

Community-Based Micro-Credentials for Neurodiverse Young People

Creating and Capturing Social, Cultural, and Economic Value for
Young People and their Communities



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Hume Whittlesea Local Learning and Employment Network

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Executive Summary

Introduction

This report describes the process and outcomes from a pilot project that worked with a small cohort of neurodiverse young people (ages 16-24) in the City of Whittlesea to successfully achieve a Micro-credential in Co-design for Diversity and Inclusion, and to evaluate the neurodiverse young people's progress in achieving the micro-credential.

In this project and report we have worked in a way that aligns with the following definition of 'neurodiversity':

Neurodiversity describes the idea that people experience and interact with the world around them in many different ways; there is no one "right" way of thinking, learning, and behaving, and differences are not viewed as deficits.

The word neurodiversity refers to the diversity of all people, but it is often used in the context of autism spectrum disorder (ASD), as well as other neurological or developmental conditions such as ADHD or learning disabilities. (Baumer & Frueh, 2021)

With this focus in mind, the report on this project is designed to show and celebrate how young people, key stakeholders and employers can collaboratively shape transition supports using co-design processes.

The pilot project, developed in collaboration with young people and key stakeholders, was structured through four interconnected core elements:

- **Capabilities** – from the cluster of capabilities identified in Appendices D-G which are the most important for this micro-credential - keeping in mind the scale and scope of this project.
- **Activities** – What activities – current and/or planned – would enable young people to develop and demonstrate these capabilities.
- **Evidence** – What forms of evidence – photo, video, audio, written - can be gathered to demonstrate the development of these capabilities.
- **Accreditation** – Milestone meetings are a place for planning and evaluation – self review, peer review, stakeholder review - on an accreditation pathway to the award of a micro-credential.

The pilot project involved three stages:

Stage 1 entailed working with stakeholders to agree on the scope of the pilot project and resources required.

Stage 2 involved collaborating with stakeholders who work with neurodiverse young people to:

- identify a limited number of capabilities critical to learning a new way of working together;

- agree on existing and/or planned activities which involve collaboration and thereby enable young people to develop and demonstrate their capabilities in co-design;
- imagine various means for collecting demonstrable evidence of those capabilities;
- use the collected evidence as well as ongoing self and peer evaluation processes in a series of workshops as part of an ongoing community-based accreditation pathway, resulting in the award of the micro-credential in co-design.

Stage 3 will entail young people co-designing and implementing place-based support projects.

This report only covers Stages 1 and 2 of the pilot project.

Background

In the City of Whittlesea disability providers are reaching capacity and overstressing their resources and there is a need for an inclusive community response to meet present and future challenges. The number of National Disability Insurance Scheme (NDIS) participants in the City of Whittlesea grew from 3,096 to 3,826 in the 12 months until the end of 2020. The four most common primary disability types comprise **74% of all NDIS participants in the City of Whittlesea**. Of these, autism, developmental delay, and psychological disability will become **even more prevalent in the future** (see Whittlesea City Council, 2021). This evidence was brought to light by members of the WYC SAG, and subsequent working group meetings explored the potential of developing and implementing a project to address the gap in providing smooth transitions to employment for neurodiverse young people in the City of Whittlesea.

Structure of the Report

Chapter 1 explains what micro-credentials are and the response they provide to challenges to young people's health and well-being, education, training and employment pathways and a number of global crises. The chapter also explains how this pilot project is a part of a program of applied research to co-design a series of micro-credentials for sustainable, regenerative and just futures in different places.

Chapter 2 outlines the challenges for the City of Whittlesea disability providers reaching capacity and the need for an inclusive placed-based response to meet present and future challenges. The chapter analyses and synthesises the literature on the neurodiversity movement. It defines co-design and discusses its principles in relation to the context of bringing together neurodiverse young people and stakeholders together to improve the social supports that neurodiverse young people need to transition effectively beyond school. Finally, this chapter identifies the CORE capabilities for co-design: **Collaboration, Openness, Responsibility, and Empowerment**.

Chapter 3 introduces the aims of the project, the participants, the idea of action research, the research process, and ethical considerations.

Chapter 4 describes information about each of the neurodiverse young people that participated in the project and provides links to their portfolios that display their evidence of

co-design. The chapter also includes their responses along with their key support workers' responses about the young people's experiences in collecting and presenting evidence for co-design and other key stakeholders such as employers' responses to the relevance of the young people's evidence.

Chapter 5 discusses how the pilot project delivered proof of a concept - that a micro-credential process can be delivered in a local community setting demonstrating how neurodiverse young people collect evidence of their capabilities in co-design to form part of an accreditation pathway to credentials valued by employers. The project also demonstrates how partnerships between young people, support workers, employers and other key stakeholders could work together towards a place-based response to reaching successful outcomes for the neurodiverse young people. It briefly mentions how this work has informed HWLLEN's participation in relevant future partnerships. Finally, it sets out recommendations about improving the program and implementing its final stage.

Recommendations

Based on the outputs and outcomes of this pilot project, we would propose several key recommendations:

1. Consider support workers' suggestions for how the micro-credential process could be improved, including:
 - a. spending more time training support workers about the project and providing more clarity about post completion options;
 - b. acknowledging that some young people and their support workers might require more assistance with technology to manage any change of days, times, and places that might arise during the process;
 - c. recognising that neurodiverse young people tend to like routine; and
 - d. creating further opportunities for young people to get to know each other by having more meetings in quiet and accessible places.
2. Consider employers' suggestions for improvement, specifically:
 - a. that they be involved directly in the roll out with young people;
 - b. that the list of credentials that young people could complete be expanded; and
 - c. that milestone meetings could include more face-to-face options.
3. Based on the achievements of young people in Stages 1 and 2 consideration should be given to rolling out Stage 3 of the pilot project in 2023 - so young people can co-design and implement place-based support projects in collaboration with key stakeholders.

Chapter 1. Micro-Credentials

Introduction

We drew on the work of several recent projects at UNEVOC@RMIT University and Deakin University which are part of a program of applied research to co-design a series of micro-credentials for sustainable futures in different places. The program imagines that these micro-credentials can deliver on the promise of developing place-based responses for young people's health and well-being, and education, training, and employment pathways for sustainable futures.

What are Micro-credentials?

Micro-credentials or micro-creds are a relatively recent, digitally enabled, approach to the accreditation of skills development and training outcomes, often in usually non-accredited, informal or non-traditional training contexts (see, Business Council of Australia, [BCA, 2018](#), [Learning Vault, 2020](#)).

The Australian Government's Education Council review of senior secondary pathways into work, further education and training (Shergold, 2020), titled [Looking into the Future](#), defines a micro-credential as a "certification of assessed skills and knowledge that learners have demonstrated or acquired through a short course of study or training". These short courses "focus on smaller elements of learning and may stand alone or be additional, or complementary, to other certificated training. They may also be a component part of a formal qualification".

In a pre-COVID-19 world, these credentials were in increasing demand for a number of purposes, including: "as stackable credit towards aggregated awards; employed to recognise prior learning; provide evidence of graduate attributes; and warrant professional and continuing education for registration and licensing" (Shergold, 2020).

Our response to the issues outlined by Shergold, and in other places - for example, Australia's National Centre for Vocational Education Research (NCVER) recent report on [An analysis of 'micro-credentials' in VET](#) - is to suggest that micro-credentials can provide an important mechanism to deliver on the promise of innovation, flexibility, portability, co-design and place-based responses to the challenges for young people's health and well-being, education, training and employment pathways, and sustainable, regenerative and just futures.

There are several models for how these promises might be met, including a more detailed account of the model that we have developed here - [Young People and Micro-creds for Sustainable, Regenerative and Just Futures](#). A number of others have been outlined in an earlier post on the [UNEVOC@RMIT website](#). Also, another project ([VitalArts](#)) is developing a different approach to micro-creds for 21st century skills in the creative industries.

The Challenge

The [Young People's Sustainable Future Lab \(YPSFL\)](#) - drawing on the work of a number of recent projects - is developing a proposal for a program of applied research to co-design a series of micro-credentials (micro-creds) for [sustainable, regenerative, and just futures in different places](#).

The program imagines that these micro-creds can deliver on the promise of developing scalable, place-based responses for young people's health and well-being, and education, training and employment pathways for sustainable, regenerative and just futures.

The program model is framed by 4 key elements:

- **Capabilities** - what skills, capabilities and forms of 'value' do communities want young people to develop (which currently go unrecognised and/or are not delivered in formal education systems)?
- **Activities** - what existing or new activities will enable these capabilities to be developed?
- **Evidence** - what forms of evidence - video, voice, creative, written - can be gathered to attest to the 'value' created?
- **Accreditation** - how can this value be accredited to create trust in the micro-cred?

Micro-creds for Sustainable, Regenerative and Just Futures

Drawing on these and other models - including our work in developing a discussion paper on the concept of 21st century skills, and the work on COVID-19 recovery scenarios for young people that we have written about in many posts on [this website](#) - the *Micro-creds for sustainable, regenerative and just futures* project is framed by a number of key ideas, including:

- **Involving young people as stakeholders in their own future:**
 - Young people aged between 12 and 24 (though this can be flexible).
- **Developing processes of co-design for ethical innovation (innovation that is *Responsible, Inclusive, Disruptive and Engaged* - Rickards & Steele, 2019):**
 - Partnering and collaborating with communities, agencies, governments, businesses, Third Sector Organisations, supra-national organisations to create and capture shared social, cultural and economic value for young people and communities.
- **Developing micro-creds for sustainable futures:**
 - Co-designing ways of creating and capturing the shared social, cultural and economic value of young people's learning and capabilities for acting as stakeholders in sustainable, regenerative and just futures.
- **Using the affordances of the platform enabled by 'digital badges' to signal the value created through micro-creds:**
 - Partnering with platforms such as [Badgr](#), [Credly](#) and/or [Learning Vault](#) to develop local, scalable, portable, 'trusted' accreditation of young people's capability development for sustainable, regenerative and just futures.

Micro-creds for sustainable, regenerative and just futures are not only about an individual young person's learning; they are also about the accreditation of this learning.

While this is important, the development of micro-credentials in this project is about the learning and capability development that is required for building shared, sustainable, regenerative and just futures in which young people are key stakeholders.

In this sense, we imagine these micro-creds emerging at the intersection of frameworks such as [World Economic Forum's](#) understanding of "21st century skills", the UN Sustainable Development Goals (SDGs), and ideas about 'regeneration' and 'regenerative futures', and 'intergenerational justice'.

Chapter 2. The Project and Co-Design

Neurodiversity describes the idea that people experience and interact with the world around them in many different ways; there is no one "right" way of thinking, learning, and behaving, and differences are not viewed as deficits.

The word neurodiversity refers to the diversity of all people, but it is often used in the context of autism spectrum disorder (ASD), as well as other neurological or developmental conditions such as ADHD or learning disabilities. (Baumer & Frueh, 2021)

Introduction

This pilot project in the City of Whittlesea aimed to work with a small cohort of neurodiverse young people to successfully achieve a Micro-credential in Co-design for Diversity and Inclusion and to evaluate the neurodiverse young people's progress in achieving the micro-credential.

In this pilot project we identified key support stakeholders and young people in partnership with the HWLLEN. HWLLEN provided the backbone agency coordination support to facilitate consistent communication, planning, consultation with partners and participants, delivery of all milestone meetings and direct and ongoing supports for young people and key support workers. We ran three milestone meetings to develop young people's capability to formulate and implement co-designed projects. We worked with key support stakeholders to develop the structure, content, and format of these milestone meetings. The aim of this process was to clarify the learning intentions for these meetings so that young people could use them to understand how to work together towards an agreed outcome.

The Problem

In the City of Whittlesea disability providers are reaching capacity and overstressing their resources and there is a need for an inclusive community response to meet present and future challenges.

Despite COVID-19, the number of NDIS participants in the City of Whittlesea grew from 3,096 in September 2019 to 3,826 in September 2020 (Whittlesea City Council, WCC, 2021). WWC expects the total to reach 6,088 participants by June 2023 (WCC, 2021). Whittlesea has a young NDIS community, with 58% of participants aged from birth to 18, versus 49% for Victoria (WCC). This will increase in the future, as young families continue to move into new housing areas (WCC). The four most common primary disability types comprise 74% of all NDIS participants in the City of Whittlesea (WCC). Of these, autism, developmental delay and psychological disability will become even more prevalent in the future (WCC).

These are the following challenges neurodiverse young people face:

- low levels of funding for Aboriginal and Torres Strait Islander young people with Autism

- Autism supports are in large schools (but with few in the community)
- Young people with autism are at-risk of mental health issues
- Post school options are ill-defined
- There are low employment rates for young people with autism, even though they are uniquely skilled
- NDIS participants are growing 6% each quarter in Whittlesea and 25% per annum (WCC).

Researchers suggest that these issues will be further amplified by the COVID-19 pandemic, leaving neurodiverse young people in a precarious situation (Cook et al., 2021; Dimov et al., 2021). Co-designed transition supports for neurodiverse learners are needed in Whittlesea as clearly outlined above.

The Neurodiversity Movement

Neurodiversity is a term coined in the late 1990s by Judy Singer, a sociologist who has autism (Singer, 1999). The term recognises “that certain developmental disorders are normal variations in the brain” which encompass among other things attention deficit hyperactivity disorder (ADHD), “autism spectrum disorder, dyslexia, dyspraxia and other learning disabilities” (Wiginton, 2021). The concept also recognises that neurodiverse people have certain strengths (Wiginton 2021). While people with ADHD for example “may have trouble with time management, they often show high levels of passion, drive, and creative thinking” (Wiginton, 2021).

There is a gap in the literature which suggests the need for future research that improves neurodiverse people's quality of life and that includes neurodiverse people throughout the scientific process. The neurodiversity movement is an important part to understanding the need to recognise and accept autism from a position of strength rather than deficit (Kapp, 2018).

Kapp observes (2018, p. S364) that:

The literature reveals the importance of autistic individuals' unique perspectives on their own lives and the need for research on how to help them from an early age to holistically understand their strengths, differences, and needs in an affirmative way that empowers them to constructively face their challenges.

Kapp (2018, pp. S364-S365) also highlights how self-advocates and people with direct lived experience can provide insight into how specific “behaviours or traits associated with autism...may sometimes improve individuals' functioning and wellbeing” - including how “their intense interests can build success in education and employment”.

Kapp (2018) argues that social supports are a critical contributor to the empowerment of neurodiverse young people. Kapp (2018) notes, for example, the benefits of parental acceptance of autism for the family in which neurodiverse young people live

and develop. Equally, he points to evidence of a positive relationship between a young person's awareness of the neurodiversity movement and their preference for referring to themselves as "autistic", an opposition to a cure, and more positive emotions towards their own autism among people on the autism spectrum (Kapp, 2018; Kapp et al., 2013).

Kapp (2018, p. S364) suggests that "future studies should consider how the complex relationship between autism and quality of life depends not only on social factors but also on the specific traits or behaviours associated with autism". He also suggests that:

Many more researchers need to actively include autistic people throughout the scientific process and focus on their priorities which often lean strongly toward services and adulthood; clearly useful and under-resourced areas. (Kapp 2018, p. S365)

One researcher has suggested that the neurodiversity movement can create a bias against autistic young people with intellectual disability, and that most of the research is generally focused on those that are 'high functioning' (with relatively intact language and cognition), while more than half of the autistic population is 'low functioning' (Costandi, 2016).

We are aware of this issue, but prefer not to use this sort of language (such as low or high functioning) which belies 'ableist' assumptions. Rather, as part of our pilot project to test a concept, we purposefully selected neurodiverse young people deemed by their support workers as having demonstrated capacity for participating in collaborative activities. Questions about high or low functioning were therefore irrelevant.

Co-design: Definition and Principles

Co-design in this context is about bringing neurodiverse young people and stakeholders together to improve the social supports neurodiverse young people need to transition effectively beyond school.

It is an approach to the development of programs, projects or services that actively involves all stakeholders in the design process. There are five key principles of co-design:

Inclusive – Co-design works in partnership with the users or consumers of the program, product, or service.

Respectful – Efforts are made to engage all design partners on equal terms and to seek their input as part of a democratic process.

Participative – Consultation is one part of co-design, and rather than simply 'ticking the box' of consultation at the beginning of the design process, continued engagement with stakeholders occurs throughout the co-design process.

Iterative – Ideas and solutions are continually tested and evaluated with the participants.

Outcomes focused – The process can be used to create, redesign or evaluate services, systems or products (New South Wales Council for Social Services, NCOSS, 2017).

These principles reflect the underlying values associated with co-design, which have been described by the New South Wales Government Agency for Clinical Innovation (ACI, 2019) in accordance with the NSW (New South Wales) Health core values of **Collaboration** (see Appendix D), **Openness** (see Appendix E), **Respect** (see Appendix F) and **Empowerment** (see Appendix G).

Associated with each of these core values is a set of capabilities. Our pilot project was co-designed with neurodiverse young people and stakeholders so that we collected evidence of the ways in which young people either have those capabilities already, or have developed them through participation in various activities.

Figure 2.1 below portrays the process through which young people and their key support workers worked to demonstrate these core values and capabilities.



Figure 2.1: Co-design process (adapted from ACI, 2019).

CORE Capabilities for Co-design

We worked with key stakeholders and neurodiverse young people to relate the capabilities for co-design around the core values articulated by the ACI (2019) to the lived experience and priorities of young people in Whittlesea.



Figure 2.2: Core Capabilities (ACI, 2019, p. 8)

Descriptions of each of the NSW Health Core Values and the Co-design capabilities associated with them, including how good practice is demonstrated, are provided in Appendices A-D. The following definitions and examples reproduce, but in a different order, many of the capability summaries set out in AIC's *A Guide to Build Co-design Capability* (2019, pp 9-12):

Collaboration: *Balancing power* (I acknowledge everyone's contributions and lived experience as equal. I seek the views and experiences of others I will let go of and let in power.); *Challenging assumptions* (I am sensitive and understanding when resolving conflicts and disagreements. I listen and value everyone's views and enquire about their beliefs and assumptions. I take time to understand and question my own assumptions and beliefs.); *Creating and enacting a shared vision* (I will ensure there is shared understanding about the way we are working.)

Openness: *Responsiveness* (I can change my course of action based on experiences and data in a purposeful and thoughtful way); *Curiosity* (I am non-judgmental, curious and respectful. I will explore opportunities to the fullest.); *Transparency* (I speak with meaning and passion. I always share all information whether it is good or bad. I can show vulnerability and share power.)

Respect: *Valuing diversity and individuality* (I am understanding and I value individual differences. I am empathetic and non-judgmental); *Communicating openly* (I ask questions to get people to think about the impact on others. I can share my experiences and ideas without fear of judgement.)

Empowerment: *Commitment to the process* (I am present physically and mentally. I will make time and resources available to support the co-design process.); *Setting expectations* (I am clear about the objectives, roles and responsibilities of all individuals participating in the co-design process I recognise my strengths, boundaries and vulnerabilities.)

Chapter 3. Participants, Action Research Approach and Ethical Considerations

Introduction

The aim of the pilot project was to work with a small cohort of 11 neurodiverse young people to successfully achieve a Micro-credential in Co-design for Diversity and Inclusion and to evaluate the neurodiverse young people's progress in achieving the micro-credential.

Participants

There were three participant groups: One included neurodiverse young people; the second group included key support workers; and the third included employers. Both the second and third groups were involved with HWLLEN.

Neurodiverse Young People

Neurodiverse young people (ages 17-24) were purposively sampled for an illustrative cross-section to the extent possible of the population in the outer north to be inclusive of gender, ethnic background, and social class. The purposive sample was restricted to those neurodiverse young people deemed by their key support workers to have demonstrated capacity for participating in collaborative activities. Eleven neurodiverse young people participated in three milestone meetings. Where participants were under the age of 18, parental consent was obtained. The limited number of participants was because it was a pilot project.

Key Support Workers

Key support workers (and the young people) are listed in Appendix B. The support workers were adults ages (18+) who delivered and provided youth services as support workers to the neurodiverse young people, who operated businesses, who had leadership roles in local and state government, and NGOs. In each of the milestone meetings, we included 6-15 support workers so that the neurodiverse young people were supported by a person with whom they had an established relationship of care and mutual understanding.

Employers

Employers are listed in Appendix C. These were managers (ages 18+) of municipal organisations such as libraries and local government sports centres which engaged with young people including neurodiverse young people. Three employers participated through reviewing the evidence collected and its relevance for assessment of prospective employees.

Action Research Approach

The approach involved three capability building milestone meetings using action research (AR), which helped to build the collective capacity of key stakeholders in Whittlesea. AR can generate rich insights into the problem of neurodiverse young people's acquisition of a micro-credential and help to support them. AR also helps to generate knowledge for changes in practice that will be required in workplaces where neurodiverse young people wish to work (See Appendix H for a brief outline of the principles of AR, and the ethical principles that shaped the use of AR).

The researchers facilitated three AR milestone meetings (milestone meetings 1 and 3 were conducted over Zoom while milestone meeting 2 was held face-to-face). Each milestone meeting involved checking what participants knew about co-design, what they were learning, how they were applying their learning, and how to collect evidence of their learning and CORE (collaboration, openness, respect, and empowerment).

The three milestone meetings consisted of an AR cycle for observing, reflecting on how their collaborative practices contribute to co-design, planning and action. In between these milestone meetings neurodiverse young people worked with their key support worker and the HWLLEN project officer/HWLLEN staff to support the collection of evidence and assisted with the three milestone meetings. Work done in these satellite meetings was brought into each of the second and third milestone meetings.

- In the first milestone meeting the neurodiverse young people with their key support worker discussed their experiences of co-design and how it could improve their participation in post-school transitions and consider the principles of co-design. They were assisted in collecting evidence of their capabilities in co-design.
- In the second milestone meeting neurodiverse young people and their key support worker described the behaviours associated with each capability and their importance to co-design. They were assisted in collecting evidence of their capabilities in co-design.
- In the third and final milestone meeting they and their key support worker described how success should look for each capability and provided practical evidence of their capabilities to complete the Badgr Micro-Credential in Co-Design for Diversity and Inclusion.

After the three milestone meetings, employers reviewed the relevance of the evidence collected by the young people with the assistance of their key support workers, and made judgements about the extent to which employers could use such information when assessing prospective employees.

Chapter 4. The Young People, Key Support Workers, and Employers

“I hope to develop my team working skills as well as show others that neurodivergent people are able to complete projects just as well as others”.

(Madi discussing what she hoped to achieve from participating in the pilot project)

Introduction

This chapter describes information about each of the neurodiverse young people that participated in the project. A total of 11 neurodiverse young people (9 male, 1 female, and 1 non-binary, ages 17 to 24) participated in this project from the outer northern Melbourne suburbs. Demographically, 0 identified as having a First Nations background and 2 identified as having a CALD background. The young people’s educational backgrounds varied:

- 3 completed Year 10 or less
- 3 completed Year 11
- 3 completed Year 12 (with VCAL certificate)
- 2 completed Year 12 (with VCE)

Two of the young people either planned on or will undertake further education (either TAFE or university). The young people’s employment backgrounds varied:

- 7 unemployed
- 2 casual
- 2 part time

Those 4 young people who were employed were looking for more hours. This chapter further details the key support workers’ and employers’ responses about the young people’s experiences with completing the micro-credential and young people’s responses as well.

Young People’s Stories¹

The 11 neurodiverse successfully completed their micro-credential, which shared their biographies and provided evidence of their CORE capabilities. These achievements and capability details are highlighted in the following sections with links to the [YPSFL’s website](#).

Chloe

[Chloe](#) was 20 years old, living in Whittlesea. She loved to cook, read, write, swim and look after her animals. Chloe was working on a video to educate other people in the community about neurodiversity. She enjoyed creating something that was useful to others.

¹ In each young person’s story below there is a link to their digital portfolio and micro-cred badge on the [YPSFL](#).

Brendan

[Brendan](#) was 20 years old, living in Doreen, in the northern suburbs of Melbourne. He enjoyed spending time with friends and family. Brendan was passionate about acting and performing in theatre productions. He loved expressing himself through mediums of theatre and film.

Liam

[Liam](#) was 24 years old, living in Mernda. His interests included playing video games and watching movies. Liam enjoyed volunteering at the local Vinnies and the experiences this provided him with working and engaging with others.

Thomas

[Thomas](#) was 17 years old, living in Lakes Entrance. His hobbies and interests included music, dancing, basketball, riding his bicycle and walking his dog. He was working at the YMCA and enjoyed going on camps and making friends with his fellow coworkers and learning how to help and encourage others.

Madison (Madi)

[Madi](#) was 18 years old and living in Greensborough. They enjoyed going for walks, reading and playing piano and video games. Madi was working at Woolworths gaining teamwork experiences such as cleaning the registers, counting the money, emptying the bins, blocking off certain areas with trolleys to achieve the main goal of closing the store on time.

Jacob (Jay)

[Jay](#) was 18 years old, living in Watsonia North. He enjoyed playing video games and Dungeons and Dragons. His hobbies and interests included art such as painting, drawing, and digital art. Jay was working on an animation project with a few other people on the topic of anxiety.

Armaan

[Armaan](#) was 17 years old, living in Mernda with his Indian family. His hobbies and interests included riding his bicycle and playing sports, video games, board games, and card games. Armaan enjoyed working at the school's canteen and the opportunities this experience provided in developing his skills and in engaging with his co-workers in planning ideas.

Luu

[Luu](#) was 17 years old, living in Reservoir. He enjoyed spending time with his friends and bowling. He was passionate about working at the school's canteen. Luu learned a great deal from his experiences at the canteen such as accounting, cooking, and cleaning up and building his teamwork skills.

Adam

[Adam](#) was 24 years old, living in Wollert. His hobbies and interests included listening to music, art, cooking, sport, computers and the internet. Adam was working at a cafe, helping out in the kitchen, providing great customer service and working as a team with his co-workers.

Nicholas

[Nicholas](#) was 18 years old, living in Epping, and studying VCAL (intermediate level) at Plenty River College. He enjoyed playing music and basketball. Nicholas' recent achievement was returning to education. In the future he wants to become a qualified architect.

Gary

[Gary](#) was 20 years old, living in Doreen. He was interested in science fiction-related themes such as space exploration, new technologies, and Artificial Intelligence. Gary enjoyed playing Grand Strategy games that simulate real world scenarios and allow the user to make decisions that affect the outcome of the game. These games provide historic insights and can be useful in the study of international affairs.

Pre-Milestone Meetings About Young People's Micro-Credential Experiences

The young people and key stakeholders responded to questions before the first milestone meeting via VideoAsk about the young people's prior understanding of co-design, past experiences achieving a goal, and what they hoped to achieve from this experience.

Young People's Responses

"Co-design is the process where people work together to create something of value tailored to their needs and preferences that is built around four CORE capabilities (collaboration, openness, respect, and empowerment)"

(Jay defining co-design)

Before the first milestone meeting the young people rated their understanding of codesign on a scale from 1 to 10 with 10 being the highest. On this item, there was an average of only 4.8.

Some of the young people such as

- Thomas remarked, *"I do not really understand what co-design is but I hope to learn more about it"*.
- Others such as Armaan explained that co-design is *"coming up with ideas, engaging, developing, planning, deciding, exploring, etc."*.

All of the young people had experiences working with other people to achieve a goal. For example:

- Gary worked *"in a team in his early school years"*.

- Nicholas worked *“in a team to design a new garden bed”*.



(The new garden bed, designed by Nicholas and his classmates at school, shared as evidence of Nicholas’s capability for Collaboration)

When asked what the young people hoped to achieve from participating in this project, some such as:

- Liam stated, *“I don’t know”*.
- On the other hand, others like Madison observed, *“I hope to develop my team working skills as well as show others that neurodivergent people are able to complete projects just as well as others”*.

Key Support Worker’s Responses

“Adam hopes to enjoy himself, earn some money and promote his skills”.

(Ross, a key support worker for Adam talking about Adam’s aspirations)

“My passion is art. I excel in Art especially in painting which is my preferred medium and I also enjoy working with clay to create ceramics pieces. My art has sold at recent exhibitions and there is demand for more of my work.”

(Adam describing his passion for art in his biography prepared with the help of Ross, his key support worker)

Before the first milestone meeting the key support workers rated the young person’s understanding of codesign on a scale from 1 to 10 with 10 being the highest. On this item, there was an average of 5.2.

- Some of the key support workers such as Louise said that *“using the word, ‘co-design’ I had no idea what it meant”*.
- Others such as Samantha stated that *“Adam is a very determined and conscientious young man who knows his strengths well and is really keen to use them where possible”*.
- Jansu explained that *“Chloe has been involved in the Neurodiverse Project where she and other young people had the opportunity to create a video that they felt was important for other neurodiverse young people. It was a co-design project that gave Chloe and others the ability to design and lead the initiative”*.

All the support workers stated that the young people had experience achieving a goal with other people. For example:

- Lisa recounted how *“During their hospitality studies they worked with other young people to plan, deliver and cater events for large groups”*.
- Mathew described how the young people he supported *“worked together to research and design the building of a sensory room at school”*.
- Sue discussed how Armaan and Luu *“had positive experiences being a part of a group running the school canteen, preparing food, giving out orders, and sorting orders together”*.



(Luu working with others in the school canteen discussing his capability for Empowerment)

When asked to describe what these young people hoped to achieve from participating in the project:

- Key support workers such as Paul stated that *“the young person’s aspiration is to continue to develop the skills and knowledge to work with others, irrespective of real or perceived differences”*.
- Jason commented that *“I know the young people I dealt with on this project are keen on self-improvement and would like to become more confident interacting in a group setting”*.

Post Milestone Meetings About the Micro-Credential Development and Accreditation Process

The young people, key stakeholders, and employers responded to questions after the third milestone meeting via VideoAsk.

- The young people and key stakeholders responded to questions about what the young people had learned or understood about each of the CORE capabilities, what they hoped to achieve after completing the micro-credential, and what they liked about the micro-credential process, and what they thought could be improved.
- The employers responded to questions about how relevant the young people’s evidence was to them, how well the evidence helped to demonstrate the young

people's employability skills, and how the micro-credential process could be improved.

Young People's Responses

"On the camps sometimes there are some people that I don't get on with. For example one boy called Mitchell kept wanting to take a photo of my dog Bella and I didn't want him to so he got upset. I had a chat with one of my buddies who told me I was upsetting Mitchell and perhaps we could all talk about it – which we did and now I am happy for Mitchell to take photos of my dog – it feels good to talk and have a happy outcome for us all. Win win!"

(Thomas talking about his capability for Respect)

After the third milestone meeting the young people rated their understanding of co-design on a scale from 1 to 10 with 10 being the highest, and the average at this stage was now 7.2. This represented a substantial improvement in their understanding.

The young people described what they had learned or understood or knew about each of the four CORE capabilities of Collaboration, Openness, Respect and Empowerment. For example:

- Gary defined collaboration as *"the process of two or more people working together to complete a task or achieve a goal"*.
- Armaan provided an example of what collaboration meant from his work experiences.
 - *"I talk to people who I am working with and help them. I listen to others, come up with suggestions and ideas and follow instructions. In the canteen, I have made pizza with the team, including making the dough, which is a good skill and experience"*.
- Jay described openness as *"the ability to be open to new ideas and thoughts from yourself and others. I learnt about being more open to new ideas and thoughts"*.
- Chloe *"learned that openness is about listening to others' opinions and thoughts instead of your own"*.
- Luu *"learned how to respect others at the workplace"*.
- Chloe understood *"that respect is truly about being kind and understanding towards others for who they are"*.
- Jay stated that: *"empowerment is being confident to do the things you want to do even if it's not by yourself but with others"*.
- Liam described empowerment as being: *"helpful in the workplace so we encourage the people that work well to be even better next time"*.

The young people were hopeful about what they wanted to achieve after completing the micro-credential. For example:

- Luu said *"I hope to get a job as a cook"*.
- Chloe wanted to *"show future employers and others that there is more to neurodiverse people than meets the eye"*.
- Armaan said, *"it actually helped me with the skills that I need to get a job"*.
- Adam wanted a job, to volunteer and to sell his art.



(Adam profiled his strengths in producing artwork when explaining his capability for Empowerment)

The young people expressed what they liked about the micro-credential process.

- Garry commented *“I liked how laidback the whole experience was, not too demanding of us, the phone updates were a big help for me because I don’t check my emails that often”*.
- Jay remarked *“I liked the people who were there and how helpful and nice they were”*.
- Thomas explained *“I liked meeting new people...and thinking more deeply rather than giving simple answers”*.

The young people also shared their ideas about how the micro-credential process could be improved.

- Some participants such as Liam stated, *“I’m not sure how it can be improved”*.
- Others such as Garry thought that *“more face-to-face could have helped for some but having it half-half may be helpful to those who don’t feel comfortable about going in”*.
- Adam thought the milestone meetings would be better in person than online.

Planning for the milestone meetings anticipated that, for various reasons, the option of face-to-face meetings might not always be possible or attractive for some participants. In the event, social distancing requirements associated with COVID-19 and logistical problems associated with local flooding meant that we were unable to meet face-to-face during all three milestone meetings.

Key Support Workers’ Responses

“Chloe has a good understanding of the CORE capabilities of co-design. She has been able to give examples of this in her work. She can conceptualise why it’s

important when working with a group to do this as well as the required skills and values that align with co-design”.

(Lisa, a key support worker for Chloe describing Chloe’s understanding of co-design)

“I really enjoy helping people and contributing to the community. I do that by volunteering at my local neighbourhood house. I love cooking for the Women’s Lunch as I like to see people enjoy themselves and get happy and excited about what food I will be cooking. I also get to connect with people that attend, and I sometimes even get a hug. In this workplace, I get to meet like-minded people that have values like mine, for example, honesty, compassion, and loyalty.”

(Chloe giving examples from her work and volunteering activities)

After the third milestone meeting the key support workers rated the relevance of the evidence of the co-design CORE capabilities demonstrated by the neurodiverse young people on a scale from 1 to 10 with 10 being the highest, and the average at this stage was now 8.

The key support workers assessed their young person’s current understanding of co-design. In all cases they noted improved understanding. For example:

- Louise observed progress in Brendan’s understanding of co-design after the third milestone meeting: *“From what I have seen and heard from Brendan, he would probably now say something along the lines of, ‘Co-design is people working together to focus on a project with the same goal”.*
- Samantha remarked: *“Adam is a very intuitive and intelligent young man who I believe had a good understanding of the information he was given towards the project. Although I feel that Adam may be a little confused about what the information could lead to for him in the future”.*

In describing how the young people worked to achieve a goal:

- Louise discussed an example of how:
 - *“Brendan worked with other adults and youth in Scouting to become a Joey Scout Leader. This entails dedicated hours on a weekly basis to support children aged 5-8. There are a number of online theory courses as well as adult leadership camps that are required to be attended”.*



(Brendan being inducted as a Joey Scout Leader)

- Mathew said:
 - *“They expressed that it was at first confusing as to what it was about but that it made sense after a few meetings. They like that they were paid to participate and liked what they had produced at the end”.*
- Jansu commented on how:
 - *“Chloe is a great team player, in her school programs and cooking classes, she seems to have worked well with her peers”.*

The key support workers shared what the young people’s hopes and aspirations were beyond this project.

- Sue commented that *“the young person is continuing to focus on work experience and in the future looking for a job”.*
- Samantha explained how *“Adam would like to create promotional designs for Araluen using his computer skills and continue to sell his artwork”.*

In discussing what the key support workers liked about the project,

- Lisa explained that:
 - *“It was a great collaboration to draw out an individual’s skills and confidence where they may have never thought it was possible. There was a great sense of pride and self-love when the young person realised all the wonderful things they did and have achieved in their lives that this project drew out”.*
- Jason liked that the micro-credential:
 - *“Helped the young people understand themselves better”.*
- Ross liked that the micro-credential:
 - *“was affirming for Adam, and he enjoyed it”.*

In explaining how the micro-credential process could be improved,

- Louise needed *“more assistance with technology...and just with the face-to-face, change of days, times, and places. One thing with neurodiverse people is they tend to like a routine”.*

- Mathew stated that the process could be improved with:
 - *“Further opportunities for young people to get to know each other by having more meetings in a quiet and accessible place. The arrangement of the computer room in the library was too stark an environment and didn’t allow young people to interact as they were arranged in rows”.*
- Lisa stated that *“I would spend more time training the support workers about the project”.*
- Samantha *“wanted more clarification about what can happen next”.*

Employers’ Responses

“At the launch, one of the young people said, ‘I didn’t realise that there was so much to me’, and that has really stayed with me. This credential has helped young people realise and draw out their existing skills as well as developing new ones”.

(Kate, an employer describing the ways the micro-credential helped neurodiverse young people demonstrate their employability)

After the third milestone meeting the employers rated the relevance of the evidence of the co-design CORE capabilities demonstrated by the neurodiverse young people to the potential of their employment in their organisation on a scale from 1 to 10 with 10 being the highest, and at this stage, there was an average of 9.6. This was a very affirming result for proof of concept purposes.

The employers provided some examples of these CORE capabilities viewed in the young people’s profiles. For example:

- Renae stated that these capabilities were demonstrated by the young people:
 - *“Working with others and listening to different opinions; examples within their jobs and the interactions with others with whom they have group work; and stepping out of their comfort zone and being prepared to try something new”.*
- Kate described how the young people demonstrated *“collaboration - teamwork; openness to others and to change”.*

The employers illustrated the ways the micro-credential helped neurodiverse young people demonstrate their employment skills.

- Renae explained how as an employer:
 - *“We look for technical skill in the role, but we weigh more on the personal capabilities, traits, and soft skills of employees”.*
- Annette commented on how the micro-credential process helped neurodiverse young people demonstrate their employability skills. She explained:
 - *“It does this by actually showing that people are able to grow and learn regardless of their neurodiverse status or their neurological status, that they are able to learn, implement things themselves, modify and show initiative as well. So, I think that really helps when people go into jobs where they can actually say that they’ve gone through a learning opportunity and an opportunity to grow themselves and bring those skills into a workplace and better that workplace as well. The micro-credential demonstrates these soft skills that are key in creating a workplace that has a positive and respectful*

culture. It also demonstrates key components that people need to have to work as a part of a team”.

In describing how the micro-credential process piloted in this project could be improved,

- Kate commented that it was a:
 - “Good process but I wasn’t involved directly in the roll out with young people”.
- Renae stated that:
 - “Adding to the list of credentials that the young person can demonstrate” would improve the process.
- Annette remarked that milestone meetings could be improved by having a face-to-face option.
 - *“I think face-to-face learning is very different from online learning. So that’s probably a way to be improved, is having those face-to-face options throughout the whole process”.*

Chapter 5. Discussion and Recommendations

Introduction

This pilot project has delivered proof of a concept - that a micro-credential process can be used in a specific community setting to collect and demonstrate evidence of capabilities that neurodiverse young people have which will be of value to employers. Our project showed how young people's capabilities can be demonstrated through activities involving partnerships between young people, support workers and employers. We showed that evidence of capability can be gathered and shared in a variety of formats. And in partnership with the HWLLEN project officer/HWLLEN staff, we demonstrated how the process of self-review, peer review and stakeholder review could form part of an accreditation pathway to a credentialing of capabilities valued by employers. This chapter discusses our process and outcomes in relation to themes in the literature, briefly describes the impact of the pilot project and offers recommendations for its further improvement and implementation.

Process

Consistent with themes in the research literature we reviewed as part of this project, we found that it is critically important to involve neurodiverse young people throughout the scientific process and to focus on their priorities and conduct research with young people rather than on them (Pellicano et al., 2014, Kapp, 2018). Such an approach is consistent with our commitment to draw upon the principles of ethical innovation. Specifically, our approach builds on work by Lauren Rickards and Wendy Steele (2019), researchers at the Centre for Urban Research at RMIT University, who suggest that ethical innovation has four core principles. Ethical innovation is:

1. Responsible—anticipatory and precautionary
2. Inclusive—collaborative and systemic
3. Disruptive—bold and impactful
4. Engaged—democratic, purposeful.

These principles informed our approach to involving neurodiverse young people and their support workers, as well as employers, in the co-design and micro-credentialing process. For example, neurodiverse young people were included in the design and testing of the consent forms, participant information descriptions of the project and survey materials. They were also consulted about the set up of the milestone meeting arrangements, and planning for how they would work with their support worker to collect evidence of their capabilities for inclusion in VideoAsk - the online platform utilised in the micro-credential. The improvements that were revealed, through pre-and post-project surveys demonstrate the potential of this sort of ethical innovation to build collaboration that enhances the local ecosystem of transition from school into employment for neurodiverse young people.

The process that was piloted in this project helped to produce evidence informed, provocative, and disruptive solutions to transition challenges experienced by neurodiverse young people as they seek to enter the world of employment. The research team, working in collaboration with the HWLLEN project officer/HWLLEN staff, facilitated 'surprising alliances'

of academic, community, business, Third Sector, and government stakeholders in developing innovative supports in relation to identified contexts/situations/place-based needs and challenges. The method that we utilised built on and extended existing knowledge about the dynamics and value of integrated support networks and systems using a principled co-design approach.

Outcomes

Successful completion of the micro-credential

A fundamental outcome from this project is that all 11 participants successfully completed the Micro-credential in Co-design for Diversity and Inclusion. This was an achievement of which the young people were justifiably proud, as were their support workers. All stakeholders - support workers, employers, funders, HWLLEN staff, and family members - shared in the excitement and satisfaction derived from the young people's achievement.

Building on Research Evidence

The research team highlighted how researchers such as Kapp (2018), Balfe and Tantam (2010), Kanne, Gerber, Quirnbach, Sparrow, Cicchetti, and Salnier (2011), Kin, Saulnier, Sparrow, Cicchetti, Volkmar, and Lord (2007), among others have shown that an autism typical pattern of poor adaptive functioning relative to IQ tends to rise with greater age and IQ, and autistic young adults as a group tend to have lower employment rates than their peers with intellectual disabilities.

Similarly, we took account of longitudinal research by Taylor and Malick (2014) which has revealed that autistic adults experience declines in vocational independence over time whereas the receipt of services improves independence in vocational activities which are associated with more independence in other activities of daily living. Autistic young adults with greater conversational skills more often lose services after high school in the United States of America (USA), whereas those with intellectual disabilities tend to have more organised daytime activities (Kapp, 2018; Shattuck et al., 2011). We highlighted, in this context, that researchers like Kapp (2018) have underlined the importance of social supports for facilitating improved social functioning. As a result, this project used a co-design approach to enable neurodiverse young people to develop social experiences and supports suited to their individual abilities, potential, and needs.

Addressing an Identified Gap in Research and Practice

In this project, we addressed an identified gap in research and practice that suggests the need to consider practices that improve neurodiverse young people's quality of life and that includes them throughout the scientific process (Kapp, 2018). We acted on this suggestion, as well as Kapp's suggestion that future studies should consider how the complex relationship between autism and quality of life depends not only on social factors but also on the specific traits or behaviours associated with autism - such as intense interests which can help to build success in education and employment (Kapp, 2018). We factored these suggestions into the way we designed and conducted the micro-credential process in collaboration with young people and key stakeholders.

Furthermore, we addressed the calls by researchers to actively include autistic people throughout the scientific process and focus on their priorities which often lean strongly toward services and adulthood (Kapp, 2018; Pellicano et. al., 2014). Equally, we listened to those self-advocates who prioritise the need for every autistic person to have opportunities to communicate their insights into how best to provide effective support or assistive technology so that they can clearly express their personal wants and needs (Kapp, 2018; Ne'eman, 2010; Robertson, 2010). We used these suggestions to shape a project focused on enabling neurodiverse young people to express their interests in transitioning into adult roles through activities undertaken in collaboration with peers as well as employers.

In doing this, the project has contributed towards shaping evidence-informed innovations that might help neurodiverse young people, support workers and employers to shape a more inclusive employment ecosystem in Whittlesea.

Improving Prospects for Neurodiverse Young People's Employment

Achieving the micro-credential may therefore contribute to redressing the challenges neurodiverse young people face in seeking and securing sustainable employment outcomes. In Australia, the autistic labour participation rate is 38%, which is lower than individuals with a disability (53%) and without a disability (84%; ABS, 2019). That is, there are significantly fewer autistic individuals employed or actively seeking employment and available to start. Specific challenges in seeking employment reported for autistic individuals include navigating the job application process (Lorenz et al., 2016), passing successfully through the job interview (Strickland et al., 2013), determining whether or not to disclose one's autism diagnosis (Higgins et al., 2008), and, similar to non-autistic young adults (Scurry & Blenkinsopp, 2011), and gaining employment in an area aligned with one's level of education (Baldwin et al., 2014).

While there are several thousand autistic job seekers, available services do not have the capacity to meet the needs of autistic individuals, highlighting an area of urgent need in Australia (e.g., Victorian Parliament Family and Community Development Committee, 2017).

By utilising a community-based micro-credential process and partnering with a local community agency, HWLLEN, this project demonstrated the potential of a collaborative process involving young people, support workers and employers for building a trajectory for neurodiverse young people into inclusive employment opportunities and workplaces.

Effectiveness of the Four Interconnected Elements of the Model

Finally, the micro-credential process that was trialled in this pilot project has empowered young people to improve their understanding of co-design and to use the process of a community-based Micro-credential in Co-design for Diversity and Inclusion to demonstrate their capabilities - to themselves and to employers. It has helped them to gather evidence that they can use in job applications and interviews. And it has provided a means for accrediting the capabilities that young people either already had or have developed, and which they demonstrated through activities in the places where they live, learn and work.

In concluding this report, we offer some reflections on the effectiveness of the model's four interconnected elements.

Capabilities

At the centre of the micro-credential are the four CORE capabilities of Collaboration, Openness, Respect and Empowerment. All the participants - young people, support workers and employers - were delighted with the way in which the micro-credential process enabled the young people who participated in the pilot project to realise how they possessed these capabilities already.

At the closing ceremony, when all the participants formally received their micro-credential, one of the participants, Chloe, spoke about how the process had helped her to bring out and frame skills and capabilities she had not previously recognised that she had already developed. The community-based micro-credential process provided a means for her to bring out the 'treasure within' - to adapt the words from an earlier report on transforming education for the twenty-first century (UNESCO, 1996). Remarks by support workers and employers, as noted in Chapter 4, also confirmed that the process enabled all the young people effectively to realise and showcase the capabilities they possess for working in inclusive workplaces.

Activities

The project revealed the ways in which activities are capability-laden. That is, any activities in which young people are engaged were shown to have the potential to be used as the basis for young people demonstrating the CORE capabilities they either already have or can learn through collaborative doing-and-learning processes. Reports on these learnings by young people, their support workers, and employers, as noted in Chapter 4, revealed how the activities enabled young people to develop and demonstrate their capabilities in co-design.

Furthermore, to the extent that participants and their support workers were able to reflect on the way in which **what they do** entails **what they know**, the process proved to be an effective means for engaging young people in 'reflective practice' - an approach which is fundamental to everyday practices of continuous improvement and ongoing professional development in business and human service settings (e.g., Owen, 2022).

Evidence

This pilot project successfully demonstrated the multiplicity of forms in which evidence of capabilities in co-design can be collected. Our approach showed how, through the use of media as diverse as photos, video, audio and written word, evidence can be gathered to demonstrate the development of the CORE capabilities associated with co-design. This approach was not without its challenges. Young people and their support workers struggled with VideoAsk as a platform for gathering evidence because they were unable to view their responses once submitted. The young people who needed assistance used email as a way of submitting their evidence which was then curated by our research team within a digital micro-credential platform.

The result was a digital CV that each young person could present to prospective employers when applying for a job and negotiating the supports they might need to be effectively engaged in a workplace setting. The digital badge represents one form of evidence of completion of the micro-credential. This was reinforced, as it were, by the awarding of a paper certificate as well, as a means of providing further evidence of completion of an accredited learning program.

Accreditation

The milestone meetings conducted as part of this pilot project proved to be a place (whether virtual or face-to-face) in which planning and evaluation occurred. These meetings allowed various forms of review and ongoing assessment to occur – self-review, peer review, stakeholder review - along an accreditation pathway leading to the award of a micro-credential. In this way, the micro-credential process that was trialed in Whittlesea operated in line with the process described by Peter Shergold et al. (2020) as a “certification of assessed skills and knowledge that learners have demonstrated or acquired through a short course of study or training”. Our process was also similar to that described by Shergold et al (2020), in that it had a “focus on smaller elements of learning” which “may stand alone or be additional, or complementary, to other certificated training”.

The pilot project, therefore, showed how such a process could be utilised not only in Whittlesea but potentially more widely to provide neurodiverse young people with a process for collaboratively recognising their capabilities and facilitating their transition from school to post-school employment and other activities roles.

Impact: Whittlesea Community Futures Partnership–Vocational Transitions for Neurodiverse Young People

Following the completion of the micro-credential process, the Whittlesea Community Futures (WCF) partnership held a forum in December 2022 on “Neurodiversity and Autism: How Our Community Can Respond”. This forum aimed to explore neurodiversity in the Whittlesea community and provide practical examples from organisations who are driving change in their organisation in terms of neurodiversity.

The opening session highlighted the contribution made by the City of Whittlesea (and other WCF/WYC partners) for the Micro-credential for Neurodiverse Young People pilot project. This was followed by presentations from a range of organisations providing support for neurodiverse young people in the Whittlesea Local Government Area. Forum participants were requested to submit their ideas for further collaborative approaches to addressing the growing needs of this community ranging from early years, through life stage transitions and vocational opportunities, to diversity support.

The main action from the forum has been the formation of a working group of interested members to focus on vocational transitions for neurodiverse young people in the City of Whittlesea with the aim of establishing a systemic partnership approach. The HWLLEN has been identified as a key partner in helping to lead this work.

Recommendations

Based on the outputs and outcomes of this pilot project, we would propose several key recommendations:

1. Consider support workers' suggestions for how the micro-credential process could be improved, including:
 - a. spending more time training support workers about the project and providing more clarity about post-completion options;
 - b. acknowledging that some young people and their support workers might require more assistance with technology to manage any change of days, times, and places that might arise during the process;
 - c. recognising that neurodiverse people tend to like routine; and
 - d. creating further opportunities for young people to get to know each other by having more meetings in quiet and accessible places.
2. Consider employers' suggestions for improvement, specifically:
 - a. that they be involved directly in the roll out with young people;
 - b. that the list of credentials that young people could complete be expanded; and
 - c. that milestone meetings could include more face-to-face options.
3. Based on the achievements of neurodiverse young people in Stages 1 and 2 consideration should be given to rolling out Stage 3 of the pilot project in 2023 - so young people can co-design and implement place-based support projects in collaboration with key stakeholders.

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Appendices

Appendix A: List of Key Stakeholders

The key stakeholders included:

- Kim Stadtmiller and Fiona O'Grady from HWLLEN,
- Ross Coverdale and Jonathan Crowther from Araluen,
- Melissa Webster and Jose Molina from Irabina Autism,
- Simon Williamson from the Northern School of Autism Services,
- Jane Cowell, Robyn Ellard and Kate Ferguson from Yarra Plenty Regional Library,
- Michele Rowse CEO, and Annette Jurisch from The Y Whittlesea,
- Sandra McKechnie from Whittlesea Tech School,
- Renae Whitaker from the City of Whittlesea (Youth Services).

The key stakeholders involved in early conversations included:

- Sue Pakakis and Gabrielle Graf from the Department of Education and Training Victoria,
- Helen Brooker from the Department of Education and Training Victoria (Area Jobs, Skills and Pathways Manager),
- Michael Benfari from the Department of Education and Training Victoria (Community Liaison Officer),
- Stephen Bell from the City of Whittlesea,
- Jodie Turner from the City of Whittlesea.

Appendix B: List of Key Support Workers

These key support workers (for the young people) and referral organisations included:

Key Support Workers	Young Person	Organisation
Lisa Wellington and Jansu Gaz	Chloe	City of Whittlesea
Louise Knell	Brendan	Whittlesea Youth Connections
Nagam Abas	Liam	AGA Transition to Work
Sarah Gleeson and Simone Vrljic	Thomas	The Y Whittlesea
Samantha Vertkas and Ross Coverdale	Adam	Araluen
Simon Williamson and Sue O'Leary	Armaan	Northern School of Autism
Simon Williamson and Sue O'Leary	Luu	Northern School of Autism
Paul Adigan	Madison	Plenty River College
Mathew Allen	Jacob	Plenty River College
Jason Sheather	Nicholas	Plenty River College
Jason Sheather	Gary	Plenty River College

Appendix C: List of Employers

The employers included:

- Kate Ferguson, Senior Manager at Yarra Plenty Regional Library,
- Renae Whittaker, Unit Manager at City of Whittlesea,
- Annette Jurisch, General Manager Inclusion Services at YMCA Whittlesea.

Appendix D: NSW Health Core Value: Collaboration

Table 4. NSW Health Core Value: Collaboration

Collaboration involves supporting and assisting others and acknowledging that it's ok to ask for advice or support. It is realised through sharing knowledge, information and lessons learnt. It requires all participants to demonstrate teamwork and ensure an inclusive approach.

Capability	Individual behaviour
Balancing power	I acknowledge everyone's contributions and lived experience as equal I seek the views and experiences of others I will let go of and let in power I will approach the collaboration with compassion and care for others
Challenging assumptions	I am sensitive and understanding when resolving conflicts and disagreements I listen and value everyone's views and enquire to their beliefs and assumptions I take time to understand and question my own assumptions and beliefs I reflect on the collaboration to understand what is working well and not working well
Creating and enacting a shared vision	I will ensure there is shared understanding about the way we are working

What does good practice look like?

- Everyone involved feels represented in the final product and comfortable and ready to act on the outcome
- A sense of unity and trust within the co-design team
- Embedding reflection through the co-design process.
- Enables process to move forward and recognise change is a dynamic process that needs to be managed
- Modelling collaborative practices at all levels
- Making sure the right groups are represented
- Ensuring people involved in the co-design process have relevant lived experience
- Deciding together the principles that will underpin the collaboration
- Creating time and space to reflect on the collaboration; surfacing and discussing concerns or issues and where possible resolving these together
- Sharing knowledge and information about co-design to everyone.

Appendix E: NSW Health Core Value: Openness

Table 1. NSW Health Core Value: Openness

Openness is a state of mind, enabling colleagues to share ideas and communicate clearly. We strive to be approachable, actively listen and encourage others to contribute and speak up. We offer and receive constructive feedback. This ensures others feel their contribution is valued, even when there are disagreements.

Capability	Individual behaviour
Responsiveness	I am open to feedback from everyone in the co-design team I can change my course of action based on experiences and data in a purposeful and thoughtful way
Curiosity	I am non-judgmental, curious and respectful I can ask difficult questions in a considerate way I am enthusiastic about change and I do not have existing solutions I will explore opportunities to the fullest
Transparency	I speak with meaning and passion I always share all information whether it is good or bad I am consistent in my messaging I can show vulnerability and share power

What does good practice look like?

- Sharing data and outcomes openly
- Matching communication and methods of collaboration to individuals needs and preferences
- Role modelling the need to press pause during discussion to check if people agree
- Creating a safe space that will allow everyone to express their opinions and valuing them equally
- Recognising that there are power imbalances and working together to shift the dynamic
- Supporting people to be open and examine their own assumptions and biases
- Ensuring there is transparency and agreement from the beginning about how decision-making processes will work
- Being transparent about the co-design process including methods used, decisions, and outcomes
- Being open to change even when the solution is not defined

Appendix F: NSW Health Core Value: Respect

Table 2. NSW Health Core Value: Respect

The value of Respect is a reminder to treat others as we would like to be treated ourselves. It is important to be mindful of each other's capabilities, regardless of role or grade. We care about the different perspectives and backgrounds in our workplace and are thoughtful of our impact on others.

Capability	Individual behaviour
Valuing diversity and individuality	I am understanding and I value individual differences I am empathetic and non-judgmental
Communicating openly	I listen to understand in the spirit of working together I ask questions to get people to think about the impact on others I can share my experiences and ideas without fear of judgement

What does good practice look like?

- There is a policy for compensating people with lived experience of a health condition and carers for their time and input into the co-design process
- People with lived experience of a health condition and clinicians will feel empowered to speak up
- There is a breakdown of traditional power relations and professional hierarchies with an understanding that 'expertness' comes from a range of sources
- Agreement is made at the beginning of the process around equal participation and involvement. This is also renewed regularly.
- There is a plan for how conflict will be managed respectfully and it is discussed and agreed at the beginning
- Making co-design resources accessible to different groups
- People are free to be authentic and honest without fear of consequence and judgement
- Respect for expertise, experiences and reasons for involvement
- Ensuring that there are equal numbers of staff and people with a lived experience of a health condition on the co-design team
- Recognising and reducing barriers to participation

Appendix G: NSW Health Core Value: Empowerment

Table 3. NSW Health Core Value: Empowerment

Empowerment enables a sense of purpose in our work. It is achieved through taking responsibility for our performance and behaviour. We celebrate our achievements. We also reflect upon what may not have met all expectations and learn from that experience. In doing so, we create a positive environment in which people are encouraged to grow, develop and succeed.

Capability	Individual behaviour
Commitment to the process	I am present physically and mentally I will make time and resources available to support the co-design process I will be open to a different way of collaborating and ask questions if I am unsure I am motivated to see a service improvement
Setting expectations	I am clear about the objectives, roles and responsibilities of all individuals participating in the co-design process I recognise my strengths, boundaries and vulnerabilities
Knowledge of co-design	I understand the process I know how to apply the method appropriately using relevant tools and techniques I support the principles of co-design
Accountability	I am responsible for my own actions and will be proactive in addressing risk I will be accountable to the people in my co-design team I will be accountable to the outcomes of the co-design process

What does good practice look like?

- Trust is placed in the expertise of participants
- Recognition of the power imbalances, space to explore and balance them
- There is a feeling of confidence, equity, inclusion, trust
- There is support and training provided to build capacity to contribute to the process
- There is an understanding of the common barriers to using a co-design method and an active commitment to address them
- Language used is inclusive and respectful with no jargon or acronyms
- Creating a culture where you can learn from mistakes and share it
- Everyone feels that they have a voice and will be heard
- Everyone is familiar with and understands co-design
- Publicly accessible 'vision statement' with commitment of action
- Everyone is given the time to participate and are provided with different ways to be involved and support the co-design process
- Everyone's contributions are acknowledged and valued

Appendix H: Action Research Approach

Methodology

AR methodologies draw on Lewin's (1946) collaborative action research 'spiral' of planning, acting, observing, and evaluating. AR establishes an explicit, direct link between theory and action so that the process of inquiry contributes 'directly to the flourishing of...persons, and their communities'. The most productive form of action research is one in which those who are involved have a responsibility for implementing the results of their learning (see Figure 3.1).

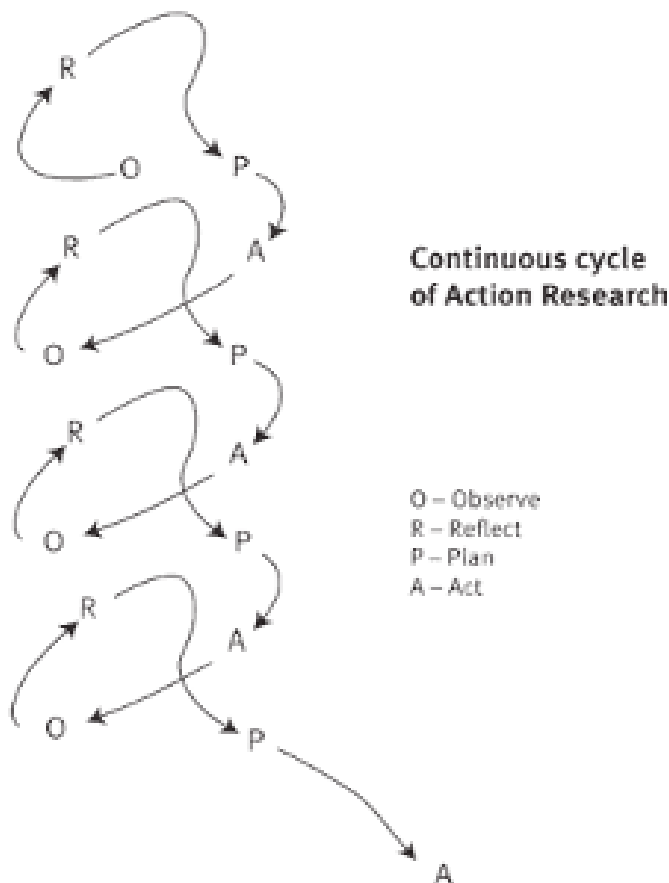


Figure 3.1: Continuous Cycle of Action Research (Brown et al., 2018, p. 40).

AR is often used in situations where there is a desire to improve local practice. It is seen as a useful and accepted method for systematically analysing situations, instigating change and providing professional development to address complex issues and ongoing problems.

There is a significant body of literature in relation to action research, but the following points are worth making in this necessarily brief account.

...Action research aims at changing three things: practitioners' practices, their understandings of their practices, and the conditions in which they practise...Action research is a critical and self-critical process aimed at animating these transformations through individual and collective self-transformation: transformation

of our practices, transformation of the way we understand our practices, and transformation of the conditions that enable and constrain our practice... (Kemmis, 2009, p. 463)

Ethical Considerations

In preparing to undertake this pilot project, we considered the young person's maturity to assess whether or not they have the capacity to consent to participate in the project. Equally we recognised, consistent with the *National Statement on Ethical Conduct in Human Research* (NHMRC 2007) that people with a cognitive impairment, an intellectual disability, or a mental illness are entitled to participate in research. That said, the purposive sample was restricted to those neurodiverse young people deemed by their support workers/stakeholders to have demonstrated capacity (to a greater or lesser extent) for participating in collaborative activities.

Our pilot project was centred on the relationship between key support stakeholders and the neurodiverse young people who participated in the pilot project. We utilised this relationship as a means for assessing their capacity to be (i) informed about the research and (ii) to provide informed consent. As regards their capacity to be informed about the research, because the support workers had ongoing relationships with the individual neurodiverse young people, and they were sensitive to their modes of communication and to what works for them, we worked with key support workers and young people in the milestone meetings to explain the project aims and methods to all participants. Regarding securing informed consent, we used the initial milestone meeting to assess whether the young people and their support workers wished to engage in the research project. To do this we used a Participant Information Sheet/Consent Form (PISCF) which incorporated a plain language statement (co-designed with the project officer and key support stakeholders familiar with the neurodiverse young people's communication needs and a neurodiverse young person).

The selection criteria were developed with our partner, HWLLEN to reflect their interests in maximising the impact of the project. HWLLEN assisted the researchers in selecting key support stakeholders that partner with neurodiverse young people and the communities in which they reside. We only included neurodiverse young people deemed by their key support stakeholder as appropriate to the aims and likely benefits of the pilot project. The key support workers/stakeholders involved with the HWLLEN made initial contact with the neurodiverse young people in face-to-face (phone or Zoom or other social media platforms) meetings and via text or email message to discuss young people's participation in the project. The research team screened the participants by working with the HWLLEN and the WYC SAG to identify neurodiverse young people in the community with particular needs that affect their capacity to make successful transitions from school into the world of work.