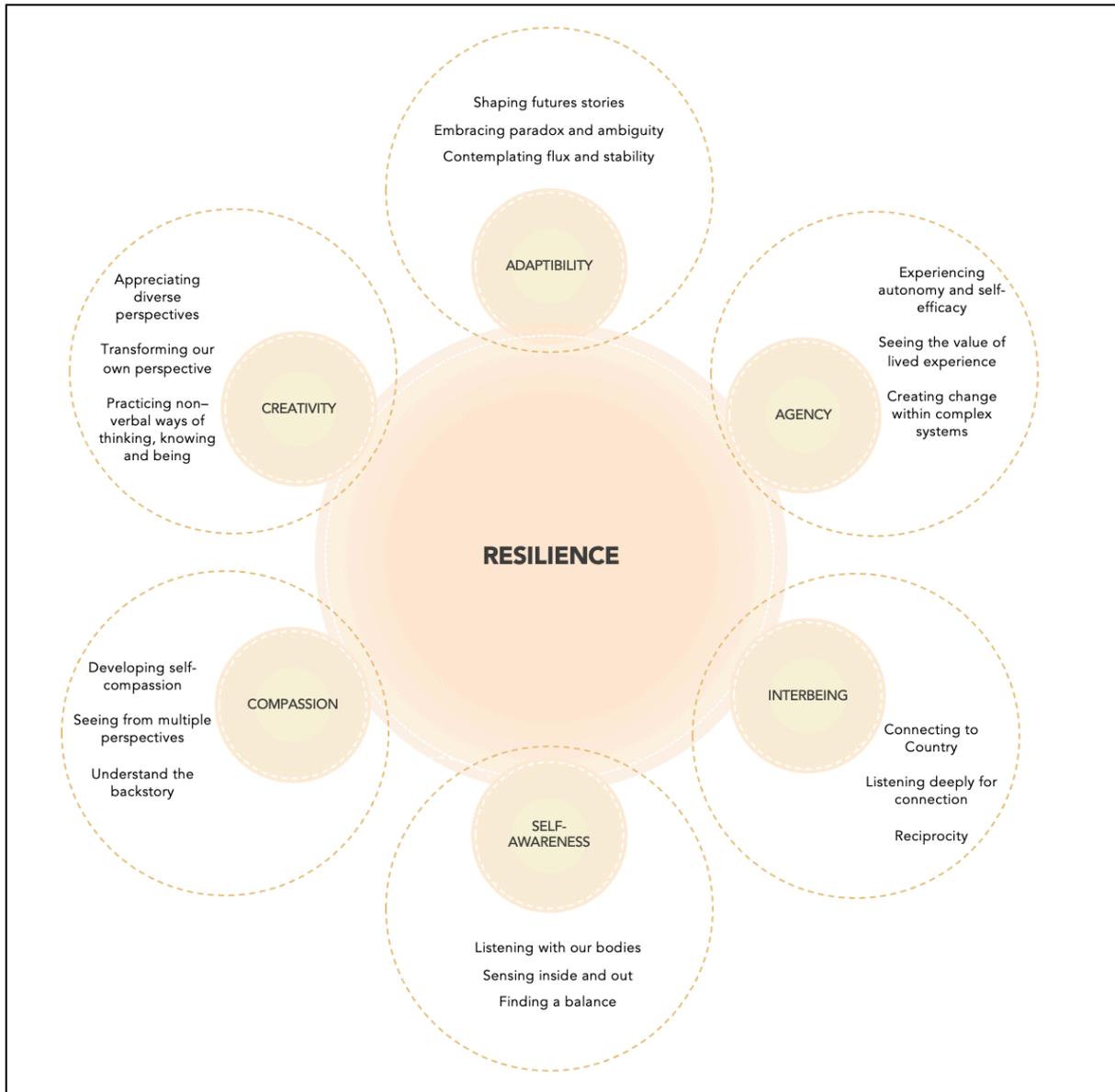
In Chapter 3, I synthesise a set of characteristics related to learning for uncertainty. These learning characteristics, being student-led, embodied, interconnected, experiential, and engaging with novel situations and ambiguity, were integrated into the design and implementation of the pilot program. Similarly, approaches and practices from transformative learning, regenerative learning and practices from Buddhist and First Nations knowledge systems were woven into the learning modules. An interpretation and analysis of the outcomes of these experiential learning activities are documented in Chapters 8-13. In Table 16 below, I summarise findings related to learning approaches and experiential learning objectives identified for each relational meta-competency. Figure 57 presents a visualisation of these meta-competencies and learning objectives.

Table 16: Relational meta-competencies, pedagogies and learning objectives

Meta-competency	Pedagogies/learning approaches	Experiential learning objectives
Adaptability	Futures thinking, speculative future scenarios and artefacts, backcasting, storytelling and narrative.	<ul style="list-style-type: none"> - Shaping future stories - Embracing paradox and ambiguity - Contemplating flux and stability
Agency	Student-led inquiry, project-based learning, user-centred design, systems thinking, futures thinking.	<ul style="list-style-type: none"> - Experiencing autonomy and self-efficacy - Seeing the value of lived experience - Creating change within complex systems
Compassion	Mindfulness, self-compassion (RAIN), active listening, empathy interviews and mapping, constellation storytelling.	<ul style="list-style-type: none"> - Developing self-compassion - Seeing from multiple perspectives - Understanding the backstory
Creativity	Storytelling, art and drawing, craft, audio experiences, theatre games and improvisation.	<ul style="list-style-type: none"> - Appreciating diverse perspectives - Transforming our own perspective

		<ul style="list-style-type: none"> - Practising non-verbal ways of thinking, knowing and being
Interbeing	Nature immersion, craft, yoga and yoga Nidra, Dadirri – deep listening.	<ul style="list-style-type: none"> - Connecting to Country - Listening deeply for connection - Reciprocity
Self-awareness	Journaling, reflection, dialogue, mindfulness, self-care, mapping emotions in the body.	<ul style="list-style-type: none"> - Listening with our bodies - Seeing inside and out - Finding a balance

Figure 56: Visualisation of experiential learning objectives

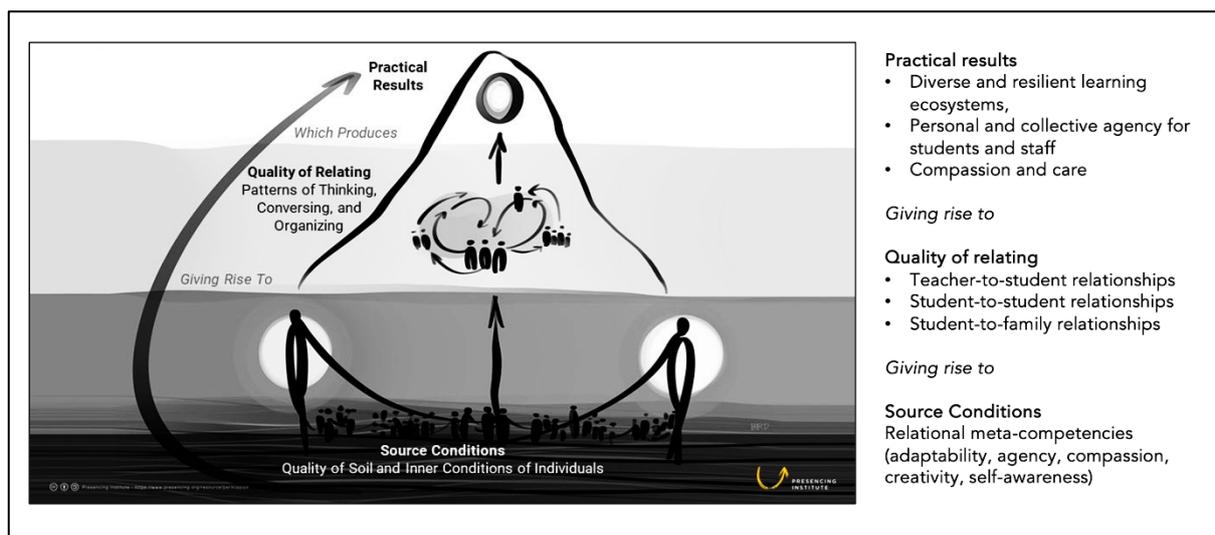


14.4.3 Relational meta-competencies and changing the source conditions

One of the key findings of this research is the importance of the 'source conditions' or relational conditions within a school system for students to develop greater resilience. From an ABSC approach (Figure 58), these 'source conditions' refer to the 'quality of the soil' or the inner condition of individuals within the school system, including teachers, students, school staff, parents, and the community. Developing learning experiences promoting relational meta-competencies of adaptability, agency, creativity, compassion, interbeing, and self-awareness enriches these source conditions. The inner awareness and relational qualities developed at this foundational level then give rise to the quality of relating within the school. The

quality of relating can be observed and is reflected in the patterns of thinking, conversing and organising, as well as the level of care and compassion shown in these relationships (Scharmer et al., 2021). Finally, this quality of relating produces practical results that manifest as diverse and resilient learning ecosystems, personal and collective agency for students and staff and a school system that values compassion and care.

Figure 57: Awareness-based systems change in schools



The changes in the quality and relating and patterns of thinking with the students' peer-to-peer relationships were evidenced in comments made by students during the post-pilot group interviews. Students talked about how the quality of their relationships with their peers had changed for the better; one student reflected, "I genuinely grew closer to them as people because after sharing about like bullying or like not fitting into friendship groups... it really helped me sort of understand my friends a lot more. So, it's like unlocking the backstory, how they came to be whoever they are right now."

During the pilot, I also observed a shift in the students' relationships with their teachers and school leaders, with recognition of the value students could bring to the peer-to-peer learning experiences for culture change. Students referred to a sense of recognition of the value of their work from teachers and school leaders as they

developed their projects aiming to improve the experience of younger students. There was an explicit acknowledgement from the key liaison teachers and the school Wellbeing Committee that the initiatives the students were designing and trialling had significant potential to influence change in complex social and cultural challenges within the school, such as improving sleep culture and connection and belonging.

Chapter 15. Contributions and next steps

15.1 Introduction to chapter

In this final chapter, I articulate the main contributions of this thesis to knowledge. These contributions are categorised as contributions of theory, practice and change in the situation. To conclude, I provide a synopsis of potential future research emerging from this body of work.

15.2 Main contributions to pedagogy

The primary pedagogical contribution of this thesis is the framework of relational meta-competencies to support young people in developing resilience in the context of uncertain futures and climate disruption. These relational meta-competencies draw on and integrate diverse disciplinary knowledge with the relational worldviews of Buddhism and First Nations knowledge systems. As this thesis documents, Buddhism offers unique learning practices for engaging with impermanence and change through mindfulness. A Buddhist understanding of suffering encourages a shift in attitude towards adverse or challenging circumstances to see these as an opportunity to develop greater self-awareness and compassion. The association between Buddhist philosophy and practice and the potential contribution to develop resilience for young people in the context of the uncertain futures and climate disruption is a unique contribution to pedagogy in learning for uncertainty.

A conceptual and contemporary understanding of resilience developed in this thesis, reflects the dynamic interaction between young people and their environment while providing them with the resources to 'define themselves as healthy' within adverse and challenging circumstances; as such, it provides strong potential for students to develop greater resilience in the face of challenging peak resilience experiences such as natural disasters and COVID-19. First Nations knowledge systems, wisdom, and ways of learning provide young people with new perspectives on our interconnectedness with each other and nature. Australian young people and all Australians have much to learn from the relational worldviews of Aboriginal and Torres Strait Islander Peoples, whose learning practices and pedagogies used for millennia in this country, promote

learning through language, Culture, connection to Country, non-verbal ways of knowing, storytelling, and art. This framework of relational meta-competencies also has potential for application in other environments such as higher education or workplaces.

A secondary conceptual contribution is the thematic analysis of contemporary issues impacting young people in Australia in the early 2020s with insights from educators, youth workers, teachers, and students. The complexity of issues impacting young people's wellbeing and resilience within a rapidly changing society are analysed and articulated to provide a better understanding of how to intervene and support young people effectively. The findings of this research have been presented at national and international industry and academic conferences and contributed to the publication of conference papers and journal articles, as documented in Appendix D.

15.3 Main contributions to practice

The main contributions to practice of my empirical research includes creating the co-design and pilot program demonstrating the implementation of a program supporting relational meta-competencies for resilience within a secondary school environment.

The design and analysis of the co-design practices with teachers and students can be adapted for use by other schools or organisations seeking to better understand the issues impacting young people's wellbeing and resilience. The pilot program provides a series of experiential learning modules designed for secondary school students that can be implemented as stand-alone modules or as a series. The student-led project design and implementation, integrating user-centred design, systems thinking and futures thinking, demonstrates the potential of peer-to-peer experiential learning in practice. Pedagogies and learning approaches relevant to the six relational meta-competencies have been identified and analysed. Additionally, relevant experiential learning objectives are identified for integration into educational programs.

15.4 Main contributions of change in the situation

The main contribution to change in the situation can be considered at an individual, relational and systems level. At an individual level, the research participants expressed and demonstrated benefits in developing their wellbeing and resilience from participating in the pilot program. These benefits were particularly evident in their improved coping mechanism and resilience during the COVID-19 lockdowns, as documented in Chapters 8-13. To interpret the change at a relational and systems level, I use awareness-based systems change to document these more subtle shifts in awareness and relationships within the school.

The relational benefits for participants documented above in Chapter 14 represent the improved 'source conditions' and quality of relationships between students and teachers and students. One of the aims of ABSC is to create the conditions for a system (and participants within that system) to *sense and see itself* (Scharmer et al., 2021). In my research, the teacher and student co-design workshops in (Chapter 6) allowed participants to explore, map and identify priorities and challenges concerning young people's resilience and wellbeing. This methodology effectively engaged research participants to sense and see the complexities of the school systems and identify the issues from their specific context and perspectives. The students then designed interventions in the form of learning experiences for younger students based on their understanding of how the school system operates. Teachers and the school Wellbeing Committee recognised these student-led projects with younger students as having strong potential to shift complex challenges impacting mental health and wellbeing within the school system.

15.5. Future research questions

There are several avenues of future research I am curious to pursue building on this thesis. There is potential for further PAR in a school environment where the staff, parents, students, and community are more closely engaged through a co-design process to identify opportunities for developing each relational meta-competencies for themselves as a school system and community. For example, what does increased

agency look like for teachers, students, parents, and community members? Or how can place-based learning create a stronger sense of interbeing, belonging in place and Stewardship for a school community? Future research could create opportunities for engagement and dialogue between the education and health systems (such as local community mental health teams) to build stronger collaborative relationships to support young people, families, schools and mental health professionals. Another area I am curious about researching is how this research might help parents supporting young people who are experiencing mental health challenges. This desire to support young people and families brings me full circle to the purpose of this research: to explore ways to transform learning systems and promote greater wellbeing and resilience for young people growing up in these uncertain and challenging times. It is in this spirit that I complete and dedicate this work.

Postscript – personal reflection

Coming home

*This morning, as another dusky day rises
You wing your way back to me
From far-off Greek islands
Where paradise burns
Back to the nest and my waiting heart*

*Your grandmother Terry made a similar trip
At your age, or perhaps a little older
Spending five weeks on a cargo ship
Seeking adventure and self-discovery
On her grand tour of Europe*

*I wonder about your children and theirs
What they will discover
What will remain of our beautiful home
I worry about what might prepare them (or us)
For what is coming, to pass*

*And yet I see your grandmother's eyes
In yours
Her kindness, her sensitivity
I see you carry forward the flame of justice
I witness your tenacity, your determination
Your resistance to being constrained by legacy systems
And crumbling institutions*

*So, in this soft dawn light
I surrender to a new day*

Asking only to find courage

To be of service

To you, our Mother Earth and all her beings

Remember, there is no destination

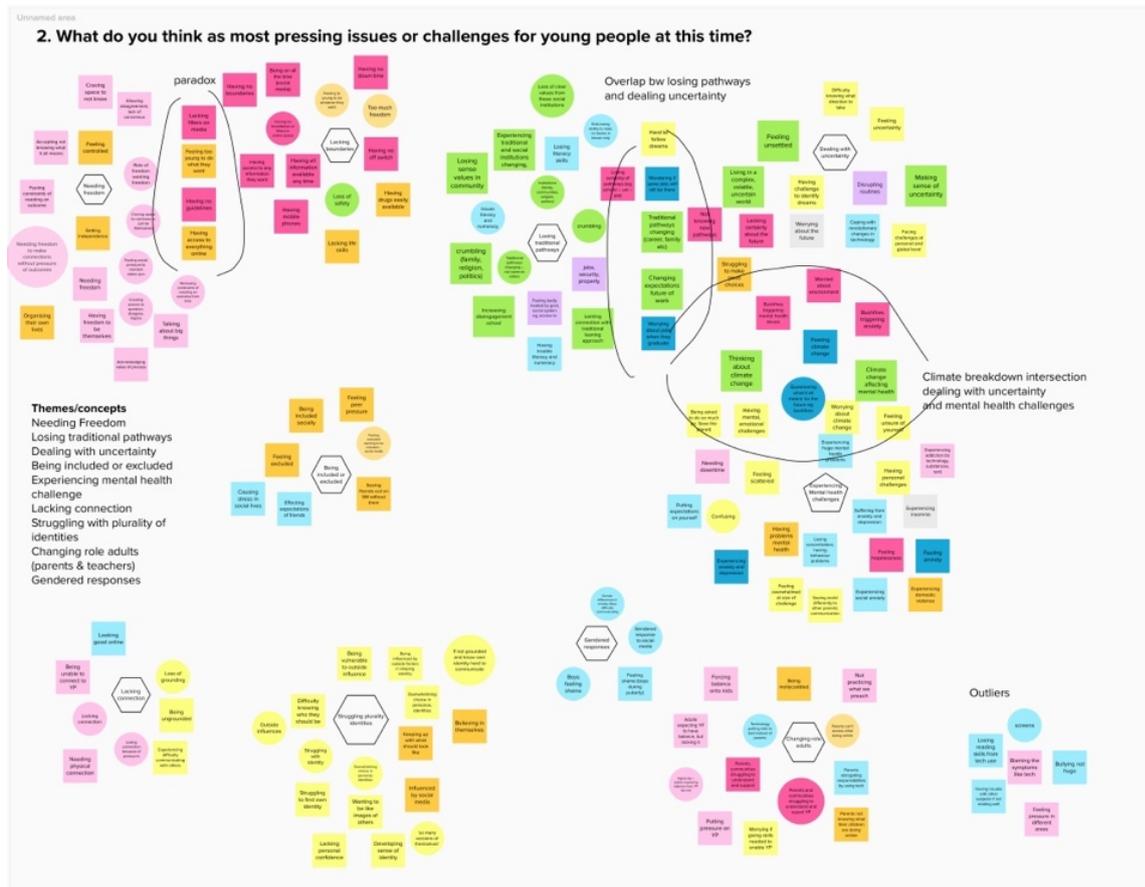
Just a path to walk

One step at a time

Holding close to each other

Appendices

Appendix A – Sample thematic visualisation and clustering from exploratory interviews



Note: Each interviewee is represented by a different colour post-it note. Post-it notes include insights from first round of paper-based open coding.

Appendix B – Co-design workshops outline

Teacher Co-design workshop run sheet

2nd December 2020

Held in the school staff room, 2 hours

Attendees: Principal, deputy principal, liaison teachers, research supervisor, researcher

Time	Activity	Notes/Resources
20 mins	Introduction to research	
40 mins	Rich pictures mapping	‘What do you think are the most important things affecting young people’s resilience and wellbeing at the moment?’
20 mins	Debrief and identifying key issues	Document key issues and discussion
20 mins	Discussion of pilot program and feedback on draft program design Discussion of recruitment strategy	
20 mins	Close and next steps	

Student co-design workshops run sheets

Held in a multi-purpose classroom in the library, 2 hours including breaks

Attendees: student participants, researcher, co-facilitators, liaison teacher

Purpose of Modules

Introducing students and teachers to the pilot program including methods and practices such as co-design, user-centred design and experiential learning. The key

research purpose is to understand the key issues identified by students as impacting wellbeing and resilience.

Aims of Modules

- To introduce students to the research project, principles of co-design and their role as participants and co-researchers;
- To experience participatory and experiential practices such as circle work, check-ins, world-café;
- To learn about user-centred design and systems thinking and practice methods of rich pictures, empathy interviews and developing insights;
- To identify and develop awareness of issues impacting wellbeing and resilience for young people; and
- To practice self-awareness and reflexivity through dialogue practices, journaling and reflective writing.

Relational meta-competencies: Agency and self-awareness

Session 1 student co-design workshop run sheet

Time	Activity	Notes/Resources
15 mins	Introduction to research and context	
15 mins	Check-in circle ‘What image reflects how you feel about creativity and design?’	CRC visual collaboration cards used as prompts
30 mins	Rich pictures mapping	Groups of 4-5 students with large roll paper and pens ‘What do you think are the most important things

		affecting young people's resilience and wellbeing at the moment?'
20 mins	Debrief and dialogue	3 rapid rounds <ul style="list-style-type: none"> - What did you notice? - What surprised you? - What are you curious about?
20 mins	Introduction to co-design principles Introduction to empathy interviews	'Beyond Sticky Notes', KA McKercher – 4 principles of co-design
10 mins	Practice empathy interviews in pairs	
10 mins	Wrap and circle check-out	

Between workshops, students work in pairs to do 3 empathy interviews focusing on question, 'What do you think are the most important things affecting young people's resilience and wellbeing at the moment?'

Session 2 student co-design workshop run sheet

Time	Activity	Notes/Resources
10 mins	Check in circle, check in question 'What energy are you bringing today?'	
30 mins	Empathy interviews debrief and mapping	Students work in groups of two pairs using butchers'

		paper on wall create large empathy map
10 mins	Debrief and dialogue	Each group to reflect What did you notice? What surprised you? What are you curious about?
20 mins	World cafe activity around ecosystem and co-design: <ul style="list-style-type: none"> - What do you feel strongly about in terms of sustainability and the environment? - Where do you see the potential for change in your home, school or community? - Where do you see the potential for positive change around the world? 	Three tables set up with groups rotating around to each table. One scribe stays with the table to take notes.
15 mins	Thematic clustering Using index cards with themes and insights arising from rich pictures, empathy interview and world café	Students gather around a large table to cluster and discuss themes
15 mins	Personal reflection and journaling. What did you notice? What surprised you?	

	What are you curious about?	
10 mins	Online survey	
10 mins	Check-out round and what's next	

Appendix C – Pilot program modules overview and run-sheets

Module 1 – Place-based Learning

Purpose of Module

An experiential learning day held off-site in a local community venue where students learn about the history and connection with their local environment and explore themes of belonging and interconnectedness through a range of activities such as nature immersion, art, and mindfulness.

Aims of Module

- To learn about the local area including history, local animals and plants, indigenous history, and culture, changing use of the site over time
- To experience immersion in nature and notice mental and emotional responses to the natural world
- To connect to self, each other, and the natural environment
- To explore and reflect on themes of connection and belonging mean
- To connect to body, senses, and mind through activities such as yoga and mindfulness
- To relax and enjoy each other's company in an informal off-site setting

Key meta-competencies

Interbeing, self-awareness and reflexivity

Key themes

Connection and belonging, Image and identity

Module 1 Runsheet

Time	Activity	Notes/ Resources	Learning Experience
9.00 - 9.20 (20 mins)	Arriving, settling in getting comfortable Introductions to co-facilitators and guests Check in circle How does it feel to be here in this place?	Check in question to bring into space and ground them	Intro to visual scribing
9.20 - 9.35 (15 mins)	Acknowledgement of country Introduction to the Coal Loader history of the site and changing purposes. Intro to site specific Augmented Reality experience.		Learning about connection to land, sustainability, stewardship of the land Learning about local history including indigenous history
9.35 - 9.45 (10 mins)	Introduce and watch or listen to Dadirri	Connect laptops to screen and/or connect audio to speaker.	Intro to Dadirri and deep listening
9.45 - 10.15 (30 mins)	Exploring the centre and land using Coal Loader AR experience app. 3 different	Girls to self-organise into 3 groups. One	Learning about local history, native

	paths - native animals, sustainability and local history	facilitator to go with each group	animals, sustainability
10.15 - 10.30 (15 mins)	Scribing experience Reads the Dadirri while students visual scribing	Create a visual gallery	Practice Dadirri or deep listening Visual reflection on connections in complex systems
10.30 - 11.00 (30 mins)	Morning tea	On veranda if nice day	
11.00-11.25 (25 mins)	Gentle movement and breath, inner contemplation	Yoga mats	Connecting to body, feelings and self
11.25-11.45 (20 mins)	Yoga nidra and reflection mindfulness - self in connection to others and the environment.		Self-awareness of thoughts and emotions Holding of opposites Layers and boundaries of identity (self, image, identity)
11.45 - 11.55 (10 mins)	Walk outside look for objects Prompt for foraging		

11.55 - 12.25 (30 mins)	Crafting exercise representation of self in environment	Craft materials – wool, beads, paper, scissors, pencils	Understanding and representing self and environment Learning through hands/making
12.25 - 12.40 (15 mins)	Reflection in pairs, sharing their mobile and what it represents for them In what way does the mobile represent you and your sense of connection?		Self-reflexivity and communication
12.40 - 12.50 (10 mins)	Sharing back in circle		Communication and connection
12.50 - 1.30 (40 mins)	Lunch and free time		Exploring the site
1.30 - 2.30 (60 mins)	Introduce themes of belonging and connection as meta-competencies Walking and connecting in nature - opening our senses, deep listening, what's in motion. Facing north listening for sound, listening with whole		Connecting with nature understanding ecosystems

	body and sensing the landscape. What did you notice? Angophera forest walk - what's in motion Reflection circle		
2.30 - 2.45 (15 mins)	Self-reflection and journaling What did you notice? What surprised you? What are you curious about? Note to self about belonging - Remember...		Self-reflexivity, reflective writing
2.45 - 3.00 (15 mins)	Module post event survey		
3.00-3.15 (15 mins)	Check out - what is one thing you will take with you from today?		

Module 2 – Self-awareness, agency and personal resilience

Designed by batyr in consultation with researcher

Purpose of Module

Participating in experiential learning exercises for self-awareness, self-care and to promote help seeking behaviour for young people. The session explores concepts of resilience, personal agency, adaptability and self-compassion.

Aims of Module

- To learn from the stories of other young people about their experiences with mental health and how/where to get support and help if they need it. To encourage young people to seek help and not feel they are alone.
- To learn about different forms of agency (personal and collective) and understanding the concept of sphere of influence, that there are some things we can control and some things we can't.
- To create a safe learning environment where young people can have experiences of reflecting on their own thoughts and emotions

Key meta-competencies

Agency/autonomy, self-awareness and reflexivity, compassion

Key themes

Boundaries, image and identity, mental health

Module 2 Runsheet

Time	Activity	Notes/ Resources	Learning Experience
9.00 - 9.15 (15 mins)	Introductions to day and objectives Ice-breaker game – Would you rather		
9.215 - 9.30 (15 mins)	What is mental health? Write down all the words and phrases you associate with mental health then discuss answers	Break into small teams work on table with butchers' paper and pens	

9.30 - 9.45 (15 mins)	The mental health spectrum Map words and phrases on linear spectrum – mentally healthy vs mentally unhealthy Introduce third dimension of coping		Intro to mental health as a spectrum Intro to coping strategies
9.45 - 10.15 (30 mins)	Batyr digital speaker stories Introduce each story, play video, reflection/discussion -What stood out to you? What were the signs they were struggling? What was the turning point Debrief and contextualise	Digital stories	Hearing stories from other young people who have struggled with mental health and gotten help
10.15- 10.045 (30 mins)	Morning tea		
10.45- 10.55 (10 mins)	Ice-breaker game - Storytime		
10.55-11.25 (30 mins)	Batyr's 5 tips – look out, get talking, listen up, reach out, take charge In small groups discuss each tip and think about what they mean to you	Butchers paper and pens in group	How to support friends, how and when to look for help, where to get help

<p>11.25 - 11.55 (30 mins)</p>	<p>Resilience wheel – introducing resilience factors: physical (sleep, nutrition, exercise), emotional, mental, connections and belonging, boundaries, agency, purpose, values and strengths</p> <p>Students break into groups and explore one of these factors and how they impact mental health and wellbeing</p>		<p>Identifying factors influencing mental health and wellbeing</p>
<p>11.55 - 12.25 (30 mins)</p>	<p>Identifying resilience strengths and areas for development</p> <p>Map on resilience wheel identify one area for development and what you might do to strengthen it</p>	<p>Resilience wheel template</p>	<p>Identifying personal strengths and areas for development in terms of resilience and mental health</p>
<p>12.25 - 12.40 (15 mins)</p>	<p>Mapping emotions on the body</p> <p>In teams draw a map around someone’s body and use colours and textures to map where you feel different emotions – anger, anxiety, happiness</p>	<p>Large pieces of butcher’s paper joined to body size</p>	<p>Recognising connection between emotions are experienced in the body</p>

12.40 - 1.30 (50 mins)	Lunch and free time		
1.30 - 1.55 (25 mins)	RAIN – Emotional management, self-compassion Recognise, Allow, Investigate and Nurture		Exploring concept of self-compassion
1.55 - 2.15 (25 mins)	Self-care and getting help What does self-care mean to you? Where are places you can get help with your mental health?		Exploring self-care Finding where to get help
2.15 - 2.45	Pledge wall Make a public pledge to do something leaving the workshop	Pledges up on wall or white board	Commit to positive change
2.15- 3.00 (15 mins)	Reflection discussion		
3.00-3.15 (15 mins)	Post event survey and check out - what is one thing you will take with you from today?		

Module 3 – Storytelling and perspective

Purpose of Module

Creating learning experiences using storytelling and embodied practices to support young people to develop a sense of empathy and insight about their own and others

stories. To understand that any situation can be viewed through a number of different perspectives depending on one's worldview and life experiences. Students explore applying some of the methods they learn to their own group-devised projects focused on resilience and wellbeing for young people.

Aims of Module

- To experience different methods of storytelling such as drama games, story triads, constellation storytelling
- To reflect on their own story through the paradigm of the hero's journey
- To understand multiple perspectives, we bring to situations and develop empathy for others' perspectives and experiences
- To develop ideas for project-based learning activities

Key meta-competencies

Creativity, compassion

Key themes

Connection and belonging, image and identity

Module 3 Runsheet

Time	Activity	Notes/ Resources	Learning experience
9.00-9.20	Welcome and settle in Check in circle – What was your favourite story as a child?	Back to country audio set up	Immersive listening to story of history of university site from indigenous perspective
9.20-9.35	Warm up movement and drama games	Audio music	Embodied movement practices

9.35-10.00	Intro to storytelling and the paradigm of the hero's journey		
10.00-10.45	<p>Trio storytelling activity</p> <p>Take in turns to be in roles of storyteller, listener, witness</p> <p>Story prompt: Tell us a story about when you have stood up for yourself or someone else (or you wanted to but didn't)? How did it feel? What did you learn?</p>	Need timekeeper/bell	<p>Reflection on own stories of courage</p> <p>Experiencing witness role</p>
10.45-11.00	Morning tea break		
11.00-12.30	<p>Constellations activity</p> <p>Three students invited to tell their stories which other students step into role of key characters in constellation. Student can move characters and engage in dialogue</p>		<p>Understanding multiple perspectives in stories</p> <p>Experiences as dynamic and changing</p>
12.30-1.30	Lunch on the green		
1.30-2.30	<p>Project-based learning</p> <p>Design a learning experience for Year 8 students to improve their wellbeing and resilience.</p>		Student-led ideation and discovery

	Respond to the prompt: What do you know now that you wish you knew in Year 8 that impacted your wellbeing and resilience		
2.30-2.45	Journaling		
2.45-3.00	Post event survey		
3.00-3.15	Closing circle check out		

Module 4 – Systems Thinking

Purpose of Module

Developing an understanding of complexity and system thinking and learn ‘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.

Aims of Module

- To understand the difference between complex and complicated problems
- To learn and practice methods of systems thinking such as rich pictures, stakeholder mapping, root cause analysis (15 whys).
- To apply systems thinking methods to student-led complex real-world challenges
- To develop skills in prototyping and safe-to-fail experiments
- To develop an understanding of agency and sphere of influence within complex systems

Key meta-competencies

Agency/autonomy

Interbeing

Key themes

Changing institutions and pathways

Module 3 run sheet

Time	Activity	Notes/ Resources	Learning Experience/Outcomes
9.00	Acknowledgement of country, welcome and check in circle Check in question: Show or share something you like being able to have access to in the online/@home learning environment. Why? Grounding guided meditation sensing where we are and our connection - coherence.	Add country you are on to your name in Zoom	Mindfulness, connection
9.25	Breakfast bonanza (10 mins) Sketch your breakfast bonanza Introduction to systems thinking and plan for today	Journals and pens	Understanding complex systems

9.35	Create a rich picture on Mural that reflects the different elements and dynamic forces for your project	Mural board	Mapping complex systems
10.00	Revisit team purpose and next steps		
10.30	Morning tea break		
11.00	Lockdown stories. Tell stories including complex or complicated ones. What makes a situation or challenge complex?		Understanding complexity, Cynefin framework
11.10	Introduction to systems thinking and complex vs complicated problems (certainty, stability, boundedness)	Possible videos Cats in Borneo	Understanding complexity, Cynefin framework
11.20	Root cause analysis exercise 15 whys Formulating the situation space: Coming from why? golden circle of why, how, what How Might We statement		Root cause analysis, asking why
12.05	Causal loops, reinforcing and balancing		Understanding feedback loops in systems

	What are possible intervention points?		
12.30	Lunch		
1.30	Game of scribbl.io		
1.45	Exploring intervention in complex systems Probe, sense respond. Intro to safe to fail experiments		Learning about safe-to-fail experiments
2.00	Think about what a safe to fail experiment might look like for their situation space		
2.30	Individual reflection and journaling		
2.45	Survey		
3.00	Next steps and check out		
3.15	Close		

Module 5 – Futures thinking

Purpose of Module

Exploring emerging practices such as futures thinking and transition design and learning methods to apply this in their project work. It involves hands-on activities of designing and prototyping assets to visualise future scenarios.

Aims of Module

- To play with and consider different possible futures for themselves individually and as a generation of change-makers.
- To identify and develop perspective around different narratives of the future and reflect on what future they would like to help co-create.
- To learn about futures thinking methods and consider how to apply them to their team's learning experience design process.
- To integrate learning experiences to date and reflect on what has been significant

Key meta-competencies

Adaptability

Creativity

Key themes

Changing institutions and pathways

Module 5 Runsheet

Time	Activity	Notes/ Resources	Learning Experience/Outcomes
9.00	Acknowledgement of country, welcome. Check in circle Short Intro to Futures Thinking and plan for the day	Note: strange hybrid format	Connecting and integrating past, present and future self. Designing alternative future scenarios
9.30	Slideshow with music of workshops (past) Thinking pairs		Reflection on learning and significant events

	<p>What is one thing you remember that stood out to you from our learning together?</p> <p>What was it? Who were you with? How did it make you feel?</p> <p>What was special about it?</p> <p>What did you learn?</p> <p>Share in pairs, invite to share back into group</p>		Identify potential transformative learning moments
10.00	<p>Design your future</p> <p>Values cards sorting - identify top 10 values then narrow down to top 3.</p> <p>Reflect how values might continue from past, to present into future</p>	Mural board	Identifying values as a constant through past, present and future
10.30	Morning tea break		
10.45	<p>Design your Life</p> <p>What you love doing</p> <p>Odyssey planning - 3 scenarios</p>		3 possible 5-year plans
11.15	Introduction to Museum of Futures		Learning about paradigms of futures thinking

	<p>Origami butterfly activity</p> <p>Thinking about the future and experiences of both anxiety/stress as well as hope/empowerment.</p> <p>Create an Origami butterfly as a personal memento or reminder</p>		<p>Understanding the narrative nature of futures</p>
12.30	Lunch		
1.30	<p>Game: Backcasting</p> <p>Taking your learning experience project as an example think about an ideal future state then use backcasting to work back in steps to the current state</p>		<p>Applying method for futures thinking - backcasting</p>
2.30	<p>Individual reflection and journaling</p> <p>What did you notice? What surprised you? What are you still curious about?</p>		
2.45	Survey		
3.00	<p>Next steps and check out</p> <p>Celebration and graduation</p> <p>Presentation of work</p>		

	Interviews		
3.15	Close		

Appendix D – Conference presentations and journal articles

(Selected publications and conference paper, ordered from most recent to least recent)

- Potts, M., Le Hunte, B., & Ross, K. (2023). On Learning Interbeing. *Journal of Transformative Education*, 15413446231177632. <https://doi-org.ezproxy.lib.uts.edu.au/10.1177/15413446231177632>
- Potts, M. (2023, July 12). *Towards an understanding of resilience and experiential learning for young people in the context of uncertain futures and climate disruption*. Transformations Conference 2023, Sydney, Australia.
- Potts, M., Garzon, J., Woodcock, N., Kalio, K., & Wearne, S. (2023). *Generating a 'transformations practice toolkit' to guide travellers through complex change*. Transformations Conference 2023, Sydney, Australia.
- Le Hunte, B., Yunkaporta, T., Melvold, J., Potts, M., Ross, K., & Allen, L. (2023). Indigenous knowledge. *Handbook Transdisciplinary Learning*.
- Knight, S., Potts, M., Mills, C., & Lee, P. (2023). *Iyarn: Developing the Evidence Base: Final Project Report*.
- Potts, M., & Le Hunte, B. (2023, June 19). Promoting systemic change in our educational institutions through meta-competencies that develop transformative qualities of being and agency. *Systems Practice for Professions*. International Society of Systems Sciences, South Africa. – **Winner Margaret Mead Memorial Award, 2023**
- Potts, M. (2022). *Young People, transformative learning and the disorienting dilemma of climate change*. International Transformative Learning Conference, Online.
- Potts, M., O'Neill, B., & Ross, K. (2022). *Strengthening inner knowing for resilient leadership, International*. International Transformative Learning Conference, Online.

- Potts, M. (2021). Embracing TD and experiential learning to develop resilience in secondary schools. *Creating Spaces and Cultivating Mindsets for Learning and Experimentation*, 86–87. <https://ethz.ch/content/dam/ethz/special-interest/usys/tldlab/docs/Events/itd-conf-2021/itd2021-conference-booklet.pdf>
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