

School of Education

**BUILDING KNOWLEDGE, MAKING MEANING, AND
APPLYING UNDERSTANDING OF LEARNER
AGENCY IN A NEW ZEALAND PRIMARY SCHOOL**

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**This thesis is presented for the degree of
Doctor of Philosophy
of
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DECLARATION

To the best of my knowledge and belief this thesis contains no material previously published by any other person except where due acknowledgment has been made.

This thesis contains no material which has been accepted for the award of any other degree or diploma in any university.

Human Ethics

The research presented and reported in this thesis was conducted in accordance with the National Health and Medical Research Council National Statement on Ethical Conduct in Human Research (2007) – updated March 2014. The proposed research study received human research ethics approval from the Curtin University Human Research Ethics Committee (EC00262), Approval Number SMEC-23-12.

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ABSTRACT

This study investigates Learner Agency through building knowledge, making meaning and applying understanding of Learner Agency in a New Zealand primary school. It is a case study through critical participatory action research which shares a story through a narrative inquiry lens. It defines Learner Agency and discusses why Learner Agency is important. For measuring Learner Agency it was important to use a valid and reliable tool, however at the time there wasn't anything available that met the needs of the school. The school developed the Agency Self-perception Tool (ASpT) for this purpose which is shared as a part of this study.

In order to achieve this, six capabilities of Learner Agency were established; Self Aware, Assessment Capable, Collaboration, Resilience, Using Tools and Strategies and Taking Action.

Over 1000 Year 4 to Year 8 learners across four New Zealand primary schools completed the ASpT. These responses were used for validation purposes in this study. This provided quantitative insights where associations were able to be made with learners' perception of their agency and their gender, ethnicity, year level, achievement in Reading, Writing and Mathematics, school differences and language spoken at home.

Qualitative data was gathered through the use of six learner focus groups and one teacher focus group at a New Zealand Primary School. Learner focus groups were formed from each of the Year 4 - Year 8 learning hubs throughout the school. One teacher from each of those hubs formed a teacher focus group which comprised of six teachers. Findings from the focus groups supported informing what teaching and learning practices enable Learner Agency, what current practices exist and how capabilities of Learner Agency might be identified, and how evidence of the capabilities can be used to inform the learning design.

Learnings from the collaborative inquiry and this study posed opportunities to reconsider the Schools' graduate profile at the time, this led to rewriting vision essence statements, outcomes, understandings and this began to shape the schools' learning map which informs the schools' local curriculum. Other implications are shared for wider networks, the Ministry of Education, New Zealand schools, classes and hubs, and Local Curriculums.

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GLOSSARY

AfL	Assessment for Learning
ASpT	Agency Self-perception Tool
BEST	Being an Effective Stonefields Teacher
BoT	Board of Trustees
CLARA	Crick Learning for Resilient Agency
CTK	Critical to Know
CTL	Critical to Learn
DRL	Designing Real Learning
ELLI	Effective Lifelong Learning Inventory
EOTC	Education Outside the Classroom
ERO	Education Review Office
GAFE	Google Apps for Education
ICT	Information, Communications Technology
ILE	Innovative Learning Environment
ITL	Innovative Teaching and Learning
LFG	Learner Focus Group
MLE	Modern Learning Environment
NZ	New Zealand
NZC	New Zealand Curriculum
NZCER	New Zealand Council for Education Research
OTJ	Overall Teacher Judgement
PIL	Partners in Learning
PLD	Professional Learning and Development
SEL	Social Emotional Learning
SMEC	Science and Mathematics Education Centre
TFG	Teacher Focus Group
TLA	Teaching, Learning and Assessment
TLIF	Teacher Led Innovation Fund
VUCA	Volatility, Uncertainty, Complexity, Ambiguous

Chapter 1

INTRODUCTION

1.1 INTRODUCTION

The purpose of this study is to build knowledge, make meaning and apply understanding of Learner Agency in a New Zealand primary school. Learner Agency is a key element of this research and has been an ongoing inquiry for many New Zealand schools over the years. The notion of Learner Agency is deeply embedded in The New Zealand Curriculum (NZC) key competencies as “the capabilities that young people need for growing, working, and participating in their communities” (Charteris, 2015, p. 176). Developing and validating a tool to assess Learner Agency became an integral feature of this study to ensure teaching and learning practices that enable Learner Agency could be better understood, shared and deployed. This study defines Learner Agency as having ownership, making responsible choices, and taking meaningful action in the Learning Process.

The following sections in this chapter cover key information relating to this study which includes: the background and context of this thesis, rationale for this study, aim and research questions, significance, overview of methods, and an overview of the thesis.

1.2 BACKGROUND

This section aims to provide details about the origin of this thesis, the New Zealand education system, and its curriculum.

1.2.1 *Origin of this Thesis*

This study is an opportunity for me to further develop ideas that were raised in my Masters thesis ‘*An investigation into the effectiveness of an IT-based Learning Management System to support learning in a New Zealand School*’ (Benson, 2012). The pedagogy that supports teaching and learning has not changed as significantly as the introduction of new technologies over the 16 years that I have been teaching. New technologies have changed the way educators can implement the theoretical concept of teaching and learning practices. It is this relationship of change and the methods of change that have sustained my interest and curiosity as a teacher throughout my

career. I am passionate about student ownership, the choices they make and the meaningful actions they take in the teaching and Learning Process - these will be the aspect of Learner Agency that is inquired into for this study. Innovative and creative ways that teachers and students can work smarter to improve learning outcomes will be explored. While I believe technology is a powerful tool to enable this, this study focused more on pedagogy than technology which enables learners to have Agency. In writing this thesis the pedagogy of Learner Agency is still relative to education, whereas some technologies have become outdated or changed significantly in the duration of this study.

I am interested and motivated by new thinking and researched ideas that have an opportunity to impact positively on learning outcomes, raise achievement and solve the issues of equity in the New Zealand education system while being a lifelong learner myself. As a New Zealand qualified teacher, I have been very fortunate to be employed by Stonefields School since 2017. The school has been very supportive of me personally and of this study, encouraging the research and the academic rigor that has encompassed this work. The role as a participatory researcher has meant that my employment and involvement at the school has been instrumental. The benefits to this role have meant that I have been able to tell the story, make it relative for the context of the study, namely Stonefields School, and wider educational spheres. The school has embraced and taught me to be comfortable with challenges when forging new territory.

1.2.2 New Zealand Curriculum

“Curriculum is designed and interpreted in a three-stage process: as the national curriculum, the school curriculum, and the classroom curriculum” (MoE, 2007, p. 37). In recent years the phrase ‘local curriculum’ has been used in New Zealand. “Your local curriculum is the way you bring the New Zealand Curriculum to life in your school” (MoE, 2019c, p. 5). These curricula are each unpacked in the following three sections.

1.2.2.1 Ministry of Education and The National Curriculum

‘The Ministry of Education is the Government’s lead advisor on the education system, shaping direction for education agencies and providers and contributing to

the Government's goals for education' (MoE, 2016). The current New Zealand curriculum has been in place since 2007. A review was undertaken due to the immense social change that was taking place during 2000 through to 2002. Following the review of The New Zealand Curriculum: Draft for Consultation 2006 there were documents in the form of findings, commentary, reviews, critique, analysis, and reports (Doig, 2007). Feedback was sought from educational organisations and practitioners who submitted over 10,000 responses. These helped to shape New Zealand's current curriculum document.

'New Zealand has a world leading curriculum that sets out the vision, values, key competencies and learning areas for our New Zealand schools and students' (MoE, 2010a, p. 2). The New Zealand Curriculum is an official policy for teaching and learning in English-medium schools in years 1 - 13. Individual schools can use the document to provide direction and guidance for their own localised school curriculum. The New Zealand Curriculum Vision states they want young people "who will be confident, connected, actively involved, and lifelong learners" (MoE, 2007, p. 8). This approach is underpinned by a constructivist theory and associated with a pedagogic approach promoting active learning or Learner Agency which this study explores.

The curriculum document also outlines effective pedagogy and teaching approaches that have a positive impact on student learning. These are when teachers:

- 'create a supportive learning environment'
- 'encourage reflective thought and action'
- 'enhance the relevance of new learning'
- 'facilitate shared learning'
- 'make connections to prior learning and experience'
- 'provide sufficient opportunities to learn'
- 'inquire into the teaching-learning relationship'

(MOE, 2007, p. 34).

NZ has a Code of Responsibility and Standards for the teaching profession (Education Council, 2017), this further details 'what it is' and 'what it means' to be a NZ teacher. The high standards for ethical behaviour are unpacked in the code, and expectations of effective teaching practice are described in the standards.

1.2.2.2 Local Curriculum/ School Curriculum

‘Your local curriculum is the way that you bring The New Zealand Curriculum to life at your school.’ (Ministry of Education, n.d.). The national curriculum provides a framework for schools to work from to develop a more individualised pathway that suits the context of their school and community. Similarly, the school curriculum should provide considerable flexibility so that classroom curriculums can be designed and shaped to meet the needs of particular communities or groups of learners.

Schools can adopt, adapt, and approach ideas that support teaching and learning practises, making interpretations of the framework and implementing strategies that help to shape their ‘school charter’. A charter is a ‘living’ document which sets the direction for the school and identifies priorities, it is a key-planning document including strategic aims, most schools use a three year timeframe (MoE, 2021a). The school curriculum context of the selected school for this study, Stonefields School, is further discussed in section 1.4.6.

1.2.2.3 Classroom Curriculum

Within a classroom, teachers plan for individual learner needs and often meet these by teaching groups of learners with similar next steps and goals. Schools develop learning progressions and pathways particularly in the core curriculum areas: Reading, Writing, and Mathematics. Many schools have progressions developed or are recognising the need to develop progressions in competency based areas, these are often integral to a Graduate Profile. In 2018 government policy changed school assessment and reporting requirements and removed National Standards which were “broad descriptions of expected achievement derived from curriculum achievement objectives” (MoE, 2011, p. 2). This change is thought to better reflect that children learn in different ways and at a different pace to one another. Utilising progressions is a way for teachers to focus and differentiate their learning design in their classroom to better meet the needs of their learners. Schools have still been required to report to parents at least twice a year on their child’s progress and achievement.

Masters (ACER, 2018) talks about progressions as an attempt to map out a learning area, being more explicit and clarifying what we understand by progress, improvement, or growth in that area. He says that if what we are trying to do is develop deeper understanding, more knowledge, or better skills, then we must be able

to map it out, and that is a learning progression (ACER, 2018). Learning progressions are not designed to be an assessment tool or teaching programme but rather a reference point and provide a language of learning. As soon as learners start to develop literacy around their learning, they are able to start reflecting on their learning and gradually increase the Agency they have over the learning that they are involved in (Treadwell, 2018). Having a literacy that underpins the Learning Process allows the learner to express their learning and what it looks like as well as how they are progressing with it (Treadwell, 2018).

Conversations and reflections need to be explicitly taught and modelled to children using a vocabulary that describes their Learning Process. As learners develop competency and the capacity to talk about their learning, learners are developing their assessment capability concurrently. The Ministry of Education published an Assessment Position Paper (MoE, 2011) describing what the assessment landscape should look like promoting system wide improvement. ‘Effective assessment is a key component of quality teaching and essential for raising student achievement’ (MoE, 2011, p. 2). Key principles of the position paper include:

- The student is at the centre.
- The curriculum underpins assessment.
- Building assessment capability is crucial to achieving improvement.
- An assessment capable system is an accountable system.
- A range of evidence drawn from multiple sources potentially enables a more accurate response.
- Effective assessment is reliant on quality interactions and relationships.

(MoE, 2011, p. 17)

Teachers “use a mix of assessment tools and activities to inform professional judgments of ‘where a student is at’ and ‘what needs to happen next’” (MoE, 2011, p. 27). Teacher Judgements draw on a range of conversations, observations, tasks, and tools that give a rich and reliable picture of a student’s learning. Students should be actively involved in the assessment of their own learning. Therefore, the relationship and rapport between the teacher and student, and the students' Agency of their learning become paramount in the teaching and learning journey.

1.3 RATIONALE FOR THE STUDY

This study is designed to build knowledge, make meaning, and apply understanding of Learner Agency in a New Zealand primary school. To support and achieve this Stonefields Primary School in Auckland New Zealand sought to develop and validate a tool to assess Learner Agency and understand existing practice. The tool itself identifies and measures learners' perceptions in relation to six capabilities, in this study it is validated with Year Four to Year Eight learners.

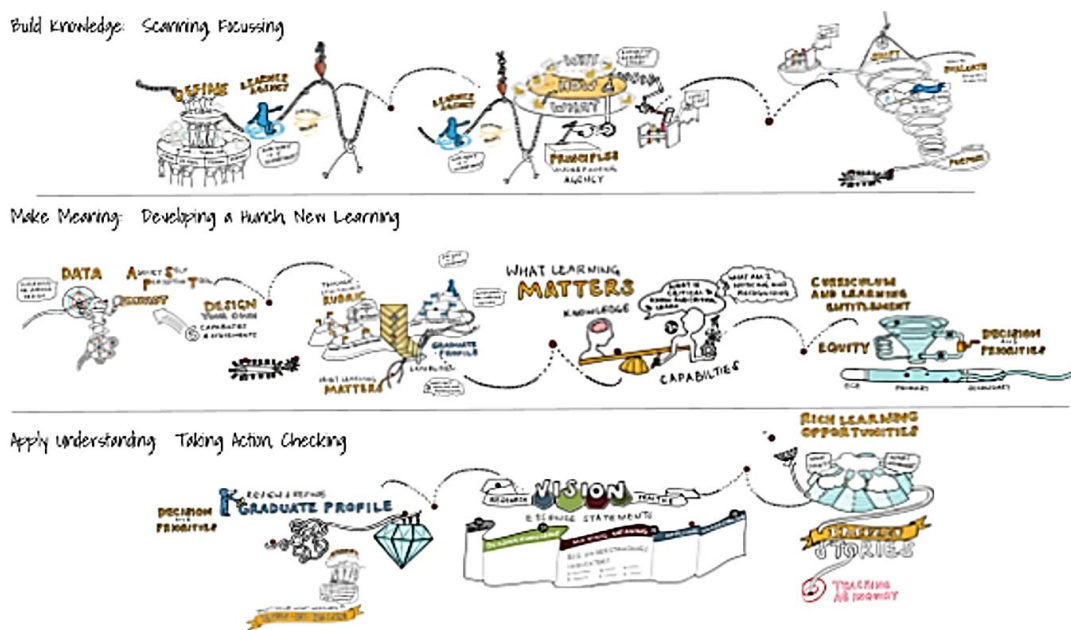


Figure 1.1
Diagrammatic representation of Study Design and Interpretation (adapted from School diagram presented in Figure 3.2, reprinted with permission - Appendix R)

Year Four to Year Eight learners were selected as respondents for this study as the Agency Self-perception Tool (ASpT) pertained preferably to learners of this age group who were able to read and interpret the tool independently. Initially this was done within Stonefields School, the tool was validated internally, then further refined and validated with Year Four to Year Eight learners across three other primary schools enabling there to be responses in excess of 1000. The three other schools remain anonymous in this study.

The notion of Learner Agency is deeply embedded in The New Zealand Curriculum through the key competencies. These competencies are described as capabilities that young people need for living and lifelong learning (MoE, 2007). Existing practice is shared in relation to the school's culture and teaching and learning

philosophy. In this study learner agency is defined as having ownership, making responsible choices, and taking meaningful action in the Learning Process. Agency Capabilities are able to be leveraged to exert agency over learning and are demonstrable things that learners are able to use, be, and do. Learning Design is planning for who, what, why, how, where, and when in relation to the learning - it takes into consideration the context for learning which can then determine if capabilities can be demonstrated or not. Teachers would ask; who needs this learning at this point in time, they would think through the learning organisation, environment and their teaching approach to best cause the learning.

The school initially trialled a questionnaire that was under-development to measure student agency by the New Zealand Council for Education Research (NZCER). The information available to teachers from the NZCER questionnaire was presented back in large cohorts of Year Level data across several schools, therefore teachers could not make sense of the data for their class or group of learners. Teachers wanted to use and cut the data to inform their learning design and be able to manipulate the data themselves, rather than being presented with combined data. This was not possible with the NZCER survey at that point in time for various reasons including ethical considerations of data ownership, therefore the ASpT was developed. The ASpT measures individual learner perceptions of their Agency in relation to six key capabilities that were identified. Teachers/ school leaders are able to cut and use the data to inform decision making. The six capabilities are Self Aware, Assessment Capable, Collaboration, Resilience, Using Tools and Strategies, and Take Action. The process of identifying the Agency capabilities are shared in section 2.2.4. After validation, shifts and comparisons against different cohorts, and correlations with achievement was implemented on a total of 1090 Year 4 - 8 learners, across four different primary schools. This “narrative, critical participatory action research” involves both quantitative data in the form of questionnaire responses (ASpT) and qualitative data of focus groups to triangulate findings.

A Doctorate of Philosophy at Curtin University enabled a more open interpretation for this study to evolve and was responsive to the inquiry unfolding. Personally, I have found that other study courses are very much prescribed in their outline and outcomes. I had previously been a student at Curtin University to undertake my Masters Thesis. This study is unique as it uses a methodology and data collection methods which document the lived story and inquiry of the researcher

(myself), colleagues and learners. This field and design is original and has not previously been used in a New Zealand primary school. The Ministry of Education offers study awards to New Zealand teachers, I was a successful recipient on two occasions where 32 school weeks of leave were awarded. In the first instance this was awarded in the early stages of the research, the second award was granted in 2021 to complete the study. This alludes that the MoE supported the design and area of study. Of note, the context and setting for the study changed significantly due to being presented with career opportunities post the first study leave.

I am employed by the MoE to work in primary education. Previously I had been based at a primary school in another city for 11 years and during that time completed my Masters Degree through SMEC (Science and Mathematics Education Centre) at Curtin University, Perth, Australia. The background and motivation for this study was to continue my own learning. My position in this research stemmed from a belief that technology is not the driver, pedagogy is. I felt that my Masters Degree became about the technology rather than the pedagogy which supports learning. Subsequently the tool is now outdated because of the technological advances, however the learning beliefs highlighted in the research about formative assessment, learners self reporting and assessment capability are still pertinent, and support the notion of Agency in this study.

Throughout the duration of this study, I have worked in learning hubs at Stonefields School, overseen a Teacher Led Innovation Fund as a Lead Teacher, worked as an Across School Teacher in a Community of Learning, facilitated professional learning development, and the school has contracted me to do work for an independent education consultancy company. The company specialises in providing professional development, strategic advice, and evaluation and research in the education sector. For this reason, I am considered in the context of this study to be local and connected. I am familiar with the communication, interactions, roles, settings and norms of the school environment. Personalities, characteristics, resources and pedagogical practises that influence and impact student learning are known to me.

This study was designed to validate a tool that was created by the school and implemented across four primary schools with over 1000 learner responses as a part of the quantitative data. The study was then designed to hone in on 6 focus groups of 6 learners across the Year 4 - 8 hubs in one of the schools (Stonefields Primary School). One teacher from each of the Year 4 - 8 hubs formed a Teacher Focus Group. The focus groups contributed to the qualitative findings in this research.

1.4 CONTEXT

This section introduces Stonefields School which is the primary context for this study. Stonefields School was identified early on as the focus for this study for several reasons. Firstly, the school is reputable for its forward thinking and effective teaching and learning practices, referenced by several publications and renowned experts in education (Martin & Bradbeer, 2016; Hattie, Masters & Birch, 2015; Stuart, Heckmann, Mattos & Buffam, 2018; Facchinetti, 2013; Imms & Mahat, 2020; Madden, Wilks, Maione, Loader & Robinson, 2012; De Witt, 2017; Hattie, 2019). Secondly, since the school opened its doors in 2011 there has been a high level of interest in people coming to visit from New Zealand and internationally to learn from the school and learn about its vision, beliefs, and approaches towards teaching and learning; this study will further enable learning from the school to be disseminated. Visitor demand continues to increase, and the school's reputation continues to strengthen as it networks and shares more widely with schools grappling with solving similar problems and doing the best for education and today's learners. Thirdly, the methodology is a Narrative Case Study through Critical Participatory Action Research. This meant that as an employee of the school, the methodology was further enabled and possible. This section introduces the collaborative culture of the school, the school vision, the school's Language of Learning, and establishment of the capabilities. An overview of the school charter, school curriculum, classroom contexts, and teacher effectiveness will also be shared.

1.4.1 *Stonefields Primary School Background*

Stonefields School offers education for children in years 0 – 8 and is classified as a full primary school. As learners enter education usually at five years old, they are categorised as a Year 0 or Year 1 student depending on when their birth date. Therefore, eight years of schooling takes place. Some primary schools educate learners through to Year 6 and then learners go to an intermediate school for Year 7 and Year 8. These primary schools are referred to as a contributing school and intermediate schools. Stonefields School is located in Stonefields which is at the base of Mount Wellington in Auckland City. Stonefields is a relatively new central-eastern suburb built in early 2000 in an old quarry, the ministry could see a need to future proof development; the school was one of the first buildings in the area. The region is a 12km drive from the central city of Auckland. Auckland is the largest urban area throughout New Zealand.

The Ministry of Education appointed the Stonefields School foundation board at the end of 2009. The Principal was appointed at the beginning of 2010 and continues in her role as current Principal. Stonefields School began student learning in February 2011. The school started with 48 learners and 10 teachers; the roll as at June 2021 was 675 learners. Roll growth of 1050 learners is expected in the next four to eight years. The roll often fluctuates at the beginning and end of a school year due to year level cohorts entering and leaving the school, therefore mid year is more reflective of the roll for the school year. Enrolment numbers in school based on the 1 July roll returns indicated that learner ethnicities at Stonefields School consisted of approximately 6% Māori, 19% Pacific, 37% Asian, 7% Other, and 46% European/Pakeha (Education Counts, 2021).

The school encourages their teachers to refer to students as learners. These two words are used interchangeably throughout the study, ‘students’ is often used when discussing literature, ‘learners’ is often used when discussing the school’s position, views or interpretations. Throughout this study the use of the word ‘we’ is used to reference the work of the Stonefields School Team as the work at Stonefields is ultimately underpinned by a Collaborative approach. As I have been an employee at the school while undertaking the research the term ‘we’ also acknowledges the input of fellow colleagues as co-researchers and participants. The word ‘we’ often refers to educators too, it is inclusive of me as the researcher and as an educator. Further information on this approach can be found in sections 3.5.3 and 3.8 where both Critical Participatory Action Research and data collection methods are discussed.

Stonefields School has a decile rating of nine. Deciles measure the socio-economic position of a school’s student community relative to other schools and are used to provide funding (MoE, 2021). Deciles range between one and ten; the lower the school’s decile, the more funding they receive.

Education Review Office (ERO) is “a government body charged with monitoring schools’ implementation of government policies and practices” (Bishop, 2019, p. 91). The school has a history of positive ERO reports with reports completed in 2012 and 2015. ERO reported that they would be likely to review again in four to five years. The school was supposed to be visited by ERO in the 2020 school year, however Covid-19 disrupted those plans. The school is under review during the completion of this thesis and ERO are currently shifting from event-based external review to supporting schools in processes of continuous improvement.

The school was built to function with innovative learning environments ensuring that learning is “social, open, engaging, and real” (Stonefields School n.d.). The innovative learning environment (ILE), often referred to as a modern learning environment (MLE), is made up of a series of learning hubs in larger open areas with smaller purposeful learning spaces with around 75 learners and three teachers in each hub working collaboratively. Collaboration is instrumental to the organisation’s success and “it is the most significant contributor to the school organisational culture” (Martin & Bradbeer, 2016, p. 49). The collaborative environment and learning philosophy were important decisions that were fostered and enabled early on to better leverage teacher strengths, be purposeful, and design learning to better meet the learner needs within particular cohorts. Teachers are encouraged to collaboratively teach and differentiate their learning design, a decision made early so that teachers wouldn’t default to working in a hub in isolation and have their ‘own class’.

Midyear of 2021 there were 40.5 teaching staff including leadership members on the payroll of which 35 are full time and 5.5 work in a part time capacity. There are four administrative roles and 18 support staff including teaching assistants/ teacher aides, caretaker etc. (M. Goldie, personal communication, July 16, 2021).

1.4.1.1 Culture, Collaboration & Values

Professional Learning in the school is largely focused on effective collaboration and culture. The culture is hugely impacted by an individual's capability and capacity to collaborate. The school believes the essence of effective collaboration and a healthy culture is the ability to have ‘hard to have’ conversations/ sense making conversations. Glaser (2016, p. xv) notes that the premise of conversational intelligence, “to get to the next level of greatness depends on the quality of our culture, which depends on the quality of our relationships, which depends on the quality of our conversations. Everything happens through conversations!”

Stonefields School invests in teachers being able to collaborate and converse about teaching and learning. This is often in the form of professional learning time, hub release, and coaching that is often additionally funded by the Board of Trustees. Valuing the time to have conversations is key to cause learning for all stakeholders and is a part of how the school operates. True collaboration at Stonefields means that there is collective efficacy, responsibility, and a shared purpose to improve. There

are also enabling conditions and social sensitivity to enable a team to be synergetic. Hub teams function well with the right emphasis and support on time, efficiency, and systems. They are also strength based and embrace innovation and opportunities. These hubs are often referred to as hubs that ‘hum’. Central to a humming hub is for individuals to be Self Aware and have a growth mindset, essentially be a learner themselves, demonstrating trust, openness, and the ability to sense make.

Stonefields approach highlighted key points towards creating collaborative effectiveness:

- For teachers shifting into innovative learning environments the time spent developing an understanding of effective collaboration and what is important to work on together, is time well spent.
- Developing a collective understanding of what we are aiming for in “synergetic” teams helps to identify areas for team and individual growth.
- Building teacher capacity to manage conflict is an important focus for ongoing teacher professional learning and supports teachers to address issues that arise (Martin & Bradbeer, 2016, p. 48).

Values are an integral part of any culture. “Simon Sinek makes the point that when the things you say and the things you do (actions) are aligned with what you actually believe (values), a thriving culture emerges” (CORE Education, 2020, p. 20). This report (CORE Education, 2020) notes that the culture of an educational organisation is the product of not only the actions and values, but also the beliefs, perceptions, relationships, attitudes, and written and unwritten rules that shape and influence every aspect of how it functions.

The school has three values for its community (whanau/ family, learners, leaders & staff). These are: Being my best self - Kia pai rawa atu au, bringing our best together - Te whakakotahi I nga mea papai katoa and breaking ground - Kia auaha. The community values are an important part of everyone's DNA, they work in harmony with the vision to create the culture and conditions for learning. These values strengthen people’s character, collaborative efficacy, and reflect who individuals are, and what they stand for together and alone.

Culture and collaboration are important in the context of this study as it has provided the conditions for innovation and collaborative inquiry to thrive.

1.4.1.2 Teacher Led Innovation Fund

It is important to highlight that the school had been a part of a Teacher Led Innovation Fund for two years prior to the focus group conversations. Teacher Led Innovation Projects are an opportunity for a small team of teachers to systematically investigate, develop, and implement new learning and teaching practices to raise the level of effective teaching across the system. The title of that project was ‘Developing Learner Agency through collaborative inquiry into innovative learning design’. As a part of this project the school worked closely with Doctor Rosemary Hipkins in the initial phase of the project. Early in the project the team were encouraged to take the time to unpack a shared understanding of what Learner Agency is and why it is important. The school teaching staff worked collaboratively on Teacher Only Days at the beginning of the 2018 school year to come up with a shared understanding and definition. Each hub team wrote a statement saying what Learner Agency is, why it is important and then proceeded to write ‘If we..., Then we...’ statements. These were designed to drill deeper into their practice and give practical examples of what Agency could or would look like in their hubs, essentially taking theory into practice. The school definition of Agency is currently ‘Agency is the power and capacity to affect change in my world’. The definition purposefully had large scope as it was discussed that the unpacking of the definition is important.

The Teacher Led Innovation Fund is important to note in the context of this study as it was a collaborative inquiry and the focus aligned with the aim and research questions as presented in this study.

1.4.2 Stonefields School Vision

Stonefields School Vision reflects the school context, location, and environment. When conceptualising the vision for teaching and learning values, key competencies, curriculum, and the NZC principles were all referred to.

Stonefields School Vision has four vision principles depicted as rocks represented in Figure 1.2 (there is an intentionality around the rocks relating to how the foundations of the school are built in an old quarry). The vision principles are:

- Building Learning Capacity
- Collaborating
- Making Meaning
- Breaking Through



Figure 1.2

Stonefields School Vision © Stonefields School (reprinted with permission - Appendix R). Our Vision. 2020. The Stonefields Collaborative www.sct.nz

Each of these rocks relates to knowing and stretching ourselves as learners. Relating, participating, and valuing diversity. Making contributions. Using tools, strategies, skills, and knowledge to break codes, understand, and take action. Also striving to achieve success and happiness in learning and in life. While this is not a simple process or undertaking, we have simplified this to be what teaching and learning means for ‘me’ (myself) > ‘we’ (myself and others) > ‘it’ (what is needed) and > ‘transfer’ (transfer of the learning).

The Vision has four essence statements saying what each rock is and the learner outcomes. Each outcome is aligned with Agency capabilities that are presented in this study. These are presented in Table 1.1 below.

Table 1.1

Vision Essence Statements and Learner Outcomes

Vision Essence Statement	Learner Outcomes
<p>Building learning capacity is about growing the foundation knowledge, dispositions, and attributes that are essential for further learning. It includes developing a strong sense of identity and actively strengthening personal hauora (health, wellbeing). Learners with a high degree of learning capacity are resourceful and use the Learner Qualities to get out of the Learning Pit.</p>	<ul style="list-style-type: none"> • know how and when to use the Learner Qualities and other strategies when I am stuck in the pit (Using Tools and Strategies) (Resilience) • reflect on my learning to continuously improve (Assessment Capable) • grow a broad and deep knowledge base through a range of rich learning opportunities (Assessment Capable) (Self Aware) (Collaboration) • understand the importance of and am actively improving my hauora (physical, spiritual, family, mental and emotional wellbeing) (Self Aware) (Resilience) • am Self Aware and Assessment Capable (Assessment Capable) • give and receive constructive feedback. (Collaboration) (Resilience) (Assessment Capable)

Vision Essence Statement	Learner Outcomes
<p>Collaborating is about knowing and using social skills and values to contribute in a range of collaborative activities and build positive relationships. To collaborate, we need to know when and how to seek other people’s ideas and skills. We need the ability to empathise and consider different perspectives in order to achieve a greater outcome.</p>	<ul style="list-style-type: none"> ● use a range of social skills to be an effective collaborator, including: (Collaboration) <ul style="list-style-type: none"> ○ turn taking ○ active listening ○ compromising ○ resolving conflict. (Resilience) ● seek out, engage with, and empathise with other people’s ideas and a diverse range of perspectives (Collaboration) ● relate well with others and am a good friend. (Collaboration)
<p>Making meaning involves using the Learning Process flexibly to think deeply about the world in which we live. The Learning Process is used across all learning to make decisions, engage in design thinking, and solve complex problems. Through these activities, understandings are deepened, connections are made, and the transfer of learning is enabled.</p>	<ul style="list-style-type: none"> ● know and use the Learning Process phases (Building Knowledge, Making Meaning, and Apply Understanding) and flexibly use a range of thinking skills for a given purpose, such as: <ul style="list-style-type: none"> ○ investigating ○ problem solving ○ design thinking ○ decision making ○ evaluating impact (Using Tools & Strategies) (Take Action) ● think deeply, critically, and creatively about increasingly complex ideas and consider multiple perspectives (Using Tools and Strategies) ● make connections and make sense of the world through my unique worldview. (Self Aware)
<p>‘Breaking through’ is about what happens when learners use their power and personal capabilities to take positive action in their own lives, in the communities they belong to, and in the world beyond. It involves taking the time to explore, discover, and pursue personal and group interests, passions, and strengths. When we break through, we are being agentic as learners and as citizens.</p>	<ul style="list-style-type: none"> ● lead, manage, and stretch my learning to realise my potential (Assessment Capable) (Using Tools and Strategies) (Collaboration) (Resilience) (Take Action) ● recognise and use my passions and strengths (Take Action) (Self Aware) ● demonstrate the positive impact I have made or to which I have contributed (Take Action)

Essence Statements and Learner Outcomes. © Stonefields School (reprinted with permission - Appendix R)

Stonefields School Vision is unpacked through pedagogy/ teacher practice and for learners in the Learning Map, some schools refer to this as a Graduate Learner Profile. The school had a Graduate Profile in place from inception through until 2019. During 2019 - 2020 the Graduate Profile was reviewed, refined, and redeveloped into the school’s current Learning Map. The school chose to change the terminology that was used as Learning Map was ‘friendlier’ language for learners to understand and associate with; also, a graduate profile alludes to an end in mind once a learner has

graduated, whereas the purpose of the school's document is to provide a pathway and progressions throughout their learning journey. This study uses the school's language, Learning Map. The school leverages the potential of emerging affordances such as space, digital tools, and collaboration to better enable its Vision in practice. This is further explained in section 1.3.5 where the school curriculum and classroom contexts are explained in relation to the progressions, the SchoolTalk platform, signature practices, devices, and innovative learning environments.

1.4.3 Stonefields School's Language of Learning

A Language of Learning was conceptualised by Stonefields School early on, also known in the school as high leverage practices, it encompasses three tools and/or strategies for learning:

- The Learning Pit
- The Learning Process
- The Learner Qualities

Signature Practices are another way of thinking about a language of learning. Signature practices are activities, events, programs, actions, or protocols nested inside bigger structures or processes that unfold over time. (Learner-Centered Initiatives, 2013). In this instance the Pit, Process, and Qualities are the school's signature practices. They are consistent and coherent across the organisation and things that you can say hand-on-heart are embedded in every class or hub throughout the school.

It is important for learners who are working in ILE's and working with different teachers throughout the day to experience a similar language of learning. This ensures that they are able to access the right language and articulate their learning to their peers and teachers. The Learning Pit, Process, and Qualities are seen as learning strategies that teachers and learners can engage with.

Table 1.2 is taken from Hattie's 2018 updated list of influences and effect sizes relating to learner achievement (Visible Learning, 2020). This indicates that self efficacy, self reported grades, and strategy to integrate with prior knowledge (learning strategies) have effect sizes of 0.92, 1.33, and 0.93. Knowing that a typical effect size of 0.4 equates to a year's gain for a year's input, anything above 0.4 is significant. The influences and domains presented in the table below relate to the notions of Agency, Assessment Capability and a Language of Learning that are discussed as a part of this study.

Table 1.2
Adaptation of Hattie's Effect Sizes and Related Influences

Influence	Sub Domain	Domain	Effect Size
Self Efficacy	Beliefs, Attitudes, Dispositions	Student	0.92
Self Reported Grades	Prior Knowledge & Background	Student	1.33
Strategy to integrate with prior knowledge	Learning Strategies	Teaching: Focus on student learning strategies	0.93

Tools and Strategies is one of the Agency Capabilities in the Agency Self-perception Tool (ASpT) as discussed in section 2.3.5. At Stonefields School the high leverage practices; the Learning Pit, the Learning Process, and the Learner Qualities are considered to be tools and strategies learners use to support them in their learning, therefore are directly linked to the context of this study.

Leadbeater (2022) highlights that it is easy to agree in principle that learning should develop a powerful sense of agency although it is much harder to do that in practice. In conjunction with The Agency Lab, Leadbeater and a group of schools explored how to make agency central to their ethos and their work, starting in 2019 and through the disruptions of COVID, ten lessons were shared; one of which is creating a strong connection between philosophy, product and practice cultivates agency. This thesis shares about the learning philosophy that runs through the school, the framework of beliefs and values about why learning matters, centred on the kind of experiences we want young people to have, the capabilities and character traits we want to develop. Leadbeater (2022) cautions that ‘a philosophy on its own can be lofty, vague and abstract’ (p. 6). To make it make it tangible and practically useful, one way is for schools to develop tangible products that students and teachers can use to make it real: a method for learner self-assessment is an example and is what the ASpT has set out to do, while ‘the philosophy (shared in Section 1.4) and the products (the ASpT) that promote agency can be thought of as the ‘explicit’ knowledge needed to promote it. Section 7.4.1 shares how indicators which could be thought of as explicit knowledge have been translated into the school's Learning Map/Local Curriculum.

Leadbeater (2022) notes that schools can start at any point of the philosophy, product and practice triangle but need to engage with the other two elements. It is clear in this thesis that the learning philosophy was well embedded within Stonefields

School. While practices were evident across the school, the Agency capabilities further enhanced clarity about practice, and out of which arose the product namely the ASpT.

1.4.3.1 The Learning Pit

The use of the Learning Pit (Figure 1.3) develops learners' and teachers' capability to be 'comfortable being uncomfortable in their learning'. Not knowing and making mistakes are celebrated at Stonefields School. We do not leave getting out of stuck situations to chance. The school's shared language of learning is intentionally taught to provide learners with strategies to use, 'on what to do, when they don't know what to do'.

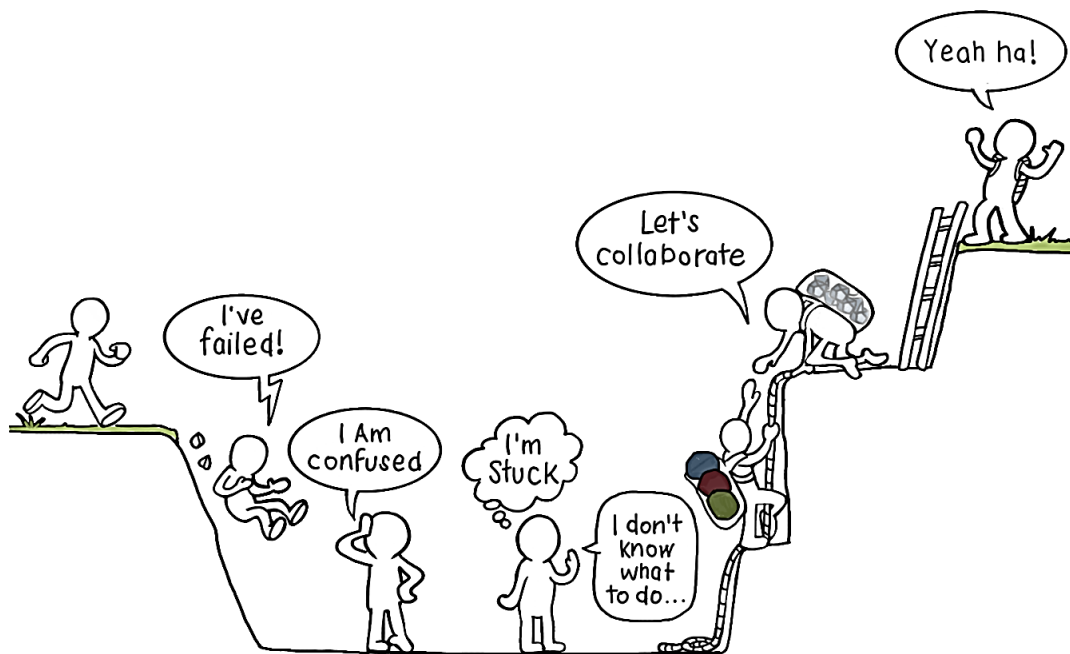


Figure 1.3

The Stonefields School Learning Pit © Stonefields School (reprinted with permission - Appendix R). Learning Pit. 2020. The Stonefields Collaborative www.sct.nz

1.4.3.2 The Learning Process

Our Learning Process is key to learning design. The goal being, to cognitively engage and challenge learners beyond building knowledge. The Learning Process has three stages which are also illustrated as rocks, building knowledge, making meaning, and applying understanding as seen in Figure 1.4. Each stage has verbs that underpin each of these rocks which help teachers purposefully design their learning. The Learning Process is built on solo's taxonomy of thinking. Learners use this

process to inquire, solve problems, investigate, design, think, and make informed decisions across all learning areas. As one learner shared “it’s not a linear cycle - it’s quite unpredictable depending on the learning task” (Stonefields Learner, personal communication, n.d.a). Stonefields School believes learners should work just as hard if not harder than the teachers. To do this, it requires transferring the locus of control to the learners, the Learning Process is key for this transfer, enabling learners to know where to start and it gives them an order for their learning.

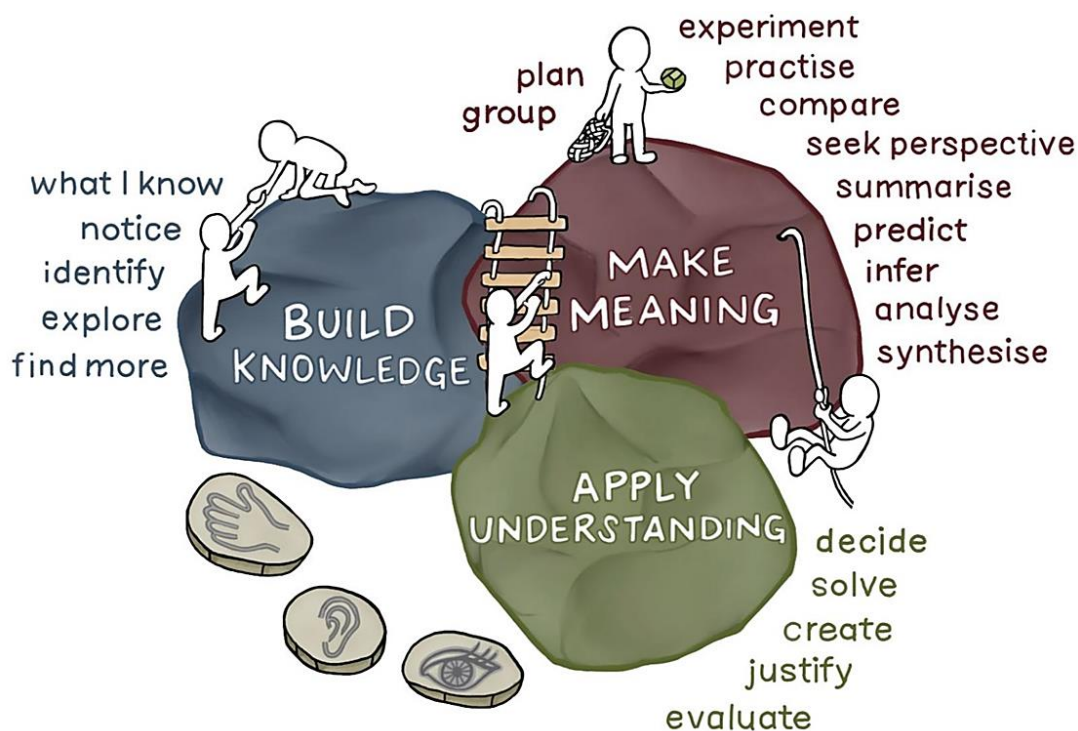


Figure 1.4
*The Stonefields School Learning Process © Stonefields School (reprinted with permission).
 Learning Process. 2020. The Stonefields Collaborative www.sct.nz*

1.4.3.3 The Learner Qualities

The Learner Qualities are seen as dispositions that learners apply as a learning strategy in particular learning situations, especially those situations when they are in the Learning Pit. They help to support and grow resilience in learners at the school. At Stonefields, we have 7 Learner Qualities. These are presented in Figure 1.5, they are ‘be determined’, ‘be self aware’, ‘connect’, ‘question’, ‘think’, ‘reflect’, and ‘wonder’. The use of the Learner Qualities helps to provide consistency across the school, when prompting feedback and when reporting to parents and communicating to the school community.



Figure 1.5

The Stonefields School Learner Qualities © Stonefields School (reprinted with permission - Appendix R). Learner Qualities. 2020. The Stonefields Collaborative www.sct.nz

Establishing the Capabilities

Stonefields School took time to define what Learner Agency is and understand why it was important as discussed in section 1.4.1.2. The school's definition is broad; 'Agency is the power and capacity to affect change in my world', it was understood by the staff that how the definition was unpacked was important. It is worthy to note that the school's definition or scope of Agency differs from this definition presented or adopted in this study 'Learner Agency is having ownership, making responsible choices, and taking meaningful action in the Learning Process'. This study supports the school's broad view of Agency, in particular the reference to 'their world'. This implies there is a transfer of learning to other contexts beyond themselves, 'their world' for a five year old as compared to a Year 8 learner would be quite different and acknowledges the different developmental stages of learners.

The school identified principles which they believed underpinned Learner Agency with the support of the wider community. It was thought that if schools were to focus on any of the following principles it would lead to an increase in Agency. These could be thought of as strategies in how the school might shift Learner Agency;

they were progressions, growing comfort in VUCA (volatility, uncertainty, complexity, and ambiguity), language of learning, collaboration, student ownership, and engagement (learning design and teacher effectiveness). The school then went on to document what practice would look like if the principle was evident in the learning hubs. Following this the question was posed, ‘if this practice is happening in and across the learning hubs, what capabilities would we expect to see improve for these learners?’ Table 1.3 below gives a brief idea of some of the principles and evidence of practice that were discussed by Stonefields School. This process was underpinned by the thinking of Dr. Julia Atkin (1996) ‘From values and beliefs about learning to principles and practice’ (Figure 1.6) and Simon Sinek’s Golden Circles (2009) illustrated in Figure 1.7.

Table 1.3

Stonefields School Examples of Principles, Evidence of Practice and Capabilities (Draft)

Principles	Evidence of Practice	Capability
Progressions	Knowing How I am going - Progressions	Assessment Capable
Growing comfort in VUCA	Being comfortable being uncomfortable Drawing from tools and strategies to know what to do when I don't know what to do	Resilient
Language of Learning	Learning Pit, Learner Qualities, Learning Process, The Big 5	Using Tools & Strategies
Collaborative	Knowing how to collaborate and share perspectives	Collaboration
Student Ownership	Being Self Aware about what makes me tick, what I am and aren't so good at.	Self Aware
Engagement - Design & Teacher Effectiveness	Being motivated to further my learning and development Assessment for Learning (AfL) practice	Take Action

(reprinted with permission - Appendix R)

Literature supporting the capabilities as presented in the right hand column of Table 1.3 is presented in section 2.3.

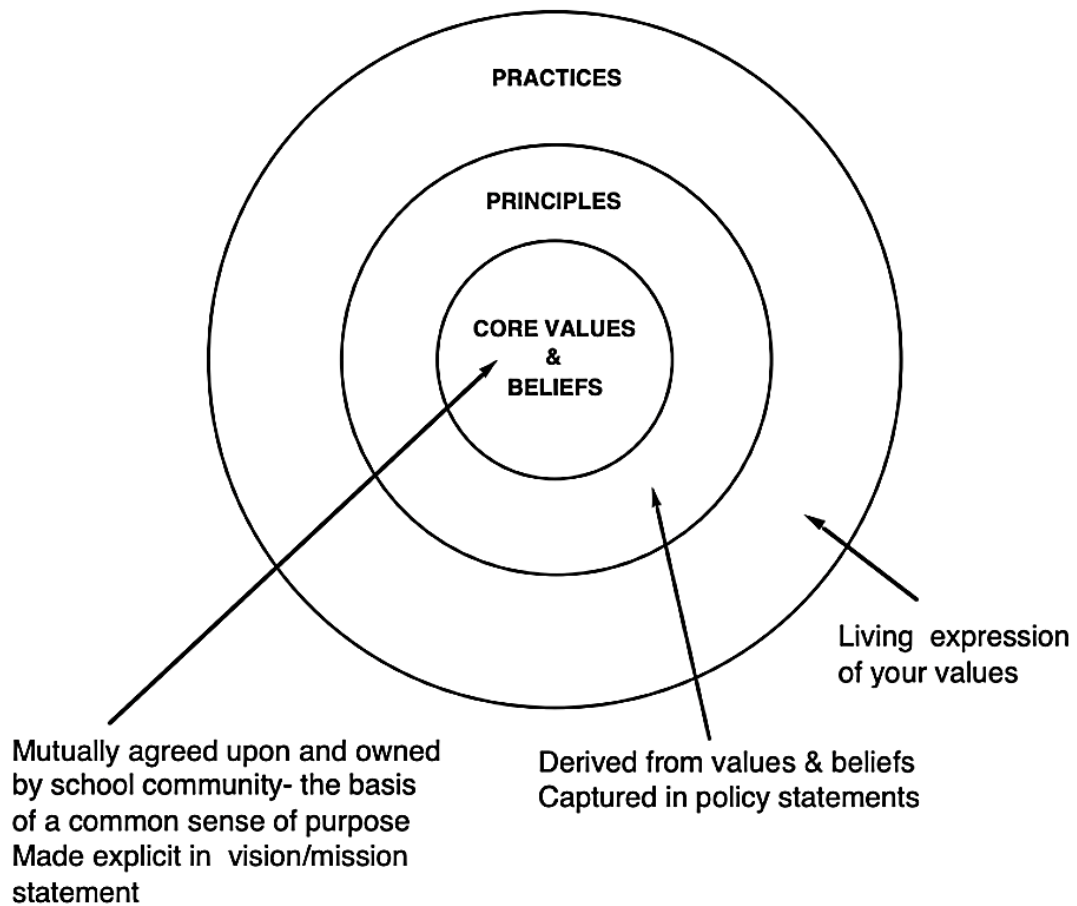


Figure 1.6

From values and beliefs about learning to principles and practice (Atkin, 1996, p. 4)

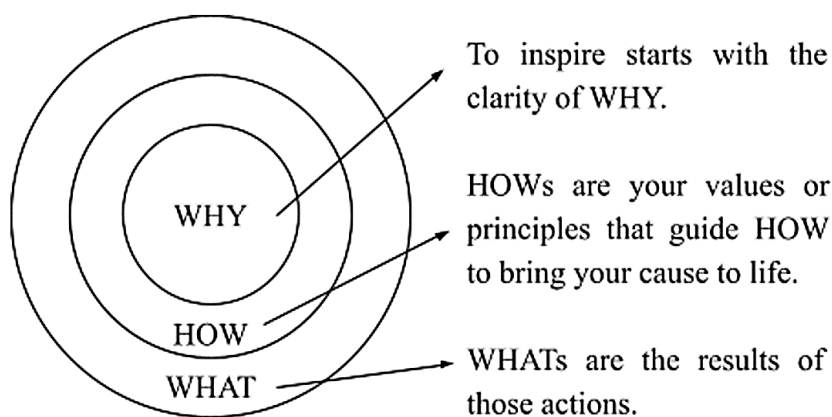


Figure 1.7

Golden Circles, Start With Why (Sinek, 2009)

1.4.4 School Charter

A School Charter sets out the direction for the school and identifies priority areas. It is considered to be a key planning document for the school. The strategic section looks at a 3 -5 year forecast which reflects the goals and aspirations for the school. The annual section identifies targets and planned actions and outlines how the school is implementing the priority areas (MoE, n.d.a).

The Stonefields School Charter has evolved since 2017. While each year there has been 3-4 strategic goals, Table 1.4 shows the strategic goals from 2017 - 2021 and how they align with Agency.

Table 1.4
The School Charter Strategy Goals Aligning to Agency 2017 - 2021

Year	Stonefields School Charter/ Strategy Goal
2017	Growing MY Effectiveness: Growing coaching capacity Growing practice for impact Designing real learning that matters (graduate profile) Vision Lived in practice all of the time Respectful learners
2018	Growing Our Effectiveness: Enable learners to have Agency over their learning, ensuring they have ‘power to act’ both individually and collaboratively with purpose, initiative and resilience, particularly for Māori and other priority learners. <ul style="list-style-type: none"> • Agency to Learn • Design, Differentiate for Diversity (Designing real learning - Learning Process, progressions, Teaching cycle - focus on Māori learners) • Evaluate Impact Growing practice for and reflecting on impact (Driving my learning)
2019	Designing Real Learning: Build teacher capacity to design rich opportunities for learning that increase Learner Agency and progress.
2020	Growing Our Effectiveness (50%) Create a framework to support and grow teacher capability to design Rich Opportunities for learning that increase Learner Agency. Organising for learning in an ILE to increase opportunities for learners to increase their Agency.
2021	Business as Usual Ensure all teachers (particularly new to Stonefields School) use the high leverage practices to intentionally build Agency in learners. Growing BEST and TLA Practice that has Impact To increase teacher capability to consistently design high quality (rich) opportunities for learning that are engaging, relevant (CTK/ CTL), integrated, and impactful.

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It is important to note that the goals within the school strategy and how they have evolved has been strategically organic. Throughout 2017 - 2021 there has always been a focus on designing real learning or designing rich opportunities for learning. Agency is a key outcome of rich and real learning design. The Stonefields School Learning Map unpacks the school vision and outcomes as presented in Table 1.1. It is a key document when teachers are designing rich, real learning opportunities, this is discussed further in section 2.4.5 in the Literature Chapter and in the Concluding Chapter in section 7.4.1.

In 2017 the school was successful in applying for a Teacher Led Innovation Fund (TLIF) as discussed in section 1.4.1.2. Robyn Baker chaired the Teacher-led Innovation Fund (TLIF) selection and monitoring panels between 2015 - 2018, she commented “collaborative inquiry means the team works together to systematically critique and evaluate their innovation to determine what practices work and why, and in what contexts” (Ministry of Education, 2019a). In 2018 an Agency team with key leads was implemented in the school and grew each subsequent year. The school charter was responsive to the work of this team and project, therefore the focus within the strategy goal became clearer and more emphasised on Agency and Designing Real Learning during the duration of the TLIF project.

1.4.5 School Curriculum/ Classroom Context

1.4.5.1 Progressions/ Learning Map

Each vision principle has outcomes which have been developed and presented in Table 1.1. Each outcome is further unpacked into Big Understandings and indicators which contribute to the school’s Learning Map. These are similar to learning progressions, they are considered daily by teachers when they design learning, by learners when they talk about what they are learning, and in conversations with parents about their child’s progress. Prior to the completion of the Learning Map which took several years to review and develop the school had a Graduate Profile in place, therefore teachers had been aware of the Learning Maps’ purpose and intended use.

Stonefields School learning progressions have been developed and utilised to support Assessment for Learning (AfL) and have informed learning design since 2011 particularly for Reading, Writing, and Mathematics. These learning progressions are the expected developmental learning outcomes, which enable learners to make

incremental progress steps in all aspects of learning. The Learning Map (progressions) maps learning and progress at Stonefields School. Over the years, Agency has been said to be the outcome of the Graduate Profile which was further developed into the current Learning Map.

Teachers have trialled, used, implemented, and innovated around new ways of using the progressions to inform their learning design. Moving from time consuming paper versions of the progressions to cumbersome, hyperlinked google sheets was still not efficient or cohesive for teachers, nor did it allow clarity or interactions with content by learners or visibility for parents. Those systems were not built for purpose, they did not disseminate and apply usable knowledge; they were just a best attempt at a point in time. The requirement for transforming teacher efficiencies and enabling Agency in this space became very evident. A SchoolTalk platform was developed, this is further discussed in section 1.4.6.2.

Progressions and the Learning Map are connected to Agency and this study. Both enable learners to have ownership of their learning and better understand their learning journey and needs. Progressions and Local Curriculum are further discussed in sections 2.4.5 and 2.4.7.

1.4.5.2 SchoolTalk

Our school, in partnership with local community, collaborated to better engage with effective pedagogical practices. The process has grown organically and continues to evolve and be refined from feedback around what is working and the actual experiences of the users (learners, parents, teachers, school leaders). ‘SchoolTalk is a platform, which helps schools implement Learner Agency and creates efficiency for teachers, learners, and parents’ (Ilyana Limited, 2016). We were mindful that technology is not the driver, pedagogy is. The pedagogy underpinning the development and design for this digital platform is: “For our learners to know how they are going, where they are going, and what their next steps are, and importantly to create teacher efficiency and being able to check off learners’ progressions and achievement” (SchoolTalk, 2017, 1:00).

This has been achieved through tracking each learner’s next steps and making explicit links to supporting resources, fostering student ownership of their learning.

Teachers are able to synthesise across all learners in a hub, their gaps, next steps, and design real learning to meet their needs and passions. This is some of the SchoolTalk features/ functionality, others include:

- Personalised Learning Calendars
- Visible Progressions
- Visible Learning Design
- Access to resources/ evidence
- Gap Analysis
- Flexible Grouping
- Transparent Practice
- Community and Parent Engagement
- Reporting on achievement and progress
- Teacher Effectiveness through Teaching as Inquiry and Appraisal

Hood & Mayo (2018) highlight that improvement efforts on the interactions between teacher, students, and content in the classroom are important to achieve meaningful and sustained change in student outcomes. Through the implementation of SchoolTalk there has been more clarity and scaffolding of the interactions with content (ie. calendars, progressions, resources, modelling books/ teacher planning). Similarly, to the school's language of learning, learners have a consistent experience of how they access their learning progressions and learning design/ calendar within each hub or when working with different teachers in ILE's.

One of the four purposes of SchoolTalk is to develop student agency. Learners having access to their calendar, learning design, and progressions all support learners to have agency and therefore support this study.

1.4.5.3 Innovative Learning Environments (ILE's)

In a technical report which defined key concepts for innovative learning environments and teacher change; an ILE was defined as “the product of innovative space designs and innovative teaching and learning practices. Only when these two phenomena are successfully merged do we produce an innovative learning environment” (Mahat et al., 2018, p. 8).

At Stonefields School the spaces have been purposefully designed and built - many schools in New Zealand are currently trying to modify existing single-cell

classrooms to enable more flexible use of space. Innovative teaching and learning practices focus on what will have the best possible learner outcomes and develop student's learning 'skills' through deep learning. Deep learning for Stonefields School refers to designing real learning (DRL) and Rich Learning Opportunities. Rich opportunities to learn increases the breadth, depth, and complexity of the learning experiences for learners as they progress along their learning pathways (Ministry of Education, n.d.). Deep learning is achieved when students actively engage in critical learning; characterised by: critically applying new facts to existing knowledge, searching for (as opposed to accepting) meaning, being actively curious about new knowledge, and accepting that learning is a part of their personal development (Mahat et al., 2018). The notion of an innovative learning environment as expressed in this section is fundamental to Learner Agency.

1.4.5.4 Devices/ ICT/ Technology

“Schools should explore not only how ICT can supplement traditional ways of teaching but also how it can open up new and different ways of learning” (MOE, 2007, p. 36). This has been largely taken into consideration at Stonefields School and how learners engage and interact with devices and technology.

Stonefields School is fortunate to have a ratio of 1:1 device per learner. In the younger years iPads are primarily used while Chromebooks are used for older learners. There are other devices and technologies available throughout the school such as robots, electronics kits, and Apple Mac desktop computers. Learners use their devices to access learning - this is often navigating their way to and through their learning via the SchoolTalk platform. SchoolTalk provides the flexibility to differentiate instruction and learners are able to access the right learning at the right point of time for their learning needs and next steps. Google Apps for Education (GAFE) are used by both teachers and learners to enable greater collaboration. These notions of access and collaboration have clear reference to learner agency.

Learners' ability and desire to self regulate their learning was a clear outcome of the COVID-19 pandemic (Bourke et al., 2021; Moore & Anderson 2020), providing an opportune time to exemplify the power, potential and possibilities of leveraging devices, ICT, and technology. Fullan (2021) highlights that the pandemic phenomenon itself may serve to accelerate solutions and be the catalyst needed to leap forward as

developments in technology are accelerated because of the pandemic. COVID-19 helped people learn about the potential of technology and how it can accelerate learning when put to good use. It has helped teachers in major ways, reducing some burden, and in doing things more efficiently and effectively (Fullan, 2021). During COVID-19 lockdown in New Zealand learners described technologies as enabling them to collaborate and gain feedback on their learning; learners wanted teachers and leaders to integrate learning that had been achieved with online platforms into their learning programmes upon returning to school (Bourke et al., 2021; Moore & Anderson 2020).

“Technology utilisation and adoption in education undeniably helps teachers and learners in the teaching and Learning Process” (Mustapha et al., 2020, para.1). It is clear that there are advantages to online processes, it empowers differentiated instruction (Patrick et al., 2013), shifts the role of the teacher (Martinez et al., 2016; OWP/ P Architects et al., 2010), and allows for greater collaborative learning opportunities (Wright, 2010). These advantages have strong connections to Learner Agency.

1.4.5.5 Being an Effective Stonefields Teacher (BEST)

Teacher pedagogy and practice at Stonefields School is unpacked through the lens of a Professional Growth Cycle known as the BEST Model (Being an Effective Stonefields Teacher). The BEST Model enables our teachers to implement our vision to practice. For learners, the vision to practice is what learners know, do, and be like in relation to the Learning Map and teachers use the Learning Map to inform their learning design.

The pieces that come together to form the school’s Professional Growth Cycle through growing practice and inquiry in action are Te tiriti o Waitangi, Professional Learning, Professional Relationships, Learning Focussed Culture, Design for Learning, and the Teaching, Learning and Assessment (TLA) Cycle. These are unpacked to further reference how they relate to the NZ teaching standards which were discussed in section 1.2.2.1. Further detail is provided through the use of rubrics for teachers to reflect and assess the quality of their practice which are framed by the pieces mentioned above. Being an effective Stonefields Teacher ensures teachers are carefully considering the design for learning and how learners are enabled to be agentic.

1.5 AIM, RESEARCH QUESTIONS AND OVERVIEW

1.5.1 *Aim*

The aim of this study is to research a primary school approach in how to build knowledge, make meaning, and apply understanding in the context of Learner Agency. This will be accomplished by:

Building Knowledge:

- Finding out what is the existing practice and what are emerging ideas in the area of Learner Agency
- Identifying current trends in Learner Agency
- Scanning what is happening in schools in relation to Why, How, and What with Learner Agency

Making Meaning:

- Comparing what is happening in schools to identify capabilities of Learner Agency in terms of age, gender, achievement, and ethnicity
- Triangulating quantitative data with qualitative data to give an in depth understanding of Learner Agency by diving deeper into focus groups of learners
- Validating an ASpT which measures shift in student perceptions of their Agency

Applying Understanding

- Using the data as evidence to inform teaching recommendations
- Reflecting on how this data/ evidence can be used to focus, cause, and facilitate learning

Research questions were designed and answered to achieve this.

1.5.2 *Research Questions*

Answering the following research questions achieve the aims of this study.

- What teaching and learning practices enable Learner Agency?
- What current practices exist and how might capabilities of Learner Agency be identified?
- How can evidence of the capabilities be used to inform learning design?

In many aspects of education there are practices which are considered to be a right or wrong driver, enable or hinder, bolster or dampen learning. The first question is designed to explicitly highlight if there are particular teaching and learning practices that enable Learner Agency.

The second question notes that previous practice needs to be considered and regarded. What has come before most certainly shapes new thinking and our current practice. It is important that we apply lessons of the past to the trends of the future, some trends have come and gone while others have stood the test of time. (Apex Learning, & Getting Smart, 2016). Capabilities of Agency are identified in light of current and previous practices and consequently highlight how to enable Learner Agency.

Recommendations and findings are shared in light of the qualitative and quantitative data through the lens of the identified capabilities and existing practice. Teachers are able to use these to inform their learning design. This is the intention of the third research question.

1.5.3 *Research Design Overview*

This research is a narrative case study through critical participatory action research which shares a story through a narrative inquiry lens. The Spiral of Inquiry framework (Halbert & Kaser, 2013; Timperley et al., 2014) is used to tell the narrative of the action research, and these are aligned to the Stonefields School Learning Process as presented in Table 3.1. Multiple cases are used for quantitative data collection while a single case design is used for qualitative data. A collaborative process was used to shape the narrative as the research developed with teachers and learners; as the researcher I was a critical participant in the process, employed at the school enabling me to speak a shared language.

1.6 SIGNIFICANCE

The study is significant for two reasons. Firstly, it seeks to provide new information about how to measure shifts in Learner Agency, particularly regarding learners' perceptions through validating a tool. This study uses pre-gathered data sets from four primary schools with over 1000 learner responses in Years 4 - 8. It is hoped that the results of this study contributes to the body of knowledge around assessment incorporating student voice in New Zealand, in particular relating to Learner Agency.

Agency is linked to the concept of assessment capability and learners being able to make ‘what next’ decisions in their learning. The concept of assessment capability is presented in the existing MoE Position Paper on Assessment (MoE, 2011). It states that “assessment capable students are more likely to take ownership of their learning and become independent learners and that they are able to make ‘what next?’ decisions” (MoE, 2011, p. 25). ‘What next’ decisions are strongly linked with instructional scaffolding which is discussed further in section 2.4.2.

A second outcome from this study is the hope that it has implications for teaching practice by presenting the quantitative and qualitative data from learners. The findings highlight correlations that can be made between learners' self-perception of their Agency with Overall Teacher Judgements in Reading, Writing, and Mathematics, Ethnicity, Gender, Year Levels and English as a first or second language.

Assessment tasks are often overwhelmingly decided by teachers and administrators and not for the very students for whom the benefits are for (Hattie & Gan, as cited in Mayer & Alexander, 2011; Waldrup et al., 2008). This study focuses on listening to student voice, their perceptions, and exploring their ideas about Learner Agency.

Leadbeater (2022) notes that to develop agency, students and teachers need reliable ways of recognising and developing it, showing it in action to employers and collaborators and that is why many schools are exploring new approaches to assessment. This study explores a new approach to assessment in NZ primary schools. Having conducted a strong, varied literature review to date, there are no other studies that have been undertaken in NZ that have looked at Learner Agency with the variables presented in this study within a primary context. Currently there is no other validated tool in New Zealand to assess learners’ perception of their Agency. These are unique features of this study.

1.7 OVERVIEW OF THESIS

The structure of this thesis consists of seven chapters and 18 appendices. Chapter 1 provides background to this study in relation to the context of New Zealand and the selected school/ site for data collection. The study’s rationale, aim, and research questions, significance, and overview of the thesis are presented within Chapter 1.

Chapter 2, the Literature Review presents the supporting literature in relation to this study. The rationale for shared understandings and a close look at the definitions of Learner Agency are presented. As this research identifies enablers and measures six capabilities of learners' perceptions of their Agency, literature around enablers of Agency, and each of the capabilities is unpacked.

The Methodology is presented in Chapter 3. It starts with the research title and significance of the study, research questions, and the research design which includes the research methods and framework. Information on the participants, triangulation, data collection, and analysis are also included in Chapter 3; followed by the assumptions and ethical considerations.

Chapters 4 and 5 present the findings of this study. Chapter 4 presents the analysis and discussion of the Quantitative Data, validity and reliability of the ASpT is presented, and correlations are explored. Qualitative Data is presented in Chapter 5, learner focus groups and the teacher focus group responses are outlined and presented using the research questions to structure the findings.

Answering the research questions are presented as major findings in Chapter 6. Discussions with supporting literature are also included.

Chapter 7 outlines the conclusions of this research. It presents recommendations for teachers to consider who are wanting to enable Learner Agency in their learning design. It addresses the implications and limitations for this research. It provides suggestions for further research and final comments are made.

1.8 CONCLUSION

This chapter has focussed on introducing this study; the context, rationale, aim, research questions, significance, and overview of the study are presented. Chapter 2 looks to explore literature that will support the understanding of Learner Agency as presented in this study, the Learner Agency capabilities, enablers of Agency, and Learning Environment background.

Chapter 2

LITERATURE REVIEW

2.1 INTRODUCTION

The previous chapter introduced this study, providing background and context, the rationale, aim and research questions, significance, and an overview of the methods and the thesis. In this chapter the literature relating to this study and particularly to Learner Agency is reviewed and presented. The literature review is based on the theoretical framework of the study; it starts by looking at shared understandings, background, and definitions of Learner Agency. Supporting theories of Agency and unpacking the capabilities that are used as a part of the Agency Self-perception Tool that has been validated as a part of this study are included in this section. Enablers of Agency are explored which have arisen from Qualitative findings. Further information regarding Learning Environment history and instruments which includes competency framework information is included.

2.2 AGENCY/ LEARNER AGENCY

2.2.1 *Agency Background*

“Agency refers to acts done intentionally” (Bandura, 2001, p. 6). Enabling people to play a part in their self-development, adaptation, and self-renewal with changing times are core features of Agency; it embodies the endowments, belief systems, self-regulatory capabilities, and distributed structures and functions through which personal influence is exercised (Bandura 2001). Bandura notes that a prime player in the human coevolution process is exercising agentic capabilities (Bandura, 2001). In section 2.2.3 efficacy is linked as a key theme of Learner Agency. A belief in oneself is at the heart of Bandura’s efficacy definition. “Efficacy beliefs are the foundation of human Agency” (Bandura, 2001, p. 10). People’s beliefs in their capability to exercise some measure of control over their own functioning and over environmental events are among the mechanisms of personal Agency (Bandura, 1997).

Albert Bandura’s contributions to education are insurmountable and his research to the construct of self efficacy is widely referenced (Bandura, 1997; Bandura 2001; Biglan, 1987; Sherer et al., 1982; Weinberg et al., 1979). Self-

efficacy is one's own conviction of successfully executing the behaviour required to produce the outcomes; it can be influenced by a person's choice of activities and behavioural settings and their coping efforts can be affected (Bandura, 1977a). The effort and persistence people show are dependent and determined by efficacy expectations. Appropriate skills and adequate incentives along with self efficacy are determinants of behaviour (Bandura, 1977a).

2.2.2 Defining Agency

Agency is defined by Murray (1997, p. 126) as “the power to take meaningful action and to see the results of our decisions and choices”. Agency has also been referred to as a power, capacity to act, or capability to make choices and act on these in learning (21st Century Learning Reference Group [21st CLRG], 2014; Martin, 2004). Agency has been said to incorporate both intention and action, be an enabler of success at school and an outcome of schooling (The Education Hub, 2020). Having Agency means having control over outcomes that affect you; having voice and choice on levels of standards/ lessons and some control over the learning; and having opportunities to exercise choice in how to engage with core concepts and demonstrate core competencies (Le, Wolfe, & Steinberg, 2014; Patrick et al., 2013; Taylor, 2016). It is becoming a default expectation to have agency as a learner (21st Century Learning Reference Group, 2014).

Agency can be thought of as pieces which make up an essential whole, requiring resilience, tenacity and grit; relating to mindset; and an interrelated web of student motivation, engagement, and voice (Carr, 2008; Ferguson et al., 2015; Rector-Aranda, & Raider-Roth, 2015; Vogt, 2016). Deeper interpretations of Agency suggest a sense of responsibility “to participate in the world and, in so doing, to influence people, events, and circumstances for the better” (Howells, 2018, p. 4) or a form of autonomy that “carries with it a conviction of moral responsibility” (Greene, 1978a, p. 248). “The emphasis on ‘responsible’ is important” (Hannon & Peterson, 2021, p. 169). Stonefields School’s definition references this deeper interpretation defining Agency as the power and capacity to affect change in ‘my’ world. In this study, **Learner Agency is having ownership, making responsible choices, and taking meaningful action in the Learning Process.**

Hannon & Peterson (2021) say that we need to move beyond engagement and highlight the importance of distinguishing between weaker notions of agency such as ‘voice and choice’ (which undoubtedly leads to improved engagement). These notions leave out the transfer from teacher to learner, control and ownership which are conveyed as ‘ownership’ and ‘making responsible choices’ as presented in the definition for this study. Furthermore the propensity to action which agency confers is distinguishable through ‘taking meaningful action in the Learning Process’ (Hannon & Peterson, 2021).

Three key concepts from Emirbayer and Mische’s (1998) definition of Agency include actors, contexts, and actions. This study's definition considers the learner as the actor, the context is encapsulated in the Learning Process and learners are required to take meaningful action. There are parallels with their definition and an ecological learning environment. Processes and sets of contexts, relationships, and interactions that provide opportunities and resources for learning, development and achievement all make up an individual’s learning ecology which is fundamental to the agency which is exerted by a learner (Jackson, 2013).

An ecological learning environment identifies key ideas that can be loosely connected to Lewin’s (1936, as cited in Koul et al., 2011) theory (discussed in section 2.5) in that people and the places/ environment have an important impact on learning and education.

An ecological learning environment can assist learners to seek greater value from their learning experiences. The fundamental ingredients are people, places and ideas connected through a loose combination of planned design and random chance to produce the conditions needed for inspiring creative thinking and innovation (Quinton & Houghton, 2006, p. 519).

These understandings of learning ecology draw on ideas which resonate with Learner Agency as compared to a more limiting definition as presented by Siemens (2007) as “the space in which learning occurs” (p. 63).

The Learner Agency definition in this study does not directly reference relationships, which differs from how Deakin Crick & Goldspink (2014) characterise Agency “by choice making in learning; generating new knowledge; taking

responsibility for learning and engaging in learning relationships” (p. 11). However, relationships are identified in this study as an enabler of Agency in section 2.4.4.

Bandura (1989) argued that people can only exert Agency over internal goal setting and reasoned that people do not have the all-powerful control to ensure their goals will succeed. This formulation implies that Agency is instructionally relevant only to the extent that educators can help students establish beliefs in their self-efficacy (Schwartz & Okita, 2004). This definition supports the ideas presented in this thesis in that teachers have the ability to influence the learning ecology and the learning environment in turn influencing the learner’s exertion of Agency.

Learners as active agents in their own learning have roots in constructivist theory. Knowledge is accumulated through associations and understood through schema that is acquired and adapted by learners during their lives, understanding is unique to an individual, recognising the *umwelten* of learners. There are also roots in social constructivism, where the role of others can support an individual learner to achieve their next steps, which implies collaboration is at play and is one of the agentic capabilities highlighted in section 2.3.3 (Hannon et al., 2011; Koudstaal & Pugh, 2006). The role of others includes teachers, peers, and/ or parents; peers through collaborative tasks and seeking help from friends as identified by learners in section 5.2.1.2; parents and teachers by helping to inspire, enable, and focus both a sense of Agency and expression of Agency through the opportunities, instruction, and guidance they provide (Ferguson et al., 2015). Teachers’ roles can also include improving practice and giving space for students’ active Agency and ownership (Lehtonen, 2015).

Despite many available researched definitions of Learner Agency as shared in this section, it is questionable about how these translate back into the education sector. Section 1.4.1.2 shares the importance of building a shared definition of Learner Agency within Stonefields School (the research site which has grounded this thesis). This process ensured the understanding of learner Agency delved deeper into what it means to be Agentic as compared to common interpretations relating to “student voice” and “student choice”, which frequently simulate Learner Agency, but does not build it (Anderson, 2021). ‘Not having a clear definition has led to many well-intended, but ultimately shallow and ineffective interpretations’ (Anderson, 2021, p. 3).

2.2.3 *Shared understandings of Learner Agency*

As a society, as we deepen our understanding of Learner Agency the more we understand how we want school to be and how we want the learning within those schools to be (Absolum, 2006). Varied definitions and associated words of Learner Agency can inhibit shared clarity around what it is and why it is important therefore defining Agency is important as presented in the previous section [2.2.2]; equally it is a key step to restoring balance between standardised assessments and local capabilities (Hannon & Peterson, 2021). This section seeks to give clarity to a shared understanding of Learner Agency. Learner Agency is sometimes referred to as student agency, this study uses the term Learner Agency as it encapsulates the idea that everyone is a learner at various points in time and may not necessarily be a student. Equally the term Agency is often used interchangeably with the intentional meaning of Learner Agency as it is referring to a learner or person who may exercise, execute, or exert Agency on or over their learning, task, and/ or activity.

Learner Agency, learning how to learn, and changing teacher assumptions has the potential to transform current educational systems, structures, and practices which have previously been identified as not sufficient for learners of the 21st century (Bull, 2009). Learner Agency in this study can be thought of as a nodal point. Nodal points work as a privileged reference point (or signifier) attempting to bring together different discourses and partially fix meaning (Laclau & Mouffe, 1985, as cited in Mannion et al., 2011). Nodal points can serve as a place of arrival of several different strands of thinking and pedagogical practice. In this study and literature review Learner Agency sets out to allow diverse meanings to converge while subordinating other meanings (Mannion et al., 2011).

There has been a growing interest in Learner Agency and it has been a central theme to educational research (Arnold & Clarke, 2014; Lehtonen, 2015). Learner Agency has been linked to nine key themes of (i) personalised learning (Patrick et al., 2013), (ii) student centeredness (Andrade et al., 2012; Apex Learning & Getting Smart, 2016), (iii) efficacy (Bandura, 1997; Hallgarten et al., 2002; Reid & Fisher, 2010), (iv) motivation (Lindgren & McDaniel, 2012), (v) voice (Cook-Sather, 2020; Hattie, 2015; Toshalis & Nakkula, 2012), (vi) autonomy (Paris & Lung, 2008; Stroet et al., 2015), (vii) blended learning (Patrick et al., 2013; Patrick & Sturgis, 2015),

(viii) self regulation (Meyer & Turner, 2002; Wiliam, 2011) and (ix) ownership (Ministry of Education [MoE], 2011). However, Vogt (2016) notes that Learner Agency is more complex than what is captured in a collection of related terms.

Various types of Agency have been explored to better understand, distinguish, and clarify what it means in different contexts. Some include direct personal Agency, proxy Agency and collective Agency (Bandura 2001); Rhizomatic Agency (Chareteris, 2014); Productive Agency (Schwartz & Okita, 2004); Agency through transformation and change, Agency as membership and Agency as resistance (Rainio, 2008); passive, responsive and initiative Agency (Rainio, 2008); existential Agency, pragmatic Agency and life-course Agency (Hitlin & Elder, as cited in Ferguson et al., 2015). Learner Agency has been explored in this section to enable a shared understanding.

2.2.4 *Learner Agency in the New Zealand context*

Apex Learning and Getting Smart (2016) highlights the importance of past lessons informing future trends so that powerful learning experiences are created for all. There have been a variety of trends which have been designed to push learning forward in effective and efficient ways; some have come and gone, and others have stood the test of time. For the past 15 years CORE Education (2020) have identified trends and influences that they anticipate will have a growing impact on learners and education in NZ into the future. Not only have they noticed and monitored patterns that have emerged, they have identified and commented on a range of areas that are indications of a system response to the structural changes that need to be addressed. An increased focus across all this has been shifting the orientation of learning to the learner and activating Learner Agency (CORE, 2020). In Table 2.1 conditions of Learner Agency are presented which is CORE Education's research from within New Zealand. I was involved in composing the Research Report, identifying the conditions and developing resources for CORE Education (CORE Education, n.d; CORE Education, n.d.a; CORE Education, n.d.c.).

Key research undertaken in New Zealand in relation to Learner Agency include Charteris (2014) and Nelson (2014). Charteris' (2014); research strives to address the under-theorised notion of Learner Agency, where Nelson's thesis (2014) looked to promote student voice within classroom-based pedagogical and curriculum decision-

making. As student voice is about Agency and is a key aspect of Agency (Charteris & Smardon, 2019; Toshalis and Nakkula, 2012) it firmly places this thesis as key literature. Charteris contends that Agency is at the heart of the New Zealand Curriculum and its discourse is contextualised in the NZC key competencies (Charteris, 2014; Charteris & Smardon, 2019). Treadwell (2018) notes; learners who have Agency over their learning journey require the ability to reflect on their learning, actions, attitudes, values, motivations, and thinking; the ability to be metacognitive and reflect on our thinking is at the core of the competencies. The New Zealand Curriculum identifies key competencies for learners to live, learn, work, and contribute as active members of their communities which draw on knowledge, attitudes, and values in ways that lead to action (MoE, 2007).

Hipkins has led research of the key competencies and school curriculum in New Zealand for many years (Absolum et al., 2009; Cowie et al., 2009; Hipkins 2006; Hipkins et al., 2009; Hipkins & Twist, 2009; Hipkins, 2014; Hipkins et al., 2014; Hipkins 2017; McDowall & Hipkins, 2018; Wylie et al., 2009). During 2010 - 2014 a series of research projects began to apply the term ‘capabilities’ to conversations about the role key competencies should play in the curriculum. The term ‘capabilities’ captured the shift of anticipating what learners might be able to do with their learning when looking out to wider community contexts and to imagined futures. During 2012 - 2018 the specificity of what each child ‘needs to be capable of’ became consolidated in further research yet was widely unfamiliar to practitioners (McDowall & Hipkins, 2018). Competencies and capabilities are further discussed in section 2.2.6. This study identifies Agency capabilities which are captured and discussed in section 2.3.

2.2.5 Constructs of Agency/ Learner Agency

Presented in Table 2.1 below are different areas of research including conditions, principles, domains, implications, expressions, emotions, motivations, mindsets, building blocks, approaches, components, levels or aspects to Agency. This study presents capabilities of Agency in section 2.3 and enablers of Agency in section 2.4.

Table 2.1

Eleven Constructs of Agency/ Learner Agency

Ten Conditions of Learner Agency

A literature scan and a series of conversations with students and teachers from three NZ schools identified ten conditions that help shift the ownership of learning, foster agentic learners, and enable Learner Agency to develop and thrive. It is acknowledged that each condition is open to personal interpretation and may change in any given context or educational climate. These ten conditions are:

- Learners at the centre of all learning experiences
- Relationships and partnerships
- Cultural responsiveness
- Leadership
- Teaching as inquiry
- Curriculum and pedagogy
- Assessment for learning
- Assessment Capability
- Technology
- Innovative learning environments

(CORE Education, n.d.)

The 7 Principles of Learning

This project explored the nature of learning through perspectives such as cognition, emotion and biology and discussed implications for different types of application in learning environments. While this research didn't directly reference the word Agency, the thinking aligns to this study in that redefining critical skills and abilities for 21st century learning includes key shifts of self directed, lifelong learning with 21st century competencies.

The research synthesis identified seven 'principles' to guide learning environment development for the 21st century. They are:

- Learners are at the centre - The learning environment recognises the learners as its core participants, encourages their active engagement and develops in them an understanding of their own activity as learners.
- The social nature of learning - The learning environment is founded on the social nature of learning and actively encourages well-organised cooperative learning.
- Emotions are integral to learning -The learning professionals within the learning environment are highly attuned to the learners' motivations and the key role of emotions in achievement.
- Recognising individual differences - The learning environment is acutely sensitive to the individual differences among the learners in it, including their prior knowledge.
- Stretching all students - The learning environment devises programmes that demand hard work and challenge from all but without excessive overload.
- Assessment for learning - The learning environment operates with clarity of expectations using assessment strategies consistent with these expectations, there is a strong emphasis on formative feedback to support learning.
- Building horizontal connections - The learning environment strongly promotes "horizontal connectedness" across areas of knowledge and subjects as well as to the community and wider world.

(Dumont et al., 2010, pp. 6-7)

Six key domains pivotal in developing Learner Agency

Treadwell notes that there is a particular implementation sequence. Identity is the key competence/ domain to be established, other domains follow sequentially. Interactions with people, places and experiences can shape these for us and they continue to develop over our lifetime. Contexts that are increasingly wide-ranging and of varying complexity are important so that learners are challenged and develop in these key domains/ competencies.

There are six key domains that are pivotal in developing Learner Agency. These are:

- Creating a sense of personal identity
- Thinking and questioning strategies
- The ability to manage self thoughtfully
- The capability to collaborate effectively
- Being able to connect new knowledge and understanding to existing knowledge and understanding via reflective practice
- Building a Language of Learning.

(Treadwell, 2018)

Implications for Teaching Across the 7Cs to Develop Agency

- Care: Be attentive and sensitive, but don't coddle.
- Confer: Encourage and respect students' perspectives, but don't waste class time with idle chatter.
- Captivate: Make lessons stimulating and relevant while knowing that some students may hide their interest.
- Clarify: - Clear up Confusion - Lucid Explanations - Instructive Feedback - Take regular steps to detect and respond to confusion, but don't just tell students the answers.
- Consolidate: Regularly summarize lessons to help consolidate learning.
- Challenge: - Require Rigor - Require Persistence - Anticipate some resistance but persist.
- Classroom Management: Achieve respectful, orderly, and on task student behavior by using clarity, captivation, and challenge instead of coercion.

(Ferguson et al., 2015, p. 11)

Student Expressions of Agency

This report examines how the 7C's (as above) predict behaviours that express Agency. Most of these are associated with classroom engagement. It is likely each has implications for how students express Agency in other settings and not just the surveyed class for this report.

Behavioral expressions of Agency, include the following:

Students who have Agency express -

- Punctuality—The student tries hard to arrive at class on time.
- Good Conduct—The student is cooperative, respectful, and on task.
- Effort—The student pushes themselves to do their best quality work.
- Help Seeking—The student is not shy about asking for help when needed.
- Conscientiousness—The student is developing a commitment to produce quality work.

Disengagement Behaviors (that are the opposite of Agency)

- Faking Effort—The student pretends to be trying hard when they actually are not.
- Generally Not Trying—The student is generally disengaged, exerting little effort.
- Giving Up if Work is Hard.
- The student fails to persist in the face of difficulty.
- Avoiding Help—The student does not ask for help even when they know they need it.

(Ferguson et al., p. 5)

Emotions, Motivations, and Mindsets Associated with Agency

The emotions, motivations, and mindsets that support Agency were explored. This study was interested in the degree to which teaching affects the learning and the changes in self-perceptions of conscientiousness in particular. Indices representing emotions, motivations, and mindsets that may awaken and support the growth of Agency include:

- Happiness—The student regards the classroom as a happy place to be.
- Anger—The student experiences feelings of anger in class (which may boost or dampen Agency).
- Mastery Orientation—The student is committed to mastering lessons in the class.
- Sense of Efficacy—The student believes they can be successful in the class.
- Satisfaction—The student is satisfied with what they have achieved in the class.
- Growth Mindset—The student is learning to believe they can get smarter.
- Future Orientation—The student is becoming more focused on future aspirations (e.g., college).
- The report grounds these concepts in the research literature and embeds them in organizing frameworks.

(Ferguson et al., 2015, p. 6)

The building blocks of Agency

“While Agency is complex, it comprises several core components, all of which can be developed and supported by teachers in the classroom” (p. 1).

- Self-efficacy: Confidence in one’s abilities
- Self Awareness: Thoughtful identification of one’s values and priorities
- Self-regulation: The ability to direct one’s efforts towards specific goals
- Individual variation

(The Education Hub, 2019)

Four Components of Agency

“Four components are essential to students becoming agents of change” (p. 5-6).

1. First, they should be purposeful
2. Second, students should become reflective through learning by doing and in action
3. Third, students need to make an investment in pursuing their purpose
4. Fourth, students need to learn to take responsibility for their actions

(Leadbeater, 2017)

Levels of agency:

“Students need to experience a sense of agency at three levels: individual; the team; and the collective: it is about individuals making their contribution to a shared effort with other people” (p. 7).

- Individual
- Collaborative
- Collective

(Leadbeater, 2017)

Aspects of Agency:

“Students should learn to develop this sense of agency across four aspects of life, which are often in tension and which need to be resolved if students are to feel a rounded sense of agency” (p. 8)

- Moral Agency - doing the right thing
- Creative Agency - bringing the new into being
- Economic agency - creating value with and for others
- Political Agency - capable committed citizens

(Leadbeater, 2017)

Approaches as key areas of implementation to strengthen Student Voice, Agency and Leadership

100 school leaders from across five school networks in Victoria in Australia worked together known as The Amplify Learning Labs initiative. From the analysis of their work, seven interrelated and mutually reinforcing approaches emerged as key areas of implementation:

- student voice/ action teams
- student feedback
- curriculum co-design
- co-design of instructional approaches
- co-design of behaviour norms
- metacognition and self-regulation
- applied learning

(Hannon & Peterson, 2021, p. 180)

2.2.6 Competencies and Capability

The New Zealand Curriculum (MoE, 2007) starts with a vision that young people will develop the competencies they need for study, work, lifelong learning, and realise their potential. Agency, as opposed to Learner Agency, is referred to as a ‘potential’ that can be realised through education, rather than a fixed quality or separate ability (Lash & Belfiore, 2015; Schwartz & Okita, n.d.). Effective teaching and learning capabilities are identified by Absolum (2006) as: building a learner focused relationship, clarity about what is to be learnt, assessment for learning, promoting further learning, active reflection, and clarity about next learning steps. It can be ascertained that competent learners are those that exhibit these teaching and learning capabilities along with making responsible choices, taking meaningful action, and having ownership in the Learning Process and that it is through the curriculum that this is enabled.

Research suggests that within specific competencies there is a need to develop Agency and that competence is the union of capability and Agency (Lash & Belfiore, 2015). Figure 2.1 below illustrates that Agency is a deep and durable self in charge of one’s learning and development and capability is the knowledge and understanding to use it in real life situations; in union they lead to competence (Calkins, 2016).

Competence in any pursuit is the union of capability and agency

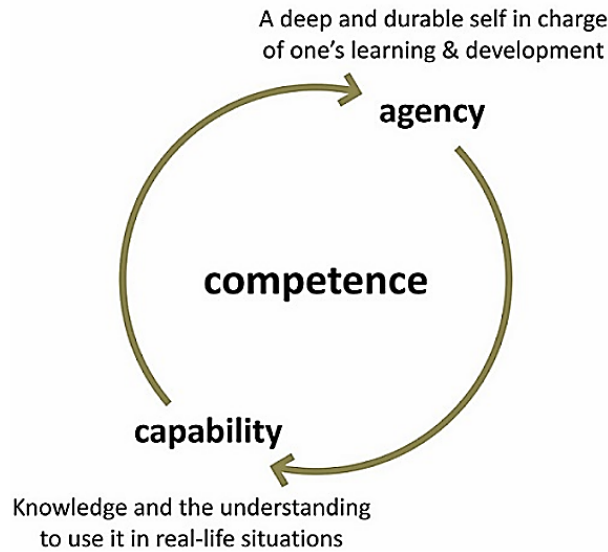


Figure 2.1

Capability and Agency interpretation (Calkins, 2016) (reproduced under CC BY License).

Many factors can influence capabilities, the role of contexts, can determine whether or not capabilities can be demonstrated. Ethical and political frameworks can enable or constrain ways of being and doing. Also, epistemic reasoning, thinking that determines whose knowledge 'counts' (Sen, A., as cited in Hipkins, 2014). In a classroom setting these ideas couldn't be more prevalent. The ten conditions of Agency (CORE n.d.) are some examples of things that can influence Agency, they were presented in Table 2.1. Epistemic reasoning could also be linked with Idiosyncratic Rater Effect, simply this means that one person is not necessarily a reliable rating of another person. Reasons for this can be that people don't have the objectivity to hold in their head a stable definition of an abstract quality, then accurately evaluate someone else on it. Our own evaluations are deeply coloured by our own understandings, sense of what good looks like, our harshness or leniency as raters, and our own inherent and unconscious biases (Harvard Business Review, 2019). This resonates again with the notion that Agency is a nodal point with different discourses.

Capabilities can be thought of as what a person is able to do and be (Nussbaum, 2011, as cited in Scherrer, 2014). Treadwell (2018) believes it is the educator's responsibility to ensure that young people have the necessary capabilities to succeed. In this study six capabilities of Agency are explored and measured in the ASpT, each

capability has a set of six indicators, these can be thought of as things the learner knows or is able to do and be. A learner is able to use and leverage the capabilities to exert Agency over their learning. The Agency Capabilities are unpacked in the following section and comprise of Self Aware, Collaboration, Using Tools and Strategies, Assessment Capable, Resilience, and Taking Action.

2.3 AGENCY CAPABILITIES

The process in which the Agency capabilities were established was shared in section 1.4.4. This section introduces literature for each of the individual capabilities.

2.3.1 *Self Aware*

Learning to Learn is a fundamental goal; requiring students to define their own learning goals and success criteria, monitor their own learning, critically examine their own work, incorporate feedback from others, and use all of this to deepen their awareness of how they function in the Learning Process (Fullan & Langworthy 2014). Self Awareness is a key attribute when Agency is present and it is important for students to unleash and create an awareness of their potential (Fullan & Langworthy 2014; Vogt, 2016).

Learners in this study acknowledged that the six capabilities were interrelated and connected. Treadwell (2018) highlights this interconnectedness addressing that a key aspect of increasing Agency is when learners take responsibility for their learning, are aware of and learn about their mind-set, and their capacity to show grit and determination. Grit and determination are associated with the capability of Resilience in this study as presented in 2.3.4.

Tomlinson and McTighe (2006) talk about differentiated classrooms, they say it is critical for students to develop increasing awareness of their own learning goals and needs, and to become effective in speaking about and playing a role in addressing those needs. Their view of being Self Aware strongly aligns to this research with a view that learners need to be able to talk about their learning goals and take action to address their next steps.

Learners who are metacognitive and are aware of intuitively using those skills activate their Agency. Schunk & Zimmerman (1994) say “while metacognition relates to awareness, self-regulation refers to the extent to which learners actively use

this awareness to initiate, motivate, and direct their own efforts to acquire knowledge and skills instead of relying on others as agents of instruction” (as cited in Timperley, 2015, p. 11). The term metacognition encourages the complexity of thinking about the Self Aware agent who can construct his or her understanding of the world (Hacker et al., 2009). Kluwe (1982, as cited in Hacker et al., 2009) describe people as “agents of their own thinking” (p. 1) when they have the following characteristics; self-awareness, self determination, and self-direction. Successful students who take charge of their own learning are agentic, ‘taking charge’ requires students to be aware of their own learning, evaluate their learning needs, generate strategies to meet their needs, and implement those strategies (Hacker et al., 2009).

A learning system is more likely to support learners' Self Awareness and their Agency. A learning system can provide immediate feedback to keep a student aware of the pace and progress towards their learning goals and advise them when they need help. This has been likened to a GPS for students and teachers, navigating with flexibility individual pathways for personalised learning. (Patrick et al., 2013).

In this section the Agency capability has referenced a learner increasing an awareness of:

- how they function in the Learning Process
- their potential
- their mindsets and capacity to show grit and resilience
- their own learning goals and needs
- being metacognitive
- taking charge
- the pace and progress of their learning.

2.3.2 *Assessment Capable*

The term Assessment Capable, unique to New Zealand, was introduced to build on from the term assessment literacy.

The use of the term assessment literacy does not always refer to Student Agency, even though it includes the implementation of a range of formative assessment practices (Booth et al., 2014). Developing assessment capability in and across learning contexts is how students should be educated so that they develop their capacity to assess their own learning (Absolum et al., 2009; MoE, 2011).

Hallgarten et al. (2002) found that “innovation in assessment processes has not kept pace with innovation in delivery processes” (p. 47). Assessment Capability seeks to address this divergence of thinking ensuring;

Assessment-capable teachers have the curricular and pedagogical capability, and the motivation, to engender assessment capability in their students. The use of the term assessment capability, distinguishes the New Zealand stance from other assessment systems where the student’s own assessment capability may not be at the heart of the assessment process (Booth et al., 2014, p. 139).

Effective assessment practices enable students to be active participants in assessment and develop the assessment capability of all stakeholders. (The Education Hub, n.d.).

Assessment has been referred to as the compass for daily planning in a differentiated classroom (Tomlinson, 2014). Fisher and Frey (2009) identify that teachers use assessment data to plan future instruction in an effective feedback system modifying their teaching which demands greater flexibility in planning. The planning of the lesson sequence is not limited although may include the children and teacher considering: Learning progressions, a WALT (We are learning to), Success Criteria, Resources/ Exemplars, Motivation, Instructional Strategies, Deliberate Acts of Teaching, Purpose, Sharing, Checking for understanding, Buddy sharing, Engagement, Integration, Process/ Activity, Making Thinking Visible, Modelling, Explicit Teaching, Reflection and Assessment, Evaluation, and Inquiry. Planning that takes into consideration the purposeful use of these aspects has the potential to impact Assessment Capability. However, job number one for a teacher is ensuring students know how to learn; a teacher who is determined to foster these beliefs, dispositions, and abilities in every student and understand that her fundamental mission isn’t teaching a subject is in support of assessment capable learners (Frey et al., 2018). Assessment-capable students typically show higher achievement and are more effective learners, they access, interpret, and use assessment information to affirm or further their learning (Absolum et al., 2009; The Education Hub, n.d.a.).

Student Voice and conversations are both critical to enabling Assessment Capability and therefore Agency. McCarroll (2014) discusses how a student-centered assessment model and critical conversations supports and develops relationships, student Agency, intrinsic motivation, ownership, design, and transformation of

learning. Learning Environments that are conducive to goal setting and feedback are those where critical conversations take place. Findings from the NZCER 2013 survey showed that conversations between student, teacher, and parents were 13 percent less likely in an end of year review (29 percent) as compared to mid-year reviews of progress (42 percent) (Wylie & Bonne, 2014).

The power of student voice should not be underestimated. To hear students reflecting on their own work, in their own voice, with their own intonations and expressions, conveys meaning in a manner that is simply not possible in written form. Voice adds depth to the work. (Fox, 2008, p. 8)

Inclusive, informative, and culturally responsive assessment practises focus on engaging students as active participants in assessment conversations. These conversations enable student voice and encourage assessment capability as they are given opportunities to share their own perspectives on their efforts and achievements (Absolum et al., 2009). McCarroll (2014) talked about the use of Critical Conversations in Learning Stories. Learning stories are an observation that tells a story, they have responded to the demands and challenges of co-authoring curriculum and assessment and devolving some of the Agency for learning to the learner (Carr & Lee, 2012).

In this section the key principles address:

- The term Assessment Capable is unique to NZ
- The term Assessment Capable builds on from assessment literacy with reference to Learner Agency
- Assessment Capability in and across learning contexts is how students should be educated
- Students are active participants in an effective assessment model that supports Assessment Capability
- Assessment Capability addresses the divergence of assessment processes with the innovation of delivery processes
- Student's own Assessment Capability is at the heart of the assessment process
- Assessment Capable students typically show higher achievement
- Assessment Capable students are more effective learners
- Student Voice and conversations are both critical to enabling Assessment Capability
- Assessment Capability resonates with inclusive, informative, and culturally responsive assessment practises

2.3.3 *Collaboration*

Collaboration is “the ability to work constructively with others” (Robinson & Aronica, 2015, p. 138). The more educators give students collaborative opportunities, choice, control, and challenge the more likely their motivation and engagement will increase (Toshalis & Nakkula, 2012). Engagement and motivation have been linked to Agency, Howells (2018) comments that students designing their own learning projects and processes in collaboration with others enables Agency. The capability to collaborate effectively was highlighted by Treadwell (2018) as one of six key domains that are pivotal in developing Learner Agency. He also notes that an aspect of lifelong learners is being able to manage their world and collaborate successfully.

Technology is discussed as an enabler of Agency in section 2.4.3. It is important to discuss here how collaboration is dramatically aided by technology (Fullan, 2013). Integrating technology, pedagogy, and change knowledge democratizes learning so that every student learns how to learn; best of all students learn collaboratively. Peer and collaborative learning opportunities support students’ cognitive, affective, and social interactions (Wright 2010).

Collaboration has been linked to self assessment, student- centered pedagogy, and blended learning. These were identified in section 2.3.2 as aspects of Assessment Capability. This illustrates again the interconnectedness of the Agency capabilities as a set. Teachers have reported how collaboration and peer-review has helped with self-assessment (Taylor & Fagan, 2014). Collaboration, skilled communication, knowledge building, and self regulation and assessment is included in student-centered pedagogy and is an element of innovative teaching practices (Fullan, 2013). Vogt (2016a) advocates that creativity creates agency; he says allowing students to practice and collaborate digitally, take more control of the collaboration process, and produce an end product are outcomes of blended learning which lead to student agency.

Deeper learning can be further enabled by the reinvention of teaching tools and platforms that empower students to do active, collaborative learning (Dede, 2014). This study introduced SchoolTalk as a platform in section 1.3.5.2.

This section has discussed that:

- Collaboration is ‘the ability to work constructively with others
- Collaborative opportunities will increase motivation and engagement for learners
- Students designing their own learning projects and processes in collaboration with others enables Agency
- Collaboration is dramatically aided by technology
- Collaboration has been linked to
 - self assessment
 - student-centred pedagogy
 - blended learning
 - deeper learning

2.3.4 Resilience

Resilience is a supporting capability of learners who demonstrate Agency. “Agency, efficacy and resilience work largely together, each attribute drawing on the other in a symbiotic arrangement” (Keogh et al., 2012, p. 48). Resilience has been used differently by different people, in learning it is often referred to as bouncing back from adversity or a positive response to failure (Perkins-Gough, 2013). New Zealand’s Education Review Office (ERO) identified four important components of resilience:

- belonging,
- growth mindset,
- self efficacy,
- ‘Grit’

(Education Review Office, 2019).

Meanwhile, Benard (1995, as cited in Fadel et al., 2015) identified three main factors that positively influence resilience which included:

1. Caring relationships.
2. Communication of high expectations.
3. Opportunities for meaningful involvement and participation.

ERO (2019) found that there was a link between resilience and doing well in school, children who rate themselves highly for grit do better academically. Young people have suggested that success in learning should include development in values such as kindness, resilience, and persistence alongside subject knowledge (Milligan et al., 2020).

An individual's capacity to overcome challenges and achieve long-term success has a strong relationship with non-academic skills such as grit, tenacity, and perseverance which is demonstrated in a growing body of research (Fullan & Langworthy, 2014). A key aspect of increasing Agency is when a learner takes responsibility for their learning, where they can be aware of, and learn about their capacity to show 'grit' and determination (Treadwell, 2018).

Students are more motivated, engaged and begin to own their learning when they understand they have Agency and choice; helping students to develop intrinsic motivation creates resilience that can be sustained as they become more independent learners' (Bitter et al., 2014). Agency is therefore linked with Resilience and academic outcomes.

This study is in support of the strong links between resilience, determination, grit, and mindsets (Fadel et al., 2015; Keogh et al., 2012; Yeager & Dweck, 2012). The capability of Resilience in relation to Agency needs to encompass the wider understandings and theories that determination, grit, and mindsets all bring to enhance the way it is defined and understood. It is important to caution against a narrow understanding of resilience, as too much resilience; or resilience channeled in the wrong areas could be detrimental to learning. An unpublished study highlighted concerns about the concept of resilience, it could be argued that prisoners display high levels of resilience, yet this doesn't encapsulate the intended use of the resilience capability (Deakin Crick et al., 2015). Deakin Crick et al. (2015) deepened their understanding of resilience as a complex construct and in essence identified it was about the ability to adapt and change positively in response to challenge. Crick (2015) has used the term 'Open Readiness' which is "an emotional orientation of being open and ready to invest in learning, having flexible self-belief, willing to persist and manage any self-doubt. A necessary prerequisite for developing resilience in learning" (cited in Learning Emergence, n.d., p. 3).

In this section it has been highlighted that:

- Resilience is a supporting capability of learners who demonstrate Agency
- There are important components and factors which support resilience
- Resilience is linked with academic outcomes
- Determination, grit, and mindsets enhance the way resilience is understood
- A narrow understanding of resilience requires caution

2.3.5 *Using Tools & Strategies*

Using Tools and Strategies to navigate new learning is an important part of the learning journey and learning how to learn.

Agency, intention, and desire, as well as the dispositions or virtues necessary to acquire the skills, strategies, and knowledge management necessary for making the most of learning opportunities requires competence in learning how to learn (Buckingham Shum & Deakin Crick, 2012). In practical terms, schools can help children succeed by giving them a variety of learning strategies to apply if they are having difficulty (ERO, 2019). It is important to recognise and acknowledge that there are many different tools and strategies that education contexts adopt, adapt, and utilise with their learners. Utilising appropriate learning strategies can lead to improved academic performance (Farrington et al., 2012). In the late eighties and early nineties, Bandura (1986) and Zimmerman (1990) identified metacognitive skills that enable students to self-regulate their behaviours and become effective learners such as self-observation and self-evaluation (as cited in Farrington et al. 2012). All students can benefit from classroom instruction that builds metacognitive skills and learning strategies such as monitoring, planning, and self-regulating. These strategies of self-evaluation align closely with the Assessment Capable capability as discussed in section 2.3.2.

There are also links between Using Tools and Strategies and Assessment for Learning which is discussed as an enabler of Agency in section 2.4.1. Students are better able to understand which strategies worked for them and where they need to improve when teachers provide timely, ongoing feedback through formal and informal assessments (e.g., discussions, papers, or tests) (Farrington et al. 2012). Links are also explicit between Assessment Capability and Using Tools and Strategies; “to ensure that students become assessment capable, teachers must actively help students learn, in part by helping them select appropriate learning tools (strategies)” (Frey et al., 2018, p. 12).

In this study, learners at Stonefields School specifically use three tools and strategies to support their learning. These were introduced in section 1.4.3, the Learning Pit, the Learner Qualities and the Learning Process. The Learning Pit is at the heart of the learning challenge. It nurtures a love of learning and builds learners’

resilience, determination, and curiosity; if someone is said to be in the Learning Pit they have a set of unresolved, contradictory ideas about something they are trying to understand (Nottingham, 2017). In order to get out of the Learning Pit learners are able to use tools and strategies, the Learning Process or specific Learner Qualities. The teacher's role shifts towards providing feedback, activating next-level learning challenges, and continuously developing the learning environment and gradually shifting away from explicit structuring of learning tasks as students make progress in mastering the Learning Process (Fullan & Langworthy, 2014). Learner Qualities can be thought of as dispositions. The nature of learners' engagement with new learning opportunities, in both formal and informal contexts is significantly influenced by learners' orientation towards learning - their learning dispositions, which form an important part of learning-to-learn competencies (Buckingham Shum & Deakin Crick, 2012, p. 2).

This section focussed on Using Tools and Strategies, it discussed:

- Using Tools and Strategies are important for learning how to learn
- Different tools and strategies are used by different educational contexts
- Appropriate learning strategies can lead to improved academic performance
- Links between Using Tools and Strategies and other capabilities and enablers of Agency
- Examples of tools and strategies include the Learning Pit, Learning Process, and Learner Qualities which are an important part of learning to learn

2.3.6 *Take Action*

Taking Action in the context of this study encompasses learners understanding the value of engaging with increasingly complex frameworks and tasks that require them to lead, manage, and stretch their learning, to take initiative, to take action, and to try a variety of ways to get out of the Learning Pit. Learners use their strengths, interests, and passions and those of people around them to help imagine greater possibilities in their life, community, and the world beyond. Learners can make a lasting difference by contributing to the world according to the Stonefields School Learning Map.

Many actions involve students in social contexts where they choose to use their growing capabilities to respond to matters that concern them, or where they see a chance to make a difference in the world and to be good citizens. Aspects of different learning areas are likely to come together here because real-world issues typically transcend curriculum divisions. For younger students the relevant curriculum ideas will be simpler and fewer, with conceptual depth and cross-curriculum complexity gradually increasing over time. The nature of the context will also determine how readily students are enabled and supported to take action (Hipkins, 2017, p. 16).

To enter a continuous flow requires strenuous physical exertion or highly disciplined mental activity. People become so involved in what they are doing that the activity becomes spontaneous, almost automatic, they stop being aware of themselves as separate from the actions undertaken. In a state of 'flow' there is a merging of action and awareness (Csikszentmihalyi & Csikzentmihaly, 1990). This description of flow illustrates the interconnectedness of the Agency capabilities again. To be in a state of flow would mean that learners are engaging with rich learning opportunities which are further explained in section 2.4.5.

Rich learning opportunities can give learners increasing exposure to real-world situations or real-life challenges, preparation for future learning is applying what one learns in one setting to another context and is in fact, the elusive goal of education transfer (Fadel et al., 2015). 'Transfer' in this sense is when learners apply their knowledge, skills, and capabilities to take action and take their learning out into the world beyond school (Hipkins, 2017). Taking initiative and meaningfully influencing their world has been linked to the idea of Learner Agency; which involves the environment, the will, and the power to act, it is about acting rather than to be acted upon, and taking action for the common good. (Anderson, 2021; Leadbeater, 2017; OECD, 2021).

The VUCA acronym began in the late 1990s and emerged to describe a future that will consist of greater volatility, uncertainty, complexity, and ambiguity (Fadel et al., 2015; Hipkins, 2017). Knowing when and how to take a specific course of action is becoming more prevalent in a VUCA world and in doing so enables learners to have agency.

In this section the Taking Action capability expresses that:

- Learners engage with increasingly complex frameworks and tasks
- Learners use their strengths, interests, and passions and those of people around them
- Learners respond to matters that concern them, or where they see a chance to make a difference in the world and to be good citizens.
- Aspects of different learning areas are likely to come together when learners take action
- A merging of action and awareness is when one is in a state of ‘flow’
- Transfer is linked with Taking Action
- Taking Action is prevalent in a VUCA world

2.4 ENABLERS OF AGENCY

Enablers of Agency presented in this section include Assessment for Learning (AfL), explicit teaching through instruction and scaffolding, technology, relationships, local curriculum and rich learning opportunities, pedagogical shifts, learning progressions, a language of learning, and teacher expectations.

2.4.1 *Assessment for Learning*

“Assessment for Learning” (AfL) was introduced to literature in the mid to late 1990’s (Dixon & Hawe, 2015). The following AfL definition reflects the thinking and research presented in this study: “Assessment for learning is part of everyday practice by students, teachers, and peers that seeks, reflects upon and responds to information from dialogue, demonstration, and observation in ways that enhance ongoing learning” (Klenowski, 2009, p. 264).

Formative assessment has been linked to AfL processes; these processes focus on what’s next instructionally (Callingham, 2010; Charteris, 2015; Waldrup et al., 2008). One study identified that AfL had shifted students' conversations and language, and they were able to articulate their learning and goals (DeLuca et al., 2015). The implementation and potential of AfL is dependent on understanding how to use assessment to support learning and the roles of teachers, students, administrators, and leaders (DeLuca et al., 2015; Dixon & Hawe, 2015).

For learners, particularly Year Four to Year Eight learners in the context of this study, AfL provided them with information and guidance so that next steps in their

learning were planned and managed (MoE, n.d.a). In this study AfL approaches are considered as instructional strategies and scaffolding, some of these include:

- day-to-day activities, such as learning conversations
- a simple mental note taken by the teacher during observation that is communicated to the learner
- student self and peer assessments
- a detailed analysis of a student's work (examples of written work, audio recordings of peer/ self reflections)
- assessment tools, which may be written items, structured interview questions, or items teachers make up themselves

(MoE, n.d.a)

The Education Hub (2019) identified strategies of Assessment for learning, some overlap the approaches listed above and others include:

- clarifying and sharing success criteria
- providing ownership over individual learning goals and learning
- regularly engaging in 1-on-1 discussions with students about their learning
- providing exemplars
- teacher and students collaborating to understand where students are at in their learning, where they need to go and how to get there
- providing opportunities for students to evaluate the quality of their work, engage in peer assessment and modify in response to assessment information

(The Education Hub, 2019a)

Stiggins (2005, as cited in Wiliam, 2011) differentiates between Formative Assessment and Assessment for Learning in the columns below:

Formative Assessment

- More frequent
- Providing teachers with evidence
- Tells users who is and who is not meeting standards

Assessment for Learning

- More continuous
- Informing the students themselves
- Tells users what progress each student is making toward the standard while the learning is happening and when there's still time to be helpful

In this instance this study aligns to the Assessment for Learning thinking which is presented. Assessment for Learning is student focussed, about progress, and is happening during teachable moments, all arguably supporting learners in their own learning pursuits; therefore, AfL is likely to enable Learner Agency.

It is important to caution against the narrow view presented here of formative assessment, elsewhere formative assessment has been defined as three key instructional processes. These are establishing where learners are, where they are going, and how to get there (Groff, 2012; Leahy & Wiliam, 2011; Moss & Brookhart, 2009). Formative assessment is feedback given and administered during instruction. The formative assessment process aligns to what happens in the classroom, making it one of the essential components of classroom work that raises achievement (Andrade et al., 2012; Black & Wiliam, 1998; Moss & Brookhart, 2009). Thinking of formative assessment as presented here would challenge us to question how Formative Assessment isn't an enabler of Agency.

2.4.1.1 Feedback

“Formative assessment as feedback is all activities that are undertaken and used to provide information to modify teaching and learning activities” (Black and Wiliam, 1998, p. 7). Effective feedback is grounded by ‘what’s next’ (Halbert & Kaser, 2013; Hattie, 2015; Heritage, 2007; Wiliam, 2011). It is known to support Agency (Charteris, 2015; Ferguson et al., 2015; Halbert & Kaser, 2013) and promote further learning (Absolum, 2006; Clarke, 2008; Groff, 2012).

Hattie (2009) asserted that when feedback is from the student to the teacher it is most powerful, and when this occurs, it helps to make learning visible. Feedback as a dialogic process supports students feeding back to teachers, enabling teachers to be responsive to their learners’ needs (Charteris, 2015). These views of feedback support Learner Agency in formative assessment processes rather than an instrumental view of feedback. Feedback has been identified as the centerpiece of instruction and helps to make teaching and learning visible (Martinez et al., 2016; Mayer & Alexander, 2011). Facilitating peer and self feedback (Andrade et al., 2012; Wylie & Bonne, 2014) supports Learner Agency and empowers students; teachers who share this vision understand that their role has to change, from a traditional concept of a teacher to that of a learning partner and facilitator (Martinez et al., 2016).

Changes in feedback have been noticeable through embracing technology, for example it has enabled learners to become less dependent on their teachers regarding feedback (Smith, 2011, as cited in Burner, 2015; Taylor, 2016). Learners therefore have an opportunity to have increased Agency during instances where technology is embraced for the right reasons. Technology as an enabler is discussed further in section 2.4.3.

2.4.1.2 Goals and Next Steps

The previous section talked about feedback. “Feedback should relate to the learning goals that have been shared with the students” (William, 2011, p. 130). Teacher response is only one part of an effective feedback system; we must also set clear learning goals and let data influence instruction, formative assessment informs instruction (Fisher & Frey, 2009; Waldrup et al., 2008). Instructional scaffolding is a Learning Process; it is the support which is tailored to student needs with the intention of helping them achieve their goal (Sawyer, 2005). Goals are closely associated with feedback and instruction as discussed here. Instruction is discussed further in section 2.4.2.1.

Goals have been linked to self regulation, autonomy and self direction (Hinton et al., 2012; Nicol & Macfarlane-Dick, 2006; Rubie Davies, 2015), therefore Learner Agency. Learner Agency is an important aspect in goal setting, it creates a reflective process in learning, and is present when students take charge of who, what, where, why, and when they learn (Patrick, 2014; Vogt, 2016). Pintrich and Zusho (2002 as cited in Nicol & Macfarlane-Dick, 2006) provide a working definition of self regulation which references goal setting; this definition alludes to learners that are agentic. “Self-regulated learning is an active constructive process whereby learners set goals for their learning and monitor, regulate, and control their cognition, motivation, and behaviour, guided and constrained by their goals and the contextual features of the environment” (Pintrich and Zusho, 2002, p. 64, as cited in Nicol & Macfarlane-Dick, 2006, p. 202). Goal setting can be thought of as the structure that embraces the constructs of motivation, engagement, autonomy, evaluation, and feedback; these constructs embrace student-centered approaches to learning. These approaches require students to be self-directed and responsible for their own learning, including goal setting, planning, and monitoring progress (Hinton et al., 2012; Rubie Davies, 2015).

One way to monitor progress is through the use of progressions, progressions as discussed in section 2.4.7 enable teachers and students to clearly identify, articulate, and address next steps. Learners who articulate and share their understanding, can provide and seek feedback so they know where to go next (Hattie, 2015).

Feedback is central to guiding students through their own next steps and it is the constant stream of feedback which helps educators tailor instruction, sometimes within moments, to meet each student's immediate needs (Heritage, 2007; Hinton, et al., 2012). Next steps are grounded by effective feedback given to the learners (Halbert & Kaser, 2013; Wiliam, 2011).

2.4.2 *Explicit Teaching - Instruction & Scaffolding*

We are continually asking ourselves what learning matters and more importantly what learning matters now knowing what we know about the changing landscape of our future. Tension in this space can be that students and teachers may have differing views about when students have a say, make responsible choices, and influence decisions. Irrespective of these views explicit teaching and instruction are paramount.

Explicit teaching is about differentiated, personalised learning to close learning gaps and enable progress towards achieving goals and next steps; with instruction in a structured, scaffolded, and supported environment, therefore enabling agency. Explicit teaching often uses deliberate acts of teaching; they include although are not limited to modelling, prompting, questioning, giving feedback, telling, explaining, and directing (MoE, 2016b).

2.4.2.1 *Instruction*

It is asserted that Learner Agency is encouraged when educationalists bring together the best instructional strategies, the curriculum, and the pervasiveness of technology (21st CLRG, 2014; Apex Learning & Getting Smart, 2016; Fullan, 2013). However, Tomlinson (2014) identifies instruction as the core of differentiation, maximising academic growth through ensuring each student has the best possible learning experiences is the ultimate goal of differentiation. He notes that this is not growth of standardised test scores, rather other indicators such as engagement and autonomy as a learner. This is underpinned by a notion that pedagogy trumps curriculum, or that pedagogy is curriculum, as what matters is how things are taught, rather than what is taught (Wiliam, 2011).

The centerpiece of instruction is helping students develop an understanding of learning as a complex and ongoing process that entails seeking feedback, revising work and regularly reflecting on what one has produced, as well as on the choices and decisions made throughout the Learning Process (Martinez et al., 2016, p. 5).

Reeve and Jang’s (2006) study looked at what teachers say and do to support students’ autonomy during a learning activity. Participants in their study were recruited from an undergraduate educational psychology course, therefore were not the same age level as participants in this study. Reeve and Jang (2006) identified instructional behaviours that were statistically significant when correlated with students’ perceived autonomy. Keeping in mind that “Greene describes Agency as a form of autonomy” (as cited in Paris & Lung, 2008, p. 254), the instructional behaviours can correlate positively and negatively with students’ experiences of autonomy, these are identified in Table 2.2.

Table 2.2
Instructional Behaviours that Correlate Positively and Negatively with Students' Experiences of Autonomy

Statistically significant positive instructional behaviours	Statistically significant negative instructional behaviours
Time listening	Time holding/ monopolizing learning materials
Time allowing student to work in own way	Exhibiting solutions/ answers
Time student talking	Uttering solutions/ answers
Praise as informational feedback	Uttering directives/ commands
Offering encouragement	Making should/ got to statements
Offering hints	Asking controlling questions
Being responsive to student generated questions	
Making perspective-acknowledging statements.	

(Reeve & Jang, 2006, p. 211)

Ferguson, Phillips, Rowley and Friedlander (2015) say it is fundamentally important that teachers provide opportunities, guidance, and instruction that help to inspire, enable, and focus Agency. They also say instructive feedback enables students to develop and express Agency through providing scaffolding so that they correct their own work, solve their own problems and build their own understanding. Providing instruction can be thought of as being helpful, however some of the ways

that teachers strive to be helpful can be Agency dampeners, serving to reduce rather than bolster Agency (Ferguson et al., 2015).

Therefore, we can acknowledge that there are instructional strategies and behaviours that have a positive or negative impact on Learner Agency. This study strongly supports the notion that during instruction, assessment for learning is key to ensuring learners are equipped and enabled to exert Agency in their learning.

2.4.2.2 Scaffolding

Scaffolding can be considered as a tool to support children to become independent learners (Gibbons, 2002). When scaffolding is appropriately used, it provides a path to independence and highlights the need for explicit teaching (Gibbons, 2002). Developing student Agency is achieved whilst utilising scaffolding as an instructional process (Meyer & Turner, 2002). During instructional scaffolding teachers support and facilitate students as needed and then step back helping them to build and exercise autonomy and demonstrate self regulation (Meyer & Turner, 2002).

Instructional scaffolding is a Learning Process; it is the support which is tailored to student needs with the intention of helping them achieve their goal (Sawyer, 2005). Heritage (2007) identified core elements of formative assessment, identifying the ‘gap’, feedback, student involvement, and learning progressions. She points out that after matching next steps in the learning gap, teachers’ scaffolding skills come into play, impacting on whether students receive appropriate support. “Monitoring students’ regulatory strategies is important for making decisions about when to fade scaffolded support in order to build independence” (Frey et al., 2018, p. 50).

2.4.3 Technology

As discussed in section 1.2.1 this study is about the pedagogy of Learner Agency, however this study positions technology as an enabler of Agency. Future advancements in technology are unknown so it is hard to anticipate what educators might see or what education will encounter. However, monitoring of the trends and patterns has allowed CORE Education to suggest that whatever emerges will likely demonstrate the following characteristics of personalised learning. Technology will continue to empower individuals to be more in control of their learning, including

what, where, when, as well as with whom they learn. The development of personalised learning platforms are likely to be further developed and designed to interact at a very user-centric level with the user as they navigate through their learning journey (CORE Education, 2020). It is this aspect of technology which supports the notion of Learner Agency in this study.

Stonefields School wanted to create teacher efficiency in synthesising across all learners in a hub, their gaps, next steps, and design real learning to meet their passions. They needed to solve the problem of how to make cohesive several different data, planning, and reporting systems in a range of print and digital formats, used by teachers and learners, to be more integrated. A deep understanding of the context and circumstances allowed Stonefields School to devise new approaches, innovations, and ways of working; adopting a problem centered rather than solution driven approach (Hood, 2018) . The solution that emerged led to the development of SchoolTalk (Ilyana Limited, 2016) introduced in section 1.4.6.2. SchoolTalk has been designed and developed with the support of the team at Stonefields School. It has grown organically, and continues to evolve and be refined from feedback around what is working and the actual experiences of the users (learners, parents, teachers, school leaders). The teachers who trial, use, implement, and innovate around new ways of using SchoolTalk are crucial for further app developments.

Liber (2005, as cited in, Chandra & Fisher, 2006) argued that the design of e-learning environments should not be left to the technicians and programmers. There is a need for teachers to become more proactive in driving the technology. Through such an approach, teachers have a far greater control in terms of how the learning activities are designed, developed and sequenced (p. 465).

Learning is differentiated and personalised through the use of SchoolTalk, learners are able to view their current goals, upload artifacts, see feedback from teachers, access relevant resources, and access a personal calendar with specific learning tagged to them. (Bradbeer, 2020). A key aspect here is that learning is differentiated, and specific learning is tagged to a learner or artefact that is uploaded. Dr Helen Barrett (2005) wrote that an electronic portfolio uses technologies to organise material and connect evidence to appropriate outcomes, goals, or standards. This aspect enables Agency of learning rather than a random collection of work, stored electronically, with no particular focus. (Fox, 2008). Responding to new tools

with thoughtful creativity and a willingness to change and challenge our conceptual frameworks and educational practices, will be needed as new technologies continue to enter the educational sphere (Ham & Wenmoth, 2010). Creativity and change are further discussed in section 2.4.6.

2.4.4 Relationships

Educators need to recognise the wider set of relationships with learners' teachers, peers, families, and communities which influence their learning and the learners' individuality to help enable Agency. A concept known as 'co-Agency' underlies the learning framework where interactive, mutually supportive relationships help learners to progress towards their valued goals (Howells, 2018). Furthermore the iron law of co-agency is that it is impossible for students to develop agency unless teachers themselves are agents, trusted by the school and the wider system to craft and design learning with students (Leadbeater & The Student Agency Lab, 2022). 'Agency is invariably co-agency: individuals cooperating to achieve shared goals' (Leadbeater, 2017, p. 5). Learning focused relationships enable Agency. The teacher's intention in a learner-focused relationship is to support and teach students to exercise as much Agency as the teacher within the teaching/ learning context (Absolum, 2006).

Relationships and in particular learning relationships are arguably the most important components in an education setting and fundamental to learning (Bishop, 2019; Robertson, 2005). Profound teaching and great learning are ultimately predicated on the power of human relationships; genuine, productive relationships are vital foundations for effective teaching and learning (Hallgarten et al., 2015; Ministry of Education, 2011a). Teachers are required to be relationship masters; forming and maintaining high quality reciprocal relationships - the quality of the relationship translates directly to academic outcomes (Borderless, 2019). Educators who nurture teacher-student relationships are more likely to see students thrive academically (Hinton et al., 2012).

Traditional negative teacher-student relationships are counterproductive to an environment which is Agency driven. Healthy relationships support Agency (Howells, 2018), AfL (Absolum, 2006; Dixon & Hawe, 2015), instruction (DeLuca et al., 2015) and engagement (Absolum, 2006). Radical changes to the structure of

relationships between students and teachers are required (Fullan & Langworthy, 2014); one study alluded to the fact that teachers did not seem to grasp how those changes would accommodate and support AfL practices (Dixon & Hawe, 2015). “The ‘instructional core’ consists of the relationships amongst the teacher, students and content” (DeLuca et al., 2015, pg. 125). Maximising students’ engagement with learning is about using the considerable potential in the relationship between the teacher and student; enabling the student to play a meaningful role in deciding what to learn and how to learn it; and about enabling the student to become a confident, resilient, active, self regulating learner. (Absolum, 2006).

Sir Ken Robinson challenges that the irreducible minimum at the heart of education is the relationship between the learner and the teacher; in some cases the teacher is the learner or it may even be technology. He cautions, nothing should be added to that relationship unless it enhances it or improves it. Over time there has been every type of encumbrance added to the relationship which has obscured education, such as testing regimes, national policies, building codes, architecture, publishers and examination boards to name but a few (Learning Without Frontiers, 2011). Keeping education less obscured by maintaining a clear focus on the learner and their learning is conducive to developing learner agency; relationships undeniably enhance the opportunity for this to occur.

2.4.5 *Local Curriculum/ Rich Learning Opportunities*

Tomlinson (2014) references the work of Dylan Wiliam (2011), John Hattie (2009) and Max van Manen (1991) who note that good teaching of a bad curriculum is superior to bad teaching of a good curriculum; it is less about the curriculum content and more about the teaching strategies and how a learner is experiencing what is being taught. Charteris (2014) argues that a dynamic reconceptualisation of curriculum and assessment can be supported by a performative view of Learner Agency. In this section local curriculum is discussed along with rich learning opportunities and rich tasks.

2.4.5.1 *Local Curriculum/ Curriculum*

Sir Ken Robinson talks openly about creativity, learning, and the curriculum (Learning Without Frontiers, 2011). He says the problem with education is that it is based on principles of conformity and increasingly of standardisation and the

consequence is that a lot of people pass through the whole of their education feeling disconnected from it because it doesn't speak to them. Education is inevitably, unavoidably, and properly personal; you can not treat people as homogenous units. All of us have different capacities, interests, and passions and one of the great purposes of education is to connect people with their own sense of possibility. We don't know what we are capable of until we have the opportunity to find out – A narrow curriculum cuts off opportunities for those whose real talents may lie in the areas that have been segregated out from the centre of the curriculum. One way of overcoming this is through a personalised curriculum where teachers know what will work for different individuals.

Koudstaal & Pugh (2006) describe Umwelt as an important notion to take into consideration here while discussing curriculum, learning design, and Learner Agency. Umwelt is the world as it is experienced by a particular organism. In an educational setting we could take the idea that learners' experiences of the same lesson are quite different; their understandings overlap but are not the same. If we were to better understand the Umwelten of our students, how much better might our chances be for being aware of and understanding the Umwelten of our students in our pedagogies. In the words of Koudstaal & Pugh (2006), “might allowing the student to possess her or his educational Umwelt and experience the interconnected Umwelten of a group of students, overcome the restrictions that a Tyler-type curricular experience might impose” (p. 331/ 332).

Education is very local and specific and for learning to be both effective and appropriate a local curriculum is one way to reflect this (Pagram & Pagram, 2008). When thinking of a local curriculum one way to conceptualise it is that every school already has one; every day, every moment is a local curriculum. The question therefore could be ‘How do you strengthen it and better reflect the umwelten of students?’ With an uncertain and unpredictable world, it is becoming increasingly difficult to decide what curriculum content is important; what is clear is that being a good learner and exercising Agency is likely to be the key (Crick et al., 2004; Howells, 2018). Agency and personal control of one's learning is an important lifelong learning strategy (Fadel et al., 2015); tools and strategies were previously discussed in section 2.3.5.

An effective curriculum provides learners with a solid introduction to different bodies of knowledge, highlighting key concepts, processes, methods, and tools. It also highlights the relevant practical, cognitive, and emotional aspects of those engaged in developing that knowledge and applying it in the world (Fadel et al., 2015, p. 30)

The advantage to this approach in thinking about curriculum is that learning continues throughout life, with less material being prescribed top-down and more of it chosen and managed by the learner. Figure 2.2 below illustrates the shift in control over time and can be a useful prompt when discussing when and how much Agency a learner may execute in their learning at given times (Fadel et al., 2015).

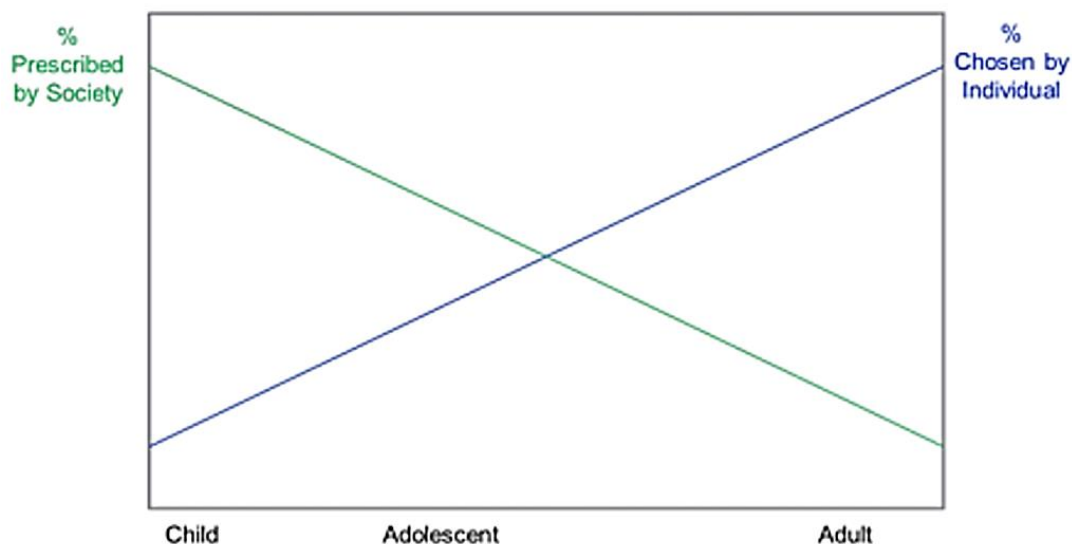


Figure 2.2
Developmental Shifting of Control of Instructional Time. Source: CCR (Fadel, Bialik, & Trilling, 2015, p. 30) (reprinted with permission - Appendix Q)

2.4.5.2 Graduate Profile

In response to emerging new ideas, beliefs, knowledge, theories, and practices many schools have created future focused visions that redefine learning, the learner and the teacher. Communicating a shared understanding of what a future-oriented learner looks like can be achieved through a Graduate Profile. Graduate Profiles describe skills, knowledge, and attitudes that students need to develop in order to participate in a range of contexts beyond school (MoE, 2016a). Learner Profiles differ, they are used by learners as a tool to build and showcase their capability and to track their progression through schooling (O’Connell et al., 2019); in some instances, tracking their progression against a Graduate Profile or even a Local Curriculum. “Although learner profiles are still in their formative phases internationally, they reflect a desire across the globe to present the full breadth of student development, including, capabilities, alongside academic learning” (O’Connell et al., 2019, p. 18). In this regard the Graduate Profile and Local

Curriculum serve as a central understanding for both teachers and learners about what to teach/ learn. A Learner Profile serves as an evaluation of learning and may reflect progress of a Graduate Profile or Local Curriculum.

2.4.5.3 Rich Learning Opportunities/ Rich Tasks

If new approaches and new designs for learning are required (Timperley et al., 2014), rich learning opportunities are a way of thinking differently about the learning design.

Rich opportunities to learn are carefully designed to increase the breadth, depth, and complexity of the learning experiences with which ākonga engage as they progress along their learning pathways. They are designed to support ākonga to contribute to their communities in ways that build on and strengthen both community and ākonga capabilities (MoE, 2019d, p. 3).

In strengthening capabilities, when one or more capabilities are developed through designing rich tasks, teachers and learners are better positioned to understand why the learning is important for now and for the future (MoE, 2019b). Why the learning is important links with the idea of purpose. Finding purpose should be a vital part of education, agency involves students having the power to take purposeful initiative, pursuing learning for a purpose, and the ability to define purpose and take actions to achieve goals. (Anderson, 2021; Leadbeater, 2022; OECD, 2021).

Not only are the capabilities at play in the design of a rich task, they also bring together concepts or big ideas from one or more learning areas; and appropriate aspects of all the key competencies. However, it is hard to focus the intended learning if we just say every key competency is in play. This is where the idea of capabilities can help. A ‘capability’ is demonstrated in action, it is what the student shows they can do and is willing to do as a result of their learning (Hipkins, 2017). “Capabilities remix aspects of all the key competencies and weave them together with important knowledge and skills” (Hipkins, 2017, p. 1).

Rethinking pedagogy and teaching practice has been integral to schools that have been most successful at integrating the key competencies into their curriculum (Charteris, 2015). The idea of competencies and capabilities were previously discussed in section 2.2.6. They are important considerations when designing a local curriculum, rich learning opportunities, and rich tasks.

Engagement and students being in a state of ‘flow’ would be indicators of successful learning design. The premise of Robert Brisk and his colleagues at the Wellington School in Columbus, Ohio is that students become most engaged when they find their work both deeply challenging and highly enjoyable. Therefore, making the content meaningful, designing interesting lessons, and requiring students to stretch a bit in their learning is the teachers’ job (Hoerr, 2016). Figure 2.3 below illustrates a graph of student engagement which indicates if learners are engaged, entertained, bored, or finding the learning a grind. Ideally all student responses would fall into the engaged quadrant, indicating that they feel highly challenged and love the learning design (Hoerr, 2016).

Graph of Student Engagement		
<i>Grind</i>	<i>Engaged</i>	CHALLENGED
<i>Bored</i>	<i>Entertained</i>	↕
HATE IT ← → LOVE IT		UNCHALLENGED

Figure 2.3

Graph of Student Engagement (Hoerr, 2016, p. 144) (reprinted with permission - Appendix P)

Rich learning opportunities and rich tasks are how students experience the learning design. The states of optimal experience as studied by Csikszentmihalyi & Csikzentmihaly (1990) are

those times when people report feelings of concentration and deep enjoyment. These investigations have revealed that what makes experience genuinely satisfying is a state of consciousness called flow - a state of concentration so focused that it amounts to absolute absorption in an activity (p. 1).

‘Flow’ was discussed in section 2.3.6 as an aspect of the Take Action capability. This illustrates the connectedness of the Take Action capability and the design of a rich learning opportunity.

2.4.6 Pedagogical Shifts

Litky and Gabrelle (2004) say all educators need to make sure we are not sticking to old patterns in new situations and need to re-examine our situations from time to time. Consideration of the future of education, technology, and creativity and how this is rooted in complex genealogies of past traditions and practices while remaining alert to emerging alternatives, counter narratives, and different possible interpretations was a focus for Loveless and Williamson (2013). They wanted to remain open to alternative trajectories as this study seeks to do. The following sections seek to explore some pedagogical shifts that are required in order to enable Agency, they focus on process change, teaching as inquiry, innovation, and creativity as some of the pedagogical shifts that would further enable Learner Agency.

2.4.6.1 Process Change

Change is inherent when we talk of educational organisations. Leading, coaching, and mentoring participants through any change is essential. Robertson (2005) says that educational institutions that establish coaching relationships are more likely to have a culture where continual improvement of learning is a focus. She says “these ‘coaching organisations’ may thus be better suited for meeting the needs of students and leaders in this knowledge age, where flexibility, innovation, and ability to adapt to change, and take on new learning are essential” (Robertson, 2005, p. 41).

Educational institutions are generally process driven; ‘process’ may be understood as ‘the way we do things’ (CORE Education, n.d.a). Therefore, process change can be considered to be ‘changing the way we do things’. Process change in the context of this study is about taking what we already know about the best teaching practices and research (in Learner Agency and AfL) and making processes more efficient, effective, and evident through the use of technology as an example. The education sector is continuously exposed to change, new ways of thinking and doing; applying a design thinking approach and spiral of inquiry can be a powerful vehicle for change in schools including innovation and creativity (CORE Education, n.d.a). Inquiry has been identified by education research studies as significant influences on school improvement and innovation (ERO & MoE, 2015). Teaching as Inquiry is further discussed in section 2.4.6.2.

One of the most critical problems our schools face is the fragmentation, overload, and interference resulting from the uncritical and uncoordinated acceptance

of too many different innovations, not the resistance to innovations (Fullan & Stiegelbauer, 1991, as cited in Hattie, 2009). Therefore, strong leadership is needed for educational improvements and leaders must be change managers (Cator et al., 2015; Guskey, 1988). However, Fullan (2013), highlights that change may not be as hard as it seems if the three forces of technology, new pedagogy, and change knowledge are organised to guide transformation. He says that to change knowledge is about the implementation, “putting something new into practice” (p. 65). When a teacher makes a deliberate action to introduce a different (not necessarily new) method of teaching, curriculum, or strategy that is different from what he or she is currently using, innovation occurs (Hattie, 2009). This firmly places innovation into the category of process change. Innovation is further discussed in section 2.4.6.3.

Quinton & Houghton (2006) highlight that educational institutions that will be prepared for the challenges of the future are those willing to take advantage of the opportunity to overcome and lead the process of change. Inquiry supports the concept that a school has to be changing all the time, it has to be a living organism (Littky & Grabelle, 2004). For many educational institutions one way of achieving this is through implementing Teaching as Inquiry, being innovative, and creative.

2.4.6.2 Teaching as Inquiry

Key elements of a learning classroom have been described as “a continuous process of inquiry, decision-making, adaptation, and transformation undertaken by assessment capable participants who understand their role in the Learning Process and whose contribution is valued” (Ministry of Education, 2011, p. 24). The Code of Professional Responsibility and Standards for the Teaching Profession (Education Council 2017) highlights that inquiry can be used to improve professional capability to impact on the learning and achievement of all learners; reflecting on the effectiveness of practice in an ongoing way and using evidence from a range of sources. Robinson and Lai (2005) emphasise the importance of schools conducting context specific, teacher research and say that this is more likely to flourish in schools that have a culture of inquiry. Effective pedagogical leadership creates the conditions to ensure quality teaching is happening in every classroom; quality teaching is fostered through inquiry, as a result, reducing within school variance in student achievement (MoE, 2015).

New Zealand schools have a huge variance of within school achievement, greater than many other countries (MoE, 2015). Teacher quality has previously been identified as the single most important variable in an education system (Wiliam, 2011). Wiliam (2011) suggests that there are two options of how to improve teacher quality; replace existing teachers or improve the quality of existing teachers. Inquiry is one way of improving teacher quality and needs to become a common pedagogical practice (Mercado, 2001, as cited in MoE, 2015).

This study uses the Spirals of Inquiry Framework (Halbert & Kaser, 2013; Timperley, Kaser & Halbert, 2014) to guide the research design of this study. The six phases are presented below and unpacked as a part of the methodology in section 3.6.

The six phases of the Spirals of Inquiry framework are:

- Scanning - What's going on for learners?
- Focussing - Where will concentrating our energies make the most difference?
- Developing a hunch - How are WE contributing to the situation?
- New Learning - How and where will we learn more about what to do?
- Taking Action - What can we do differently to make enough of a difference?
- Checking - Have we made 'enough' of a difference?

(Halbert & Kaser, 2013; Timperley et al., 2014)

Halbert Kaser and Timperley (Halbert & Kaser, 2013; Timperley et al., 2014) developed the research based Spiral of Inquiry framework which can be a system changer when applied at a personal, professional, school, district, or provincial level. Its design assists school teams in creating and sustaining quality and equity for learners and for new learning systems.

2.4.6.3 Innovation

Innovators are at the cutting edge of change, pedagogical theory and responsiveness; and adopting any innovation means discontinuing the use of familiar practice (Hattie, 2009; Koudstaal & Pugh, 2006). Innovative practices are evident in many New Zealand schools, however, to scale them both 'top down' and 'ground up' approaches will be needed (21st Century Learning Reference Group, 2014). Fullan notes that successful implementation on a large scale is 'whole system reform', quality implementation is key. However, Robinson (2010) highlights that "every education system in the world is being reformed at the moment and it's not enough"

(3:50). He says we need a revolution in education and calls it the learning revolution. Eleven years later Fullan (2021) pinpoints four drivers for whole system success posing that education, more specifically learning will be a deliberate player and the outcome will be different as we have the opportunity to be more deliberate in the way that we set up for success. Hannon & Peterson (2021) argue that education needs a new narrative, and that agency is an important part of the story's lexicon, they therefore find the increased use encouraging.

Fullan (2013) was involved in interpreting ITL (Innovative Teaching and Learning) research findings. The research investigated classroom practices in a sample of PIL (Partners in Learning) schools in seven countries. His overview of key findings identified that innovative teaching practices consisted of three elements:

1. "Student-centered pedagogy (including knowledge building, self regulation and assessment, collaboration, and skilled communication)"
2. "Extending learning beyond the classroom (including problem solving and real-world innovation)"
3. "Information Communication Technology (ICT) use (in the service of specific and concrete learning goals)" (p. 43)

Student-centered pedagogy is identified as a key theme associated with Learner Agency in section 2.2.3 and ICT has been identified as an enabler of Agency in section 2.4.3. Therefore, this study is associated with Innovative Teaching and Learning. Timperley Kaser and Halbert (2014) noted that opening up thinking, changing practice, and creating innovative teaching and learning approaches requires creating conditions and settings where curiosity is encouraged, developed, and sustained. They say that innovation floats on a sea of inquiry and curiosity can be thought of as a driver for change (Timperley et al., 2014). Initiation, implementation, and evaluation have been identified as the various stages to innovation, and that innovation often changes during the implementation (Hattie, 2008). The stages that are followed in this study for this innovation are the spirals of inquiry and are related to the stages that Hattie has identified - initiation (scanning, focussing, & developing a hunch), implementation (learning & taking action), and evaluation (checking).

Innovation is messy and difficult (Ford, 2015). Platforms that are future focused, equity centered, and teacher-powered will allow innovations to move further,

faster (Hallgarten et al., 2015). We also must ‘innovate the pedagogical core’, this is about ensuring that the core aims, practices, and dynamics are innovated to match the ambition of the learning principles (OECD, 2015). Pedagogy, formative evaluation, use of time, and the organisation are the dynamics that connect the learners, educators, content, and learning resources; these all need innovating (OECD, 2015). These make up a complex environment and need a balance of improvement and innovation, applying process change discussed in section 2.4.6.1 is one way of navigating, overseeing, and balancing tensions that may arise (Cator et al., 2015). A common tension or problem that Littky and Grabelle (2004) identify is not how to get new, innovative thoughts, but how to get rid of the old ones.

2.4.6.4 Creativity

“Creativity is the process of having original ideas that have value” and applying them in practice (Robinson, 2015 p. 118). Robinson (2015) identifies that imagination is the root to creativity (the original ideas) and innovation is putting things into practice (applying those ideas). He says that the appetite for discovery and a passion for the work is the real driver for creativity. Digital technologies could be considered as an enabler. Digital technologies have been identified as having creative potential and providing unprecedented tools for creativity (Hallgarten et al., 2015; Robinson, 2011, as cited in Fullan, 2013). Vogt says that allowing students to practice and collaborate digitally leads to student Agency; ‘creativity creates Agency’ (Vogt, 2016). Toshalis and Nakkula (2012) say that student voice can be understood as expression, performance, co-constructing the teaching/ learning dynamic, self determined goal setting, Agency, or creativity. If the learner is at the center, the role of the teacher is to foster students’ engagement with ideas shifting from the delivery of information (Ritchhart et al., 2011). Increased access to eLearning and technology increases the possibilities and opportunities of children not only engaging with ideas but collaborating and generating original ideas. Reference to creativity is throughout the NZ Curriculum, in the vision, values, and key competencies (MoE, 2007).

2.4.7 Learning Progressions

Learner Agency is when students are active participants with their teachers in formative assessment, sharing learning goals, and understanding how their learning is

progressing (Heritage, 2007). One way of achieving this is through the use of learning progressions; they are known to ground instruction, assessment, provide transparency, and clearly articulate goals (Heritage, 2007; Heritage, 2008; Sturgis, 2014).

Heritage (2007) identified core elements of formative assessment; identifying the gap', feedback, student involvement, and learning progressions. She points out that after matching next steps in the learning gap, teachers' scaffolding skills come into play, impacting on whether students receive appropriate support. In section 2.4.1 AfL was identified as an enabler of agency, learning progressions are inextricably linked to AfL as they are pivotal in feedback, goals, next steps, and learning intentions.

Learning progressions have been developed and utilised to support AfL practice and have informed learning design since 2011 at Stonefields School. Assessment for Learning (AfL) and the effect this has on student outcomes underpins Stonefields School pedagogy for teaching and learning, this is represented in the schools TLA cycle which is referred to in section 1.4.6.5. Geoff Masters defines a learning progression,

it's simply our attempt to be more explicit and to clarify what we understand by progress, or improvement, or growth, within an area of learning. In any area of learning, where what we're trying to do is develop deeper understandings or more knowledge, better skills, we must be able to map that out. A learning progression, for me, is just an attempt to do that (ACER, 2018, 5:57).

2.4.8 Language of Learning

Building a language of learning is an accumulative process over time, it ensures that we become more accurate and consistent in describing learning and builds a common culture of instruction (Treadwell, 2018; Elmore, 2008). To establish a learning culture, requires firstly valuing the need to learn and and for students to learn how to learn; this is most evident through the creation of clear and visible core values which is reflected through the consistent language used across the school and what's visible on the walls. The language that teachers and students use to talk about learning is an understanding and reflection of the core values (Martinez et al., 2016).

A language of learning is conducive to enabling personalised feedback, timely and skillful provision of quality personalised feedback makes a big difference to

learning success (Halbert & Kaser 2013). More students excel academically in classrooms with higher rates and levels of student talk (Stichter et al., 2009, as cited in Fisher & Frey, 2009). A language of learning could be used to structure useful language frames which provide the required academic language to gauge students' understanding of their learning (Fisher & Frey, 2009).

2.4.9 *Teacher Expectations & Overall Teacher Judgements*

Harris, Brown, and Dargusch (2018) note that during the last two decades, there have been calls to increase student Agency and involvement in assessment processes, particularly from the Assessment for Learning movement (e.g. Black and Wiliam 1998; Black et al. 2003). They caution however, that it is perhaps naïve to believe that Agency during assessment will always occur in ways that are productive for academic growth and learning. Years of research into teacher expectations and enabling Agency have provided evidence that they can influence and improve student performance, learning and achievement (Hinnant et al. 2009, as cited in Rubie-Davies, 2015; McKown & Weinstein 2008, as cited in Rubie-Davies, 2015; Ministry et al. 2009, as cited in Rubie-Davies, 2015; Schwartz & Okita, 2004; Zhao, 2016).

Overall teacher judgements (OTJ) are presented here closely connected with the themes of teacher expectations, academic achievement, and assessment. In this study teacher expectations are an enabler of Agency and OTJ's are discussed to provide understanding around the results that are presented in Chapter 4. In Chapter 4 results of the learners ASpT were correlated with achievement outcomes. OTJ's were the means to compare achievement for all learners who completed the ASpT. Rubie Davies (2015, p. 67) notes that 'the judgments that teachers make at the beginning of a school year may translate into expectations for performance, and these initial expectations may become rooted in subsequent estimates of student achievement'.

Overall Teacher Judgements (OTJ) were central to New Zealand National Standards which NZ schools of Year 1 - 8 students reported on between 2010 and 2018. Schools are still required to report child progress and achievement against the curriculum and teacher judgements are an important part of that. Overall Teacher Judgements involve drawing on and applying evidence gathered up to a particular point in time, enabling an overall judgement to be made about a student's progress and achievement. A range of approaches and various sources are

necessary in order to compile a comprehensive picture and strengthen an OTJ as illustrated in Figure 2.4. A single source of information is unable to accurately summarise student achievement or progress. These approaches allow students to participate in the assessment process, building their Assessment Capability which is discussed in section 2.3.2.

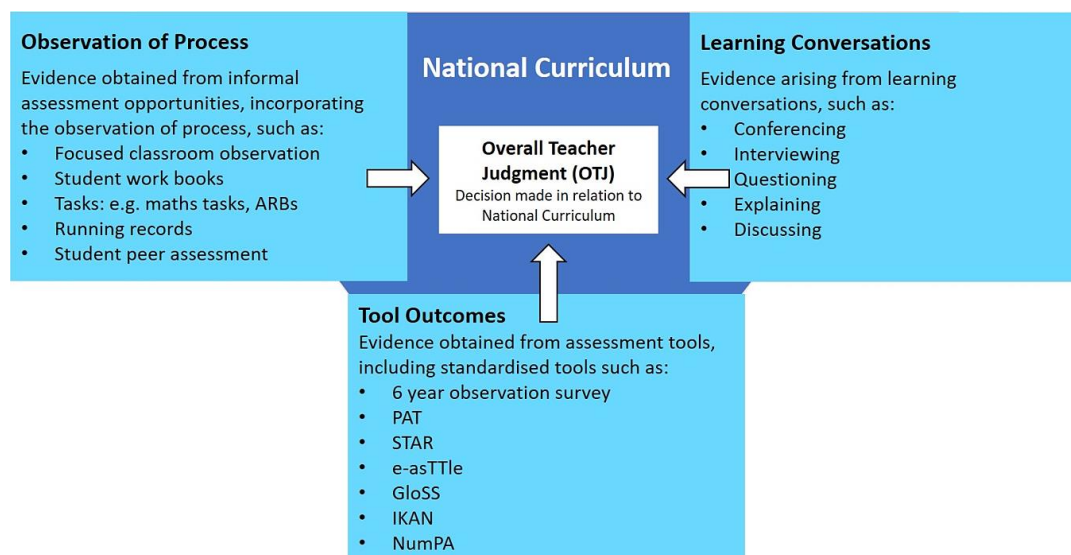


Figure 2.4
Types of Evidence informing OTJ's (Ministry of Education, n.d.c)

In relation to standards of education and the international context of political concern, New Zealand has focused on formative and cumulative teacher judgements, the intention of doing so to generate more valid and informative assessments of student progress (Poskitt & Mitchell, 2012). ‘Triangulation’ of information and robust moderation increases the dependability of OTJ’s.

Moderation sits outside the scope of this study, however the following views on moderation are important in regard to how it can influence shared understandings. “Moderation is more than informal conversations with colleagues (Hipkins, 2010); indeed it involves deep philosophical discussions in which the tensions between assessment, pedagogical and content knowledge are deconstructed and reconstructed in new ways so that teacher understanding is extended” (Poskitt & Mitchell, 2012, p. 71). Depth of knowledge, understanding of curriculum, progressions of learning, assessment tools vary from teacher to teacher. Also, the meanings that can be derived from them and the interrelationships they have with their students, these factors all

influence judgements. Engaging in moderation enables teachers to check interpretations and debate understandings about curriculum, learning and assessment; having their views deepened, challenged, or confirmed. Through this, shared understanding of curriculum, pedagogy, and assessment can emerge (Poskitt & Mitchell, 2012).

2.5 LEARNING ENVIRONMENTS

2.5.1 *Learning Environment Background*

As early as the 1930's research on learning environments began. Lewin (1936) introduced the formula $B=f(P,E)$, he recognised and identified that the environment (E) and interactions of people (P) determined how people behave (B) (as cited in Koul et al., 2011). The atmosphere, ambience, tone, or climate that pervades the particular setting and in particular applied to educational settings is the concept of environment (Dorman et al., 2006).

Building on the early ideas of Lewin, Herbert Walberg, and Rudolf Moos began research over 50 years ago which has influenced the developments of Learning Environment research since. The Learning Environment Inventory (LEI) is widely-used and was developed by Walberg as a part of the research and evaluation activities of Harvard Project Physics (Walberg and Anderson, 1968, as cited in Fraser 2012). Moos in collaboration with Edison Trickett began developing the first of his social climate scales, which ultimately led to the development of the Classroom Environment Scale (CES) (Moos and Trickett 1974; Trickett and Moos 1973, as cited in Fraser 2012). This pioneering work has ultimately led to other major research, books, and literature reviews (Fisher and Khine 2006; Fraser 1986; Fraser 1994, 1998, 2007, as cited in Fraser, 2012; Fraser and Walberg 1991; Fraser et al., 2020; Goh and Khine 2002; Khine and Fisher 2003; Koul & Zandvliet, 2009; Moos 1979; Rahmawati et al., 2015; Rahmawati et al., 2020; Walberg, 1979).

2.5.2 *Learning Environment Instruments*

In the past educational assessments, research, and evaluation have largely been concerned with instruments to assess intelligence, academic achievement, and other valued learning outcomes; these measures cannot give a complete picture of the educational process (Crick et al., 2004; Fraser, 2012). Fullan (2021) notes that the pervasive obsession with academic grades narrows learning and severely distorts

what people learn and need in the 21st century. Neuroscience and educational psychology research highlights the importance of social, emotional wellbeing and how it impacts learning and academic outcomes; wellbeing and learning represent an integrated concept (Borderless, 2019; Fullan, 2021; Panorama Education, n.d.; The Education Hub, 2019).

Moos's (1979) scheme for classifying human environments led to three basic types of dimensions which are:

1. Relationship Dimensions - which identify the nature and intensity of personal relationships within the environment and assess the extent to which people are involved in the environment and support and help each other.
2. Personal Development Dimensions - which assess basic directions along which personal growth and self-enhancement tend to occur.
3. System Maintenance and System Change Dimensions - which involve the extent to which the environment is orderly, clear in expectations, maintains control, and is responsive to change.

These dimensions provided a framework for the development of questionnaires and classification of each scale (Fraser, 2012).

Historically learning environment research mainly used questionnaires, there has been considerable growth in the area since the pioneering use of classroom environment assessments (Walberg and Anderson, 1968, as cited in Fraser, 1998). Nine major questionnaires for assessing student perceptions of classroom psychosocial environment include: Learning Environment Inventory (LEI); Classroom Environment Scale (CES); Individualised Classroom Environment Questionnaire (ICEQ); My Class Inventory (MCI); College and University Classroom Environment Inventory (CUCEI); Questionnaire on Teacher Interaction (QTI); Science Laboratory Environment Inventory (SLEI); Constructivist Learning Environment Survey (CLES); and What Is Happening In This Class (WIHIC) questionnaire (Fraser, 1998).

One distinctive feature of most of these instruments is that they measure perceptions of 'actual' and 'preferred' classroom/ school environments (Fraser, 1998). Fraser (2012) highlights that "students are at a good vantage point to make judgments about classrooms because they have encountered many different learning environments and have enough time in a class to form accurate impressions" (p.

1192). There have been numerous modified instruments that have drawn on scales and items in existing classroom environment questionnaires which better suit particular research purposes and contexts (Fraser, 2012). Learning Environment research hasn't looked at Learner Agency specifically. Assessing learners' perception of their Agency which this study seeks to do has synergies with Moo's Personal Development Dimension, the tool itself aligns more closely to the work that has been researched around Learning Power.

2.5.3 *Tools/ Instruments aligning to ASpT concepts*

The Effective Lifelong Learning Inventory (ELLI) was developed in the late 1990s as an assessment tool along with the concept of learning power (Deakin Crick et al., 2015). The aim was “to construct an assessment instrument both to identify the components of lifelong learning and for use subsequently as an assessment instrument” (Crick et al., 2004, p. 251). Seven dimensions of ‘learning power’ were identified as holistic qualities or dispositions associated with being an effective learner (Deakin Crick et al., 2015); growth Orientation, critical curiosity, meaning-making, fragility and dependence, creativity, learning relationships, and strategic awareness. The first three dimensions statistically were able to form one variable ‘learner commitment and engagement’; this allowed the instrument to work with five dimensions instead of the original seven (Crick et al., 2004).

Learning Power was further researched and conversations that emerged from the use of ELLI provided the foundations for the Crick Learning for Resilient Agency (CLARA) Self Assessment Instrument (Learning Emergence, n.d.). CLARA's purpose is to provide rapid feedback to individuals and teams about their learning capabilities so that they can make better decisions about how to interpret information and move forwards. “Well deployed, it is about emancipation and empowerment, enhancing Agency through effective learning, for individuals, organisations, and communities” (Learning Emergence, n.d., p. 4). The CLARA learning power dimensions are mindful Agency, hope and optimism, sense-making, creativity, curiosity, collaboration, and belonging. There is an eighth dimension which reflects the degree of trust and readiness a person experiences in a particular context and is an emotional orientation towards new learning opportunities named ‘Open Readiness’. Open Readiness lies between two extremes of ‘Rigid Persistence’ and ‘Dependent

Fragility’; on occasions the extremes may be appropriate, however, in learning a healthy tension between the two are optimum (Learning Emergence, n.d.).

Another tool which has been useful to schools who seek to measure ‘non-cognitive skills,’ ‘soft skills,’ ‘21st century skills,’ ‘character strengths,’ and ‘whole child development’ is the Social-emotional learning (SEL) tool (Panorama Education, n.d.). SEL describes the mindsets, skills, attitudes, and feelings that help students succeed in school, career, and life. Panorama Education’s SEL tool measures four areas which include skills and competencies; supports and environment, and well being (Panorama Education, n.d.). The skills and competencies section of the tool includes grit, growth mindset, self-management, social awareness, self efficacy, learning strategies, classroom effort, social perspective-taking, self-efficacy about specific subjects, and emotion regulation. There are similarities with these skills and competencies and the Agency capabilities which the ASpT measures as presented in section 2.3.

2.5.4 Competency Frameworks

Considerable research and organisation has gone into making competency frameworks available for educationalists and education (Partnership for 21st Century Skills, 2008; International Society of Technology Education (ISTE) Standards 2016; UNESCO Transversal Competencies, 2019; Center for Curriculum Redesign Competencies, 2019). “Recent interest in the non-academic outcomes of teaching has raised the prospect that a broader range of Agency-related factors will someday be more systematically addressed in educational policy and practice” (Ferguson et al., 2015, p. 91). Many countries and schools are trying to find balance between traditional knowledge based education and competencies through implementing and utilising competency frameworks. Incorporating such emerging demands is not a simple task; finding the right balance between incorporating future-oriented competencies into their curriculum while also minimising potentially negative side effects, such as having an overcrowded curriculum or having a new curriculum that is conceptually sound but lacks support for implementation from key stakeholders is a struggle for many governments (OECD, n.d.). Some of the challenges nations face when designing and implementing a future-oriented curriculum are common, while the goals, scope, content, and format of curricula across nations vary (OECD, n.d.).

An international perspective to curriculum analysis and competency frameworks can be useful and informative to support the process (OECD, n.d.). Within the process it is important to consider how we might measure what we deem to be important. This study offers a suggested and possible measure of assessing Agency. Competency frameworks sit outside the scope of this research but considering work in this area is essential to acknowledge for this literature review.

Table 2.3

Comparison of Competency Based Models

Partnership for 21st Century Skills (2008)	ISTE Standards (2016)	UNESCO Transversal Competencies (2019)	Center for Curriculum Redesign Competencies (2019)
Making innovative use of knowledge, information and opportunities	Empowered Learner Knowledge Constructor	Intra-personal skills	Growth Mindset Mindfulness Curiosity Courage Resilience Ethics Metacognition
		Global citizenship	
	Digital Citizen	Media and information literacy	
Creativity and entrepreneurial thinking	Innovative Designer.	Critical and innovative thinking	Creativity
Thinking critically and making judgments	Computational Thinker		Critical Thinking
Solving complex, multidisciplinary, open-ended problems			
Communicating and collaborating	Creative Communicator.	Interpersonal skills	Communication
	Global Collaborator		Collaboration
Taking charge of financial, health and civic responsibilities			Leadership
		Physical Health and Religious Values	

2.6 SUMMARY

This chapter has presented shared understandings, definitions, and constructs of Agency. Literature supporting the Agency capabilities as described and used for this study are shared. Assessment for Learning, explicit teaching through instruction and scaffolding, technology, relationships, local curriculum, rich learning opportunities, pedagogical shifts, learning progressions, language of learning, and teacher expectations are introduced as enablers of Agency. Learning Environment Theory and Research is also presented as a part of Chapter 2 along with some information regarding Competency Frameworks.

Literature gaps could include more discussion on other empirical studies, there is a gap in literature for the NZ context which utilises a live/local site to build knowledge, make meaning, and apply understanding; especially in the context of Learner Agency. This thesis will attend to this gap. Equally more research and practice feedback loops are required between researchers and practitioners. Figure 7.1 illustrates the iterative nature of this which could be further explored in other research and could be an area for future research. This study has utilised secondary sources, policy documents, and outputs not published in academic outlets, to bring further meaning to this study in the NZ context and for the teaching sector.

The next chapter, Chapter 3 is about the methodology of this study.

Chapter 3

METHODOLOGY

3.1 INTRODUCTION

Chapter 2 presented a literature review of Learner Agency, the capabilities, enablers of Agency, and some background to learning environment research.

Chapter 3 focuses on the research title, significance of the study, research questions, research design, research methods, the spirals of inquiry, and triangulation is briefly discussed. Data collection methods are presented followed by qualitative and quantitative procedures and analysis; then assumptions and ethical considerations complete the chapter.

3.2 RESEARCH TITLE AND SIGNIFICANCE OF THE STUDY

The title of this research is ‘Building Knowledge, Making Meaning, and Applying Understanding of Learner Agency in a New Zealand Primary School’. As a part of this process this research validates a tool that was developed by Stonefields School to assess students' self-perception of their Agency and is a solution for how to measure shift in Learner Agency and how to evaluate progress over time? Understanding existing practice in a New Zealand Primary School (Stonefields Primary School) was a key outcome. This was accomplished by collecting quantitative data to validate the ASpT and make correlations; qualitative data enabled focus groups of teachers and learners to discuss Learner Agency (Appendix K & L).

Quantitative data was gathered by implementing the ASpT across four primary schools and gathering over 1000 responses/ perceptions of learners in Years 4 -8. This part of the research methodology is a multiple-case design (four primary schools) and a single-unit of analysis (the ASpT). The next phase of the research gathers Qualitative data, where seven focus groups were created, six learner groups (36 learners in total), and one teacher group of 6 teachers across Year 4 - 8 at Stonefields School. This part of the research methodology is a single-case design (Stonefields Primary School) and has embedded units of analysis as there were multiple focus groups. This is illustrated in Figure 3.1.

Providing information about students' self-perception of Learner Agency, and how teachers can use the identified Agency capabilities to inform their learning design is one outcome of this study. The perceptions of upper primary students and their teachers was further explored through focus group conversations.

First of all, this study sought to understand what existing practice in a primary school supports Learner Agency and explore how this relates to well researched ideas of good teaching practice. This information seeks to provide a greater understanding of enablers and barriers in the context of Learner Agency. Lessons learnt in the context of this New Zealand study can contribute to other year levels of education, countries, and educational organisations.

Secondly, it has implications for teaching practice by highlighting how you might measure shift in the area of Learner Agency and evaluate progress over time as it can be used as a formative and summative assessment. It shares how teachers can use information from the ASpT and each of the capabilities as diagnostic evidence to inform the teaching and focus the learning to enable Agency and shift the locus of control.

A subsidiary, yet third area to which the study contributes, is the body of knowledge around assessment capability incorporating student voice which is presented in the MoE Position Paper on Assessment (MoE, 2011). It states that “assessment capable students are more likely to take ownership of their learning and become independent learners and that they are able to make ‘what next?’ decisions” (MoE, 2011, p. 25). If we know how agentic our learners are feeling and use their self-perceptions to gather student voice this can be useful in light of students Assessment Capability.

These three areas of significance have the potential to impact educational organisations in New Zealand and globally. The next section presents the research questions which guide and direct this study.

3.3 RESEARCH QUESTIONS

The research questions as presented in Chapter 1 are as follows:

1. What teaching and learning practices enable Learner Agency?
2. What current practices exist and how might capabilities of Learner Agency be identified?
3. How can evidence of the capabilities be used to inform learning design?

These questions are answered by using specific research design and methods, and will be documented using the school's Learning Process - Build Knowledge - Make Meaning and Apply Understanding and also told as a narrative using the Spiral of Inquiry framework. These are discussed in the next section.

3.4 RESEARCH DESIGN

This study uses a Narrative Case Study through Critical Participatory Action Research methodology.

The study varies in size and focus, for example - the quantitative data collection is across four different primary school contexts with a similar case being the Agency Self-perception Tool. The study then used other forms of data collection (focus groups and artefacts) in one of those contexts with embedded units of analysis. These were focus groups across different hubs and year levels in Stonefields School to provide qualitative findings which triangulated the data. This is illustrated in Figure 3.1

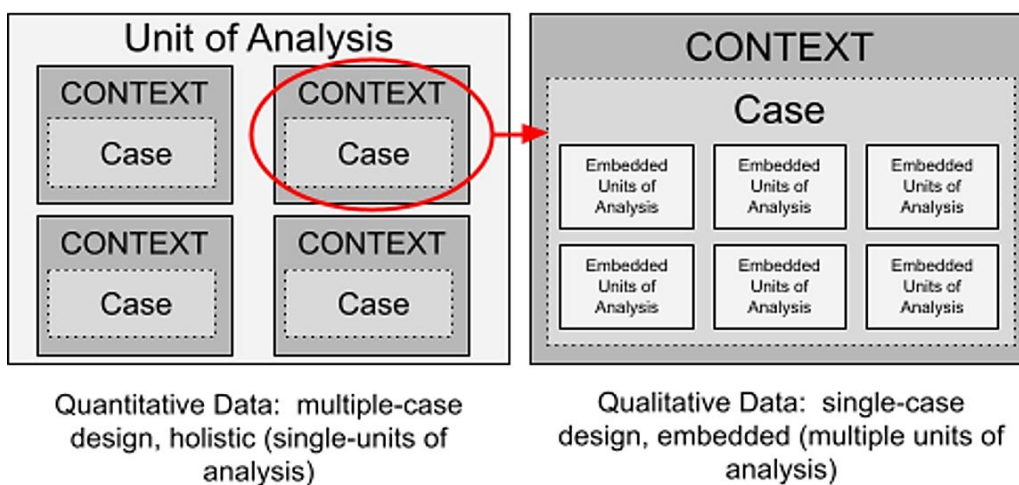


Figure 3.1

Depiction of the study context, case and unit of analysis

“The typical case study report is a lengthy narrative that follows no predictable structure and is hard to write and read” (Yin, 1981, p. 64). This narrative critical participatory action research and data collection is structured using the Spirals of Inquiry framework. Yin (1981) identified that using a clear conceptual framework overcomes any pitfalls of the study design. The Spirals of Inquiry framework has been designed to involve the learners in each phase shifting from student voice to Learner Agency, as they help to identify and address issues in the learning environment (Timperley et al., 2014). In the context of this study the issue permeating the learning environment is Learner Agency. It was proposed that through a disciplined approach to collaborative inquiry, members of the inquiry will gain confidence, insights, and the mindsets required to design new, more powerful learning systems; this process will transform their school into more innovative learning environments (Timperley et al., 2014).

The six phases of the Spirals of Inquiry framework are:

- Scanning - What’s going on for learners?
- Focussing - Where will concentrating our energies make the most difference?
- Developing a hunch - How are WE contributing to the situation?
- New Learning - How and where will we learn more about what to do?
- Taking Action - What can we do differently to make enough of a difference?
- Checking - Have we made ‘enough’ of a difference?

(Halbert & Kaser, 2013; Timperley et al., 2014).

These phases closely align to our Stonefields Learning Process as shown in Table 3.1. There were many models used to influence the thinking of the Learning Process such as SOLO Taxonomy, the Spirals of Inquiry were aligned to the Learning Process post the Learning Process development and more so for the purpose of this study.

Table 3.1*Stonefields School Learning Process aligned with the Spiral of Inquiry Phases*

Stonefields School Learning Process	Spirals of Inquiry
Build Knowledge <i>(Purpose: The way the information is experienced)</i>	Scanning Focussing
Make Meaning <i>(Purpose: To understand the relationship between information)</i>	Developing a Hunch New Learning
Apply Understanding <i>(Purpose: Transfer of knowledge)</i>	Taking Action Checking

The Spirals of Inquiry is used to discuss the methodology as a narrative in section 3.6. It is important to align the Spirals of Inquiry to our Stonefields School Learning Process to ensure this study and the findings are accessible to as many practitioners as possible. Most teachers in New Zealand School contexts would know of or relate to the Spirals of Inquiry while teachers at Stonefields School will relate to both the Spirals and the Learning Process Phases.

The methods in section 3.5 present this study through a researcher's lens, the Spiral of Inquiry intends to share the study through a practitioner's lens. In Figure 3.2 below there is a storyboard/ diagramatic representation of the research design. Each part or piece of the narrative is discussed within the Spiral of Inquiry in section 3.6. Leadbeater (2022) highlights that a shared narrative is important to schools promoting student agency as it enables you to tell a coherent story about your school, with an arc into the future. The title of the inquiry was 'Developing Learner Agency through Collaborative Inquiry into Innovative Learning Design'. This study supported specific parts of this collaborative inquiry through using research to better understand Agency; supporting in the development and validation of the Agency Self-perception Tool; and leveraging what was happening in the school to understand existing practice and inform next steps such as the development of the local curriculum/ learning map. Findings of this study in section 6.2.2 answer one of the research questions about understanding existing practice. An unanticipated outcome of the inquiry which was the design of a learning map discussed in section 7.4.1. The learning map and local curriculum is also discussed in the literature chapter (section 2.4.5) although sharing this work in its entirety sits outside the scope of this study.

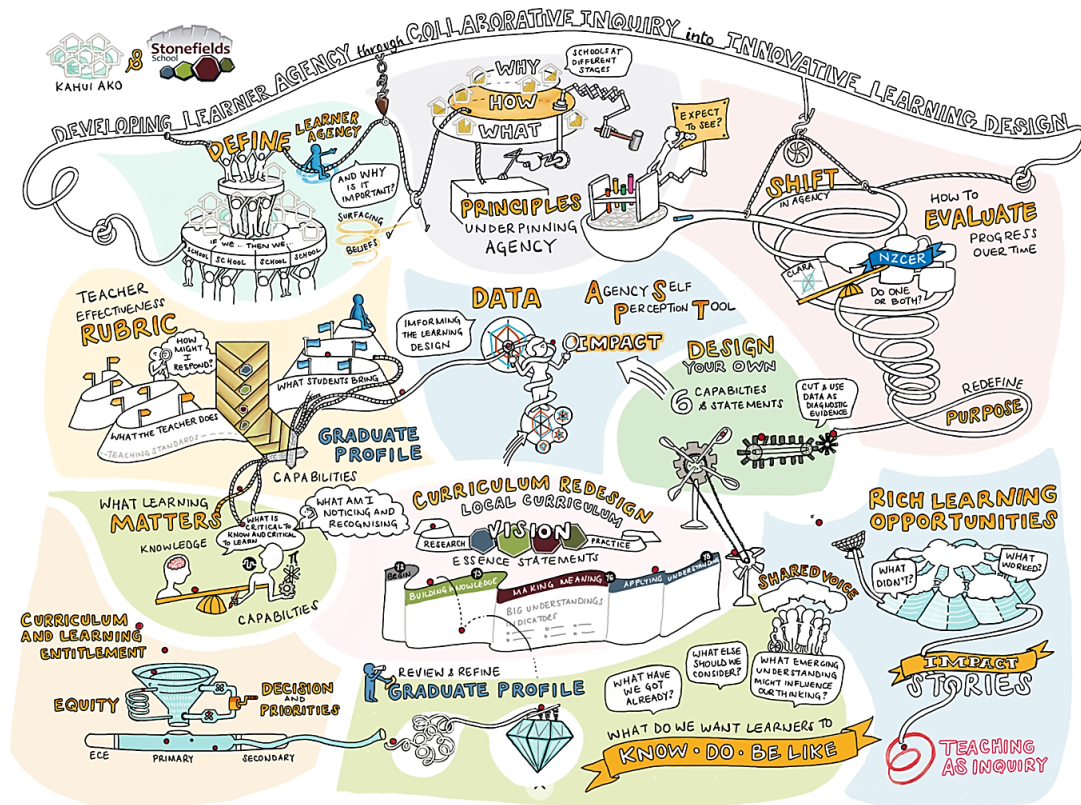


Figure 3.2
 Storyboard/ diagrammatic representation of research design. © Stonefields School
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3.5 RESEARCH METHODS - RESEARCHER LENS

This study explored Learner Agency of upper primary learners. Year 4 - Year 8 learners were the main source of both quantitative and qualitative data. This suited the methodology of this research as it is about Learner Agency. Using learners in this research was essential as Hattie (2015) states there is a need to hear the students’ view and include their voice about the impact in learning/ teaching. When student voices are heard this can be a different approach to normal operating procedures, it can help to make classrooms and schools more student centered (Toshalis & Nakkula, 2012). Student Voice can be understood as co-constructing the teaching/ learning dynamic or simply as Agency (Toshalis & Nakkula, 2012). When feedback or opinions are provided by students on aspects of their school or community, they are understood to be functioning as consultants (Toshalis & Nakkula, 2012).

At the end of 2018 quantitative data was collected, qualitative data was gathered mid 2019; these sets of data collection are presented in this study. At times data

collection served multiple purposes including reporting for other school initiatives such as the Teacher Led Innovation Fund (TLIF), monitoring of our school strategy, personal teacher inquiries, presentations to the Board of Trustees (BoT), review of targets, and to inform ongoing strategic planning. Ethics as discussed in section 3.12 covered the use of the data for this study, while other purposes were the prerogative of the school/s as they ‘owned’ the data. A positive of this research is that it brings empirical research to the foreground. This research is based on observation, interpretation and measurement of phenomena, directly experienced by the researchers. Therefore the research is positioned with an epistemology and constructionism lens, where meaning has been created from the interplay between the subject and object/s. This research fits into an interpretive epistemology and ontology paradigm. Seeking understanding and making sense of others’ perspectives which are shaped by the philosophy of social constructs; along with gaining a fuller understanding of meanings, reasons, and insights into human action is an advantage of this paradigm (Bryman, 2001; Taylor, 2008). Therefore, subjectivity is an integral aspect of such research, and leads to results which are relatively complex to analyze and interpret objectively (Bryman, 2001). Multiple solutions to problems can arise as a researcher can observe a situation with different approaches through this paradigm, therefore reach different conclusions for the same observation (Koul, 2008).

This study has been described as a ‘Narrative Case Study through Critical Participatory Action Research’. Each of these research methodologies incorporate different procedures that are useful in the context of this study, these are organised under each of the different approaches below.

3.5.1 *Case Study*

Using the Spirals of Inquiry supports Yin’s (2014) view that a case study is an empirical inquiry. A contemporary phenomenon is the focus within its real-life context; boundaries between the phenomenon and its context are not clearly evident (Yin, 2014). Connelly and Clandinin (1990) refer to the phenomenon in narrative research as ‘story’ and the inquiry research as ‘narrative’.

The case study methodology is reflected in this study in that it is an attempt to come to understand its activity (Learner Agency) within its circumstance or context (Upper Primary learners in a NZ Primary School). The data collection is purposefully

designed to start with a broader scope across different contexts and hone in on the practice of one school. It purposefully uses a multiple case study approach with the Quantitative Data in order to compare and contrast cases and arguably improve theory building (Bryman, 2015), the validation of the survey with over 1000 responses increases the reliability. However, Bryman (2015) refers to Dyer and Williams (1991), warning that a multiple-case study design can mean that the researcher spends more time contrasting the cases rather than identifying the specific context. The qualitative data is designed to ensure that reflections and detailed investigation of a particular context are understood.

3.5.2 *Narrative Inquiry*

This study used narrative inquiry as a research methodology. Clandinin and Rosiek (2007) discuss that narrative inquiry is studying lived experience as a storied phenomenon or the stories people tell about their experiences. The study of stories, narratives or descriptions of events are what narrative researchers hold in common; they embrace the assumption that story is a fundamental unit that accounts for human experience and can be understood narratively throughout inquiry (Pinnegar & Daynes, 2007; Clandinin & Huber, in press). Another view of narrative inquiry is that it is a collaborative process involving mutual storytelling and restorying as research develops, it is important that both voices of participant and researcher are heard in the process of living the shared story of narrative inquiry (Connelly & Clandinin, 1990). Connelly & Clandinin (1990) say that writing narratives of what it means to educate and be educated, can be achieved through listening to participants' stories of their experience of teaching and learning; this understanding of narrative and story functions as educational inquiry, generating a new agenda of theory-practice relations. They see the research inquiry becoming collaborative, the researchers' narrative of the participants' stories; the listening to stories, and the telling and living of a new mutually constructed account of inquiry in teaching and learning. Capturing phenomena that might not be understood as readily through other means of study can be achieved through narrative case studies which fundamentally provide an entree to information that might otherwise be inaccessible (Brandell & Varkas, 2001). The narrative of the case study is best told through the structure of the Spiral of Inquiry presented in section 3.6.

3.5.3 Critical Participatory Action Research

Critical participatory action research is where research is conducted in local sites. Participants have special access to social and educational life and how work is conducted by virtue of being ‘insiders’; it also creates the conditions for practitioners to speak a shared language (Kemmis et al., 2014). In the pursuit of practical solutions, it brings together action and reflection, theory and practice, and participation with others to better understand fundamental problems by raising collective consciousness. Several studies have identified motives of action research (Reason & Bradbury, 2001; Berg, 2004; Altrichter et al., 2008) that seek to improve the quality of professional practice and the working conditions in an organisation. Action Research is intended to support challenges, problems of practice, and innovations in a reflective way and develop both the practical situations and the knowledge about the practice of participants. Typically, data collection is tailored to what is achievable and can contribute to the development of educational values without overly disrupting practice. I am an employee within the main context of this study, Stonefields School, employed since the beginning of 2017. My ability to speak a shared language which is the school's ‘language of learning’ (presented in section 1.3.3) was instrumental for this study.

3.5.3.1 Researcher Position

The research approach necessarily crosses into teachers’ professional learning. Therefore, the boundary is blurred between teacher Professional Learning and this research. Any position of responsibility in the school, even as a participant researcher executing a project condoned by the leaders in a school, implies power relations. These are necessarily an aspect of this Critical Participatory Action Research approach. Here lies a conundrum as teachers were positioned as co-researchers, however, any resistance could have been seen as contravening the strategic direction of the school. While there was clear alignment between the study and the strategic direction of the school, teachers were permitted to withdraw from any involvement of the study. I was aware of my position in the research and always kept my research position and practitioner bias in mind.

3.6 SPIRALS OF INQUIRY

The Spirals of Inquiry Framework (Halbert & Kaser, 2013) has six key stages for an inquiry cycle. These are Scanning, Focusing, Developing a Hunch, Learning, Taking Action, and Checking. The Spirals of Inquiry are used to discuss the narrative of how this study evolved. Situating this study within a narrative is important as outcomes have arisen following the validation of the tool implying this has been a piece or part of a larger body of work.

3.6.1 Scanning

The scanning phase is about asking ‘what’s going on for our learners?’ (Timperley et al., 2014). The scanning phase is a knowledge building phase. In this study scanning was about finding out what was happening for all learners across a wide perspective of learning (Timperley et al., 2014). This included surfacing beliefs about what Learner Agency is (defining it) and why it is important, as a result a shared definition of Agency among schools in the community was created (Figure 3.3).

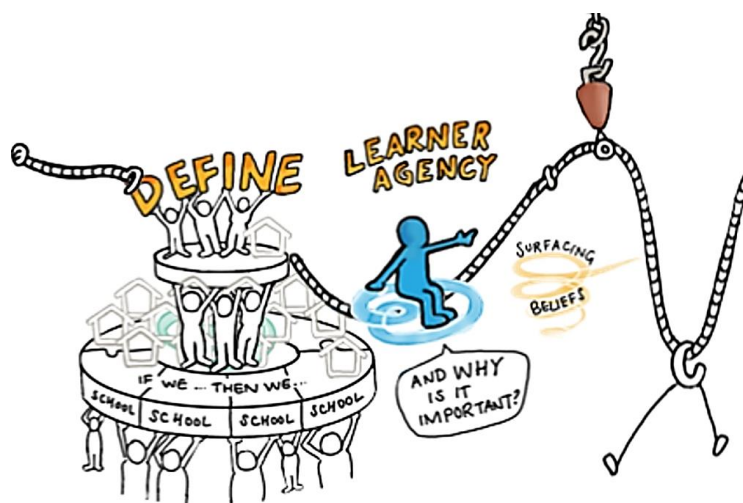


Figure 3.3

*Defining Learner Agency as a part of the Spirals of Inquiry to Build Knowledge
(adapted from Figure 3.2, reprinted with permission - Appendix R)*

Schools asked themselves if Agency is the outcome, how would we go about improving Agency in and across our schools, what are the principles underpinning Learner Agency? (see Figure 3.4).



Figure 3.4
*Underpinning Principles of Agency as a part of the Spirals of Inquiry to Build Knowledge
 (adapted from Figure 3.2, reprinted with permission - Appendix R)*

The analogy of a hammer and peg was used (see Figure 3.5) to illustrate that no matter which peg, or principle may be in focus, the schools believed that it would lead to increased Agency. These principles were identified as visible progress, authentic learning design, effective pedagogy, student ownership, language of learning, and growing comfort in VUCA.

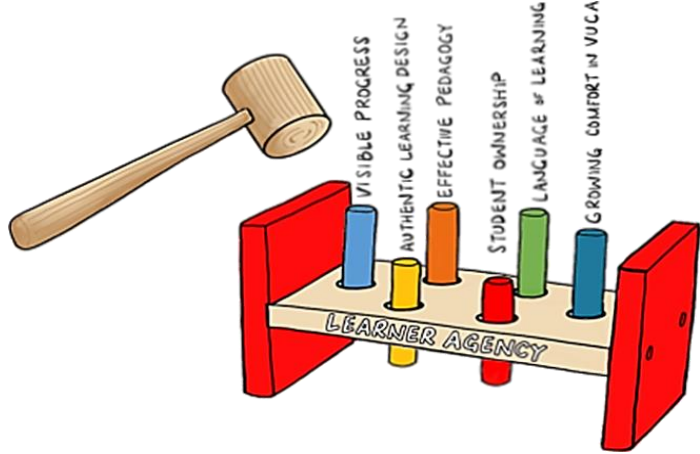


Figure 3.5
*Principles which lead to increased Learner Agency © Stonefields School
 (reprinted with permission - Appendix R)*

With these principles identified as being how you would go about improving Agency, discussion evolved to ask what you would expect to see as a living expression of those principles. This led to establishing what the improved capability

we would see in learners if those practices were happening in classrooms. Table 3.2 below presents the principles, examples of what you may expect to see in the classroom and the aligning capability.

Table 3.2

Principles of Agency (How Strategies) Developed into Practice (What), and Capabilities

How/ Principle of Agency	Example of what you may expect to see in practice	Capability
Progressions/ visible progress	Knowing How I am going - Progressions	Assessment Capable
Growing comfort in VUCA	Drawing from tools and strategies to know what to do when I don't know what to do. Being comfortable being uncomfortable	Resilient
Language of Learning	Learning Pit Learner Qualities, Learning Process	Using Tools and Strategies
Collaborative	Knowing how to collaborate and share perspectives	Collaboration
Student Ownership	Being Self Aware about what makes me tick, what I am and aren't so good at. Being motivated to further my learning and development	Self Aware
Engagement, Learning Design, & Teacher Effectiveness, Effective pedagogy	Assessment for Learning	Taking Action

At the time 'If we... then we...' statements were written, these were designed to drill deeper into practice and make something potentially quite abstract, very tangible and observable in practice which incorporated the capabilities. For example:

- if we offer more opportunities for learners to be involved in discussing their assessment results then we build students Assessment Capability
- if we give students the opportunity to think, pair, share during classroom discussions then we increase the student voice and opportunities for collaboration
- if we build in reflection time and strategies at the end of teacher workshops then we support students in becoming Self Aware

The researcher (myself), teachers, and students (where appropriate) were all required to have an 'inquiry and evidence-seeking mindset' beginning with the

scanning phase and throughout the duration of the spiral of inquiry framework. (Timperley et al.,2014). Teachers/ leaders as co-researchers were heavily involved in this phase of the inquiry.

3.6.2 3.6.2 Focussing

The focussing phase is about asking ‘what’s going to give you the biggest impact’ and ‘where will concentrating our energies make the most difference?’ (Timperley et al., 2014). The focussing phase was also a part of knowledge building in this study.

If Agency was to be a focus of classroom practice, we asked ourselves what does shift in Agency look like and how might we evaluate progress over time? This is where energy was concentrated believing it would have the biggest impact and make a big difference. Tools were explored, some of which were trialled. Both the CLARA tool and an NZCER Agency tool were considered (see Figure 3.6).



Figure 3.6

*Measuring Shift in Agency as part of the Spirals of Inquiry to Build Knowledge
(adapted from Figure 3.2, reprinted with permission - Appendix R)*

Consideration was made as to whether we would trial one, both, or if we would design our own. At the time the CLARA tool was not used for various reasons including readiness to engage, cost, and the pedagogy required to support teachers in using the tool effectively. The NZCER survey was completed, however it was soon apparent that teachers were not able to cut and use the data effectively or efficiently to inform their learning design. Therefore, the purpose of the data collection needed to be used as diagnostic evidence to inform the teaching and learning design, focussing the learning to enable Agency, and shift the locus of control. The decision was made to design a survey/ tool which forms a large part of this study through validating its use.

3.6.3 3.6.3 Developing a Hunch

Developing a hunch phase is about asking ‘what’s leading to this situation’ and ‘how are we contributing to the situation?’ (Timperley et al., 2014). Developing a hunch is a part of the making meaning phase.

The thinking and ground work that had been done to identify six capabilities enabled a group of teachers to use the six named capabilities to trial and test a series of statements that supported each capability which was the initiation of the ASpT (see Figure 3.7). This research, with the support of statisticians, refined and validated the survey internally; six statements for each capability proved to be reliable. Then the survey was validated externally across four primary schools which this study explores in Chapter 4.

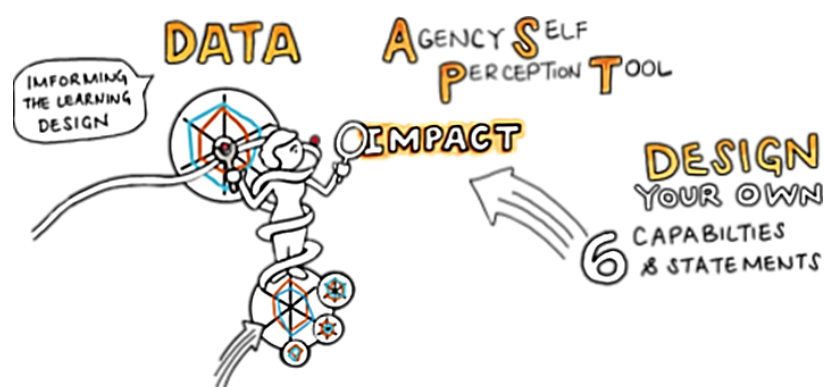


Figure 3.7
Developing the Agency Self-Perception Tool as a part of the Spirals of Inquiry to Make Meaning (adapted from Figure 3.2, reprinted with permission - Appendix R)

Professional conversations were important throughout all of the phases with teachers as co-researchers. These professional conversations were pivotal in each phase of the inquiry to check our assumptions before moving ahead. While the development of the ASpT could be considered as an innovation, Hattie (2009) cautions “there are various stages to innovation such as initiation, implementation, and evaluation - And most often the Innovation changes during the implementation” (p. 251). For this reason teachers were required to be ‘adaptive learning experts’ (Bransford et al., 2000, as cited in Hattie, 2009; Hatano & Inagaki, 1986, as cited in Hattie, 2009).

To help understand the relationship between information and weave together and synthesise existing information and new emerging understandings the document ‘Weaving a coherent curriculum: How the idea of ‘capabilities’ can help’ (Hipkins, 2017) was used. The document was helpful to support discussions about what the teacher does and what the student brings to enable capabilities (see Figure 3.8 & 3.9).

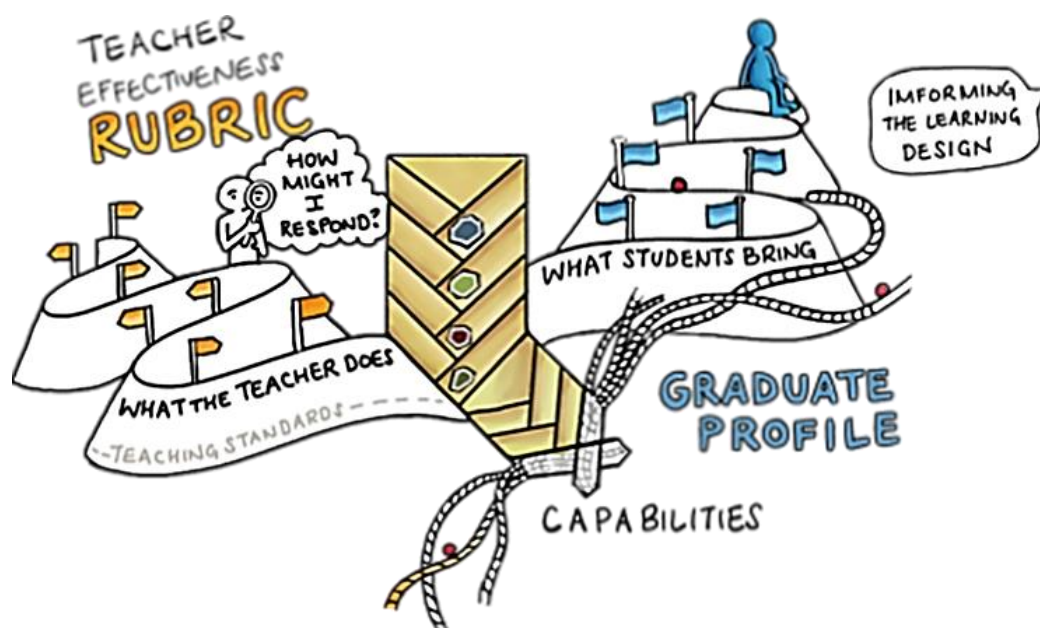


Figure 3.8

Developing a Teacher Effectiveness and Graduate Profile as part of the Spirals of Inquiry to Make Meaning (adapted from Figure 3.2, reprinted with permission - Appendix R)

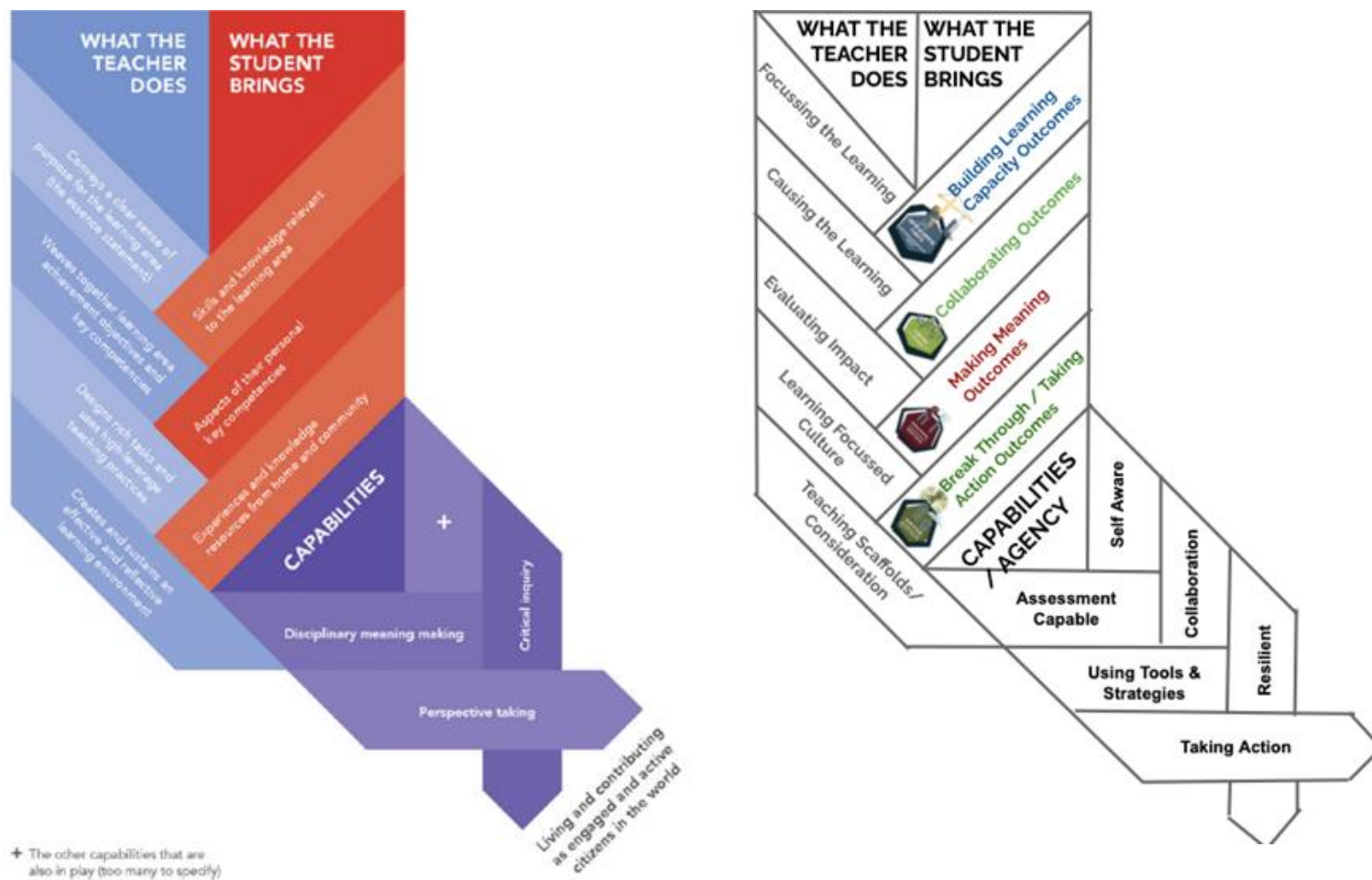


Figure 3.9

Interpretation of Hipkins (2017) Building Capabilities figure and Stonefields School context (reprinted with permission - Appendix R)

This was further developed into a Growth Cycle known as the BEST Model for the school (introduced in section 1.4.6.5) and the school’s Graduate Profile was redeveloped into the school’s current learning map which reflects the school’s local curriculum.

3.6.4 Learning

The learning phase is about asking ‘what do you need to learn’, ‘how will you design new learning’ and ‘how and where will we learn more about what to do?’ (Timperley et al., 2014). This phase aligns to the making meaning phase of the Stonefields School Learning Process. Designing new learning in relation to what learning matters and balancing knowledge and capabilities was important (see Figure 3.10).



Figure 3.10

*What Learning matters as part of the Spirals of Inquiry to Make Meaning
(adapted from Figure 3.2, reprinted with permission - Appendix R)*

Stonefields School undertook various methods to gain insights into what learning matters, what is critical to know, and what is critical to learn. The methods were not planned data sources for this study and therefore not included in the ethics, however they still had bearing on the study in that it complemented the inquiry. The school had discussions with various stakeholders including learners, teaching staff, parents, and the wider community, some were more formal such as empathy conversations with parents and others less formal such as general brainstorming sessions/ meetings with teachers. There were also surveys to the parent community during this time to learn and check understandings and validate the findings of the empathy conversations. The school surveys sent to the parent community indicated

that 36% of parents strongly disagree that the education their child/ren receives at Stonefields School is similar to their own school experience, while 48% disagreed, 11% were neutral, and 5% agreed. Another response indicated that 84% of the parents felt that the focus on learner capabilities was about right. The focus on subject knowledge (eg. Reading, Writing, Mathematics) is not enough according to 51% of the parent community, and 48% felt it was about right (S. Martin, Learning Achievement Celebration Speech, December, 17, 2019).

Decisions and priorities needed to be made about what can't be left to chance. This started to form a picture of what an eight year curriculum entitlement would look like for a Stonefields School learner (see Figure 3.11). Provocations were made to challenge peoples' assumptions and expectations such as "Children are with us in our care for 14% of their year, therefore what is a reasonable and doable ask of teachers?" (S. Martin, Learning Achievement Celebration Speech, December, 17, 2019).

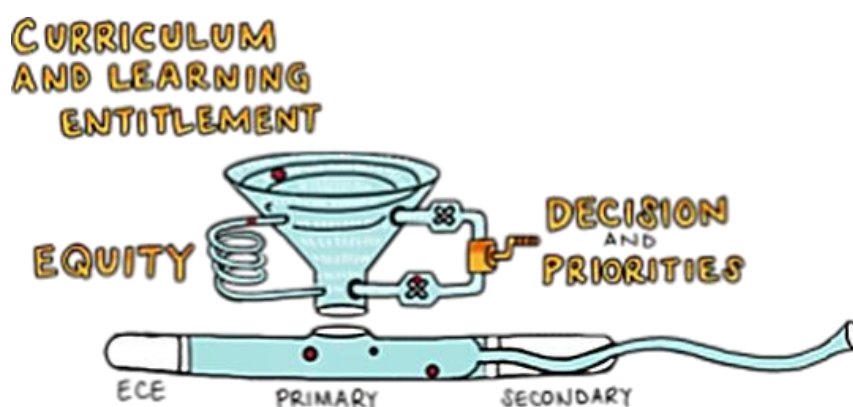


Figure 3.11

Curriculum and learning entitlement as part of the Spirals of Inquiry to Make Meaning(adapted from Figure 3.2, reprinted with permission - Appendix R)

Teachers at the school synthesised all the information, decisions, and priorities to review and refine the school's Graduate Profile. As previously explained in section 1.4.2, throughout this process the school changed the terminology to Learning Map as this better reflected the intent and purpose of the document and inferred that it is a learning journey rather than an end in mind. Key questions guided this process; what have we got already, what else should we consider, and what emerging understandings might influence our thinking. After synthesising the responses to

these questions teachers began to sort and group the information. Teachers then considered what do we want learners to know, do, and be like in relation to each of the identified outcomes (see Figure 3.12). This supported the write up of three big understandings and development of a series of indicators for each outcome.

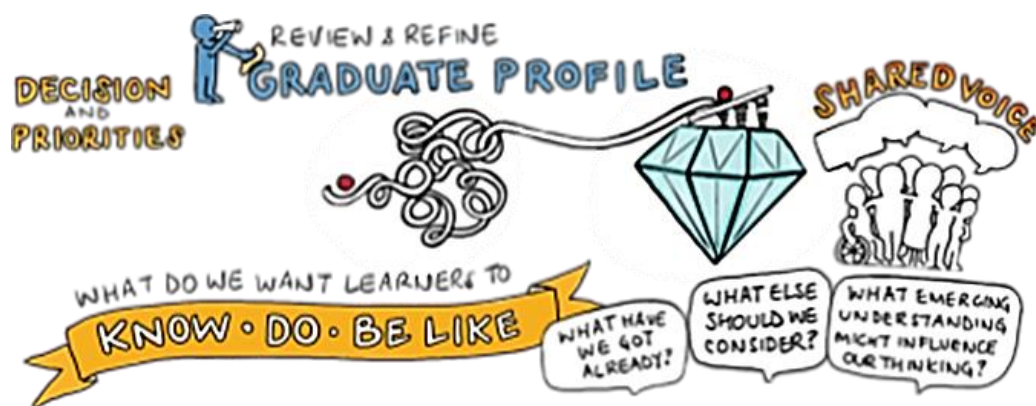


Figure 3.12

Reviewing and Refining Graduate Profile as part of the Spirals of Inquiry to Make Meaning (adapted from Figure 3.2, reprinted with permission - Appendix R)

3.6.5 Taking Action

The taking action phase is about asking ‘what will you do differently’ and ‘what can we do differently to make enough of a difference?’ (Timperley et al., 2014). This phase is about applying understanding in the context of the Stonefields School Learning Process.

The review and refining of the school’s Graduate Profile/ Learning Map was an 18 month duration, while the work is now usable, the school considers it to be a best attempt at a point in time and believe the document will continue to be reflected upon and further evolve. The Vision essence statements were rewritten, this created a framework to decide on how the content of the document would be structured (see Figure 3.13).

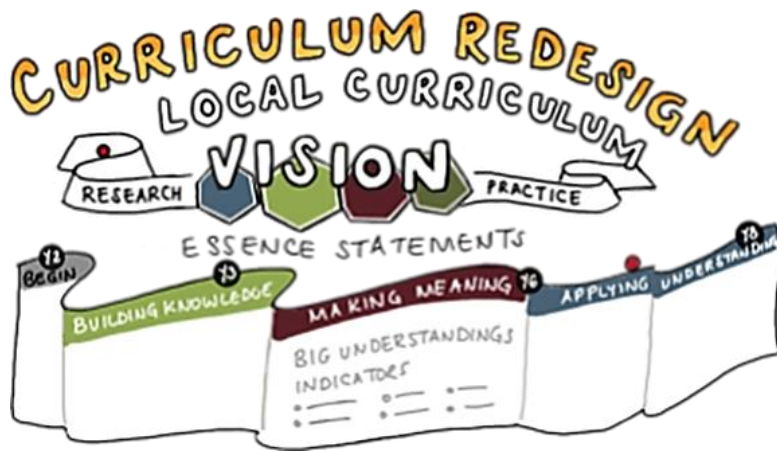


Figure 3.13

Graduate Profile informing Local Curriculum Redesign as part of the Spirals of Inquiry to Apply Understanding (adapted from Figure 3.2, reprinted with permission - Appendix R)

This work was shaping up to be a key document which would inform the school’s interpretation of local curriculum along with consideration of other progressions, concepts, contexts, and learning opportunities that learners would experience. Teachers are able to use the Local Curriculum/ Learning Map to design rich opportunities for learning. “Rich opportunities to learn increase the breadth, depth, and complexity of learning experiences for ākonga as they progress along their learning pathways” (Ministry of Education, 2019b, p. 7). Teachers are able to share impact/ insight stories about which teaching practices are having an effect on student learning. Ideally teachers build and share knowledge about what works and more importantly what doesn’t work and why (see Figure 3.14). As learners engage in these rich learning opportunities their learning can be captured and used to inform a rich record of learning. “Creating rich records of learning will ensure we can notice, recognise and respond to ākonga progress in ways that promote equity” says the Curriculum, Progress and Achievement Ministerial Advisory Group (MoE, n.d.d). This group is a part of Kōrero Mātauranga |Education Conversation, which is the Government’s undertaking to work in collaboration with New Zealanders across the sector and community to change the education system to make it fit for purpose in the 21st century (MoE, 2020).



Figure 3.14

Rich Learning Opportunities and Impact Stories as part of the Spirals of Inquiry to Apply Understanding(adapted from Figure 3.2, reprinted with permission - Appendix R)

3.6.6 *Checking*

The checking phase is about asking ‘have we made enough of a difference?’ (Timperley et al., 2014). As with any good teaching and learning, we must be able to check to see if we have had an impact and made enough of a difference. The ASpT is designed for educators at all levels to do exactly that, check in on cohorts or individual perceptions of their Agency and particular capabilities to see if there has been an impact. As is cautioned in section 5.4.1.3 sense making through conversations is important when checking in on data. Teachers also need to be careful to interpret the information as a snapshot and diagnostic evidence. For example, if we are to report back on a small group or class cohort of data it has the potential to over emphasise a certain area and there may not be enough data to make it robust. The issue being that with small numbers, random differences can seem disproportionately large due to the sampling size. Another opportunity for checking in would be to check in on the engagement of learners as presented in Figure 2.3. Individual snapshots and tracking are also possible as presented to learners in the focus groups for discussion (Appendix I), this is another possibility to check in on the difference and impact that is made.

3.7 TRIANGULATION

“Triangulation refers to the use of more than one approach to the investigation of a research question in order to enhance confidence in the ensuing findings” (Bryman, 2004, p. 1). This study uses triangulation to enhance the credibility of findings, both data triangulation and methodological triangulation occurs. Yin (1999) emphasised that triangulation occurs as data collection proceeds and is different to triangulation that occurs when findings are being interpreted. There are six different data collection methods explained in section 3.8, this supports data triangulation. Interpreting and presenting the data is more robust when triangulation occurs. “In using multiple sources of evidence, the goal during the data collection process is to amass converging evidence and to triangulate over a given fact” (Yin, 1999, p. 1217). Methodological triangulation occurs through using and combining three well known research methodologies, namely a two case study, narrative inquiry, and critical participatory action research. Different times, social situations, and people (Bryman, 2004) also have an impact on data triangulation. Therefore, using a two case study including teachers and students helped to ensure there is validity in the findings.

Triangulation facilitated validation of the methodology through different data collection methods. For example, if a student commented in a focus group and implied that they are confident, competent, and Assessment Capable in Mathematics, I had the opportunity to look for this and find evidence that the survey responses aligned. After triangulation, student identities were deleted from the data in line with ethics approval.

3.8 DATA COLLECTION METHODS

This study uses three different research methods (case study, narrative inquiry, and critical participatory action research), these each mention the broad variety, multiple types of information, and diversity of data collection methods (Bergold & Thomas, 2012; Creswell, n.d.; Yin, 1999). In fact, the more techniques are used in the same study, the stronger the evidence will be (Yin, 1999).

Zygmunt Bauman’s notion of ‘fluid identities’ resonated with Thomson & Gunter (2011) they argue that the inside/ outside binary may be helpful and also limiting which resonates for this study too. They analysed notes, linked together subjective experiences with social relations in which they were embedded, and

realised they were neither inside nor outside of the school, but rather engaged in messy, continuously shifting relationships. For the purpose of this study the terminology insider/ outsider is going to be used to describe the ‘fluid identity’ and shifting role of the researcher (outsider) as opposed to the other identity of being a teacher in the school (insider). Some of the data collection methods below were all a part of the messy inquiry/ study, some were more for the purpose of being an insider (teacher), while other methods were purposefully used for the role of being an outsider (researcher).

“Educational researchers are concerned about the ways in which researcher identity can influence practice and findings for better or worse effect” (Thomson & Gunter, 2011, p. 17). The outsider data collection procedures in this study were focus groups incorporating mediated conversations, a survey tool namely the ASpT, and student artefacts (Appendix I), while questionnaires, the researcher journal, and professional conversations are considered as insider methods. Insider methods were outside the scope of reporting in this study yet are mentioned so the entirety of the researchers information sources are known.

3.8.1 *Focus Groups*

Focus groups are similar to mediated conversations. I provided systematic guidance focussed on the research questions. The main idea that differentiates these two approaches is that mediated conversations are about a particular artefact. Interaction within a focus group is a part of the method, encouraging participants to talk to one another, “asking questions, exchanging anecdotes, and commenting on each others' experiences and points of view.” (Kitzinger, 1995, p. 299).

Focus groups are frequently used within participatory research; participants are given the opportunity to enter into conversation with each other, in a safe setting, and to converse about aspects of the study; Learner Agency (Bergold & Thomas, 2012).

3.8.2 *Mediated Conversations*

Mediated conversations have been considered to be an innovative method for generating rich qualitative data on complex issues, such as education contexts (Cowie & Hipkins, 2014). This method highlights mediating participants’ actions and thoughts through the role of artefacts and audience (Cowie & Hipkins, 2014).

Mediated conversations occurred within the focus groups with learners to discuss Appendix I and Appendix N. These were a part of the focus group conversation. Appendix I is a sample of what was provided to each learner as a material artefact, it highlighted individual shift and progress of the capabilities over time and presented particular indicators of strengths and weaknesses for consideration. Each learner received their own personalised copy of this ‘report’. Appendix N illustrates gender difference in perceptions of agency, this was shown to the focus groups to generate conversation about what other possible factors, variables, or constructs may impact learner agency. Material artefacts have the advantage as in most cases it provides rich evidence of practice, it can be revisited, and participants can ask questions of it and each other (Cowie & Hipkins, 2014).

“The combination of talk and the artefact to help participants express and make meaning serves to ‘multiply meaning’ (Lemke, 1998) within the conversations” (as cited in Cowie & Hipkins, 2014, p. 9). Earl and Timperley (2009) highlight that “using evidence to improve learning is most powerful when conversations take place among the learners themselves” (Earl & Timperley, 2009, p. 53).

3.8.3 *Learner artefacts*

Artefacts that participants use in the assembly of narratives have been considered complex and require consideration (White et al., 2009). Consideration was given to artefacts through the use of mediated conversations which encouraged participants’ thinking (Cowie & Hipkins, 2014). The sharing of ideas about how evidence of the capabilities can be used to inform learning design is constructed by the scenarios and discussion of Appendix I (Cowie & Hipkins, 2014).

In some research it has been important that participants have had ‘free hand in the selection of artefacts’ (Cowie & Hipkins, 2014). In the context of this study, I prepared and printed artefacts by generating an individual snapshot for each participant of their ASpT data (Appendix I). The process of reflection and interpreting learning artefacts was different for each of the participants involved, and when discussed required trust, support, and mutual respect.

3.8.4 *Questionnaires/ Tools*

Questionnaires are designed and administered for school use often within schools. These can be based on the needs of a class and provide data for individual teachers or at a larger scale across the school. As a part of the ethics clearance of this study I applied for access to the school database. All data was anonymous, and pseudonyms were used where necessary. Questionnaires provided an insight and overview of some quantitative data and some qualitative data insights were a part of my own reflections and journaling. While the surveys are not presented as a substantive part of the study, it is important to note that they had been administered within the setting.

The ASpT was administered to all learners via a Google Form which is discussed further in section 3.9.4. This tool was used for Quantitative Results in Chapter 4.

3.8.5 *Researcher Journal*

The study of stories, narratives, or descriptions of series of events is common in narrative inquiry (Pinnegar & Daynes, 2007). Creswell (n.d.) noted that stories may be recorded by research participants in a journal or diary. This study in particular was supported by the use of a Google Site where meeting minutes, professional learning conversations, resources, artefacts, inspiration, and reflections were documented. This site was made available to all teachers and to the BoT of the school so that the process was transparent to the co-researchers/ other teachers. Similarly, to the questionnaires, while the site isn't directly referenced, the method is worth consideration as it enabled me to make sense of various inputs of information and operate inside and outside the study. The site as a journal is an example of an insider method.

3.8.6 *Professional Conversations*

Learning conversations, an inquiry habit of mind and relevant evidence are the qualities that provide the basis for a powerful collaborative inquiry improvement process. (Earl & Timperley, 2009). Timperley (2015) identified that the enablers for professional conversations are structured around processes, resources, knowledge, culture, and relationships. "A key assumption is that professional conversations should promote the learning of the participants in ways that influence thinking and practice, and, as with student learning, it should be visible" (Hattie, 2009; 2012, as cited in Timperley, 2015, p. 5).

This study focussed particularly on professional learning conversations between myself as the researcher and key teachers about Learner Agency. “Hattie (2012) argues that the most important source of feedback for a teacher is his or her student learners” (as cited in Timperley, 2015, p. 27). Evidence from learner focus groups, mediated conversations, tools, and artefacts was used to provide feedback, ask questions, examine, and think about what the evidence means (Earl & Timperley, 2009). This was of benefit to this research in that it elicited how the ASpT could be used in particular contexts and provided learners thoughts on how evidence of the capabilities could be used to inform learning design.

3.9 QUANTITATIVE PROCEDURES AND ANALYSIS

3.9.1 *ASpT Participants*

For the purpose of this study 1000+ learners from Year 4 - Year 8 from four Auckland primary schools are the source of quantitative data collection. The Learner Agency Self-perception Tool was administered to all Year 4 - 8 learners across four primary schools at the end of the 2018 school year. These responses were used to validate the tool.

White et al., (2009) described the ‘Keeping Connected: Young People, Identity and Schooling’ project’ as an instrumental case study. They identified this as the intention was not focused on the individuals involved, instead it was the insights they provided on an issue. This study could be thought of as instrumental in this regard as it is not about the learners involved, but on the insights they provide about Learner Agency and their perceptions when correlated across a larger cohort so that trends are more visible and reliable. The selection of multiple schools was used to gather the quantitative findings and lead to a “better understanding, and perhaps better theorizing” (Stake, 2005, p. 446).

Upper primary and intermediate classes were chosen as they have greater school experience to draw from. The tool was validated for the use of Year 4 - 8 learners as younger learners' literacy and interpretation was questionable and provided too much variance in relation to the rigor of the tool.

3.9.2 *Development of the ASpT*

The school had trialled and used several other surveys for different purposes prior to the ASpT. The school historically completed surveys designed and administered by the school to inform next steps, planning, and strategy. A survey under development at the time by NZCER was also completed. To better meet the information needs of teachers and to be able to use the data to inform the learning design, the development of the ASpT was undertaken. The prior work was pivotal in the design of the tool, items were brainstormed and grouped with the capabilities which had been previously identified.

The initial tool was too long, with a total of 66 items, each capability had a range of 6 - 16 items. A team consisting of myself, researchers, a statistician, the school principal, and teachers as co-researchers were involved in the process of refining the tool. Learners at Stonefields School completed this initial version which enabled the team to independently look at items and items of lower relevance were omitted. When we pre tested the tool, the team used Principal Axis Factoring with Varimax Rotation for Factor Analysis which is used in most Learning Environment Studies. Items that had loading of <0.4 were deleted from the tool.

At this stage of refinement, a four point Likert Scale was implemented as previously the learners had a 6 point scale and an option to submit a response indicating that they didn't understand the question/ item. The response scale was altered to a four-point Likert scale from Strongly Disagree - Strongly Agree. This made it easier and more straightforward for learners to respond to the items. With increasing options of a positive response as was in the six-point scale it introduced room for the scale to be interpreted differently by learners and meant it somewhat forced learners to respond with a positive or negative perception. Equally a neutral stance was discouraged as would be possible on a three or five point scale. In my Masters Thesis (Benson, 2012) it was proven with use of the Technology Rich Outcomes Focussed Learning Environment Inventory (TROFLEI) that four-point scales were suitable and appropriate for use with upper primary learners in NZ schools. The TROFLEI scale was altered from a five-point Likert response scale to the four -point scale as used with the elementary version of the Questionnaire on Teacher Interaction (QTI).

The final version of the ASpT consisted of six capabilities each with six items as presented in Appendix J. This version is what was used for validation in this study across the four primary schools.

3.9.3 *ASpT Permissions*

The ASpT had been completed by the schools. I provided schools and their BoT's with an Information Sheet (Appendix E) and required them to give approval for pre-gathered data sets that the school had administered/ collected to be used for this research (Appendix F). BoTs were assured that I would be sensitive to the information and data would remain anonymous. Parents were notified that the BoT had given permission for the pre gathered data set to be used as a part of this study and that no identifiable information would be included (Appendix G). Schools distributed this information as they saw fit via email or newsletter or other school forms of communication. All processes involved adhered to New Zealand Education Association for Research ethical guidelines (NZARE, 2010).

3.9.4 *Administration of the ASpT*

The ASpT was administered to the learners via Google Forms. Each school had a copy of the form, and the majority of the schools chose to add the learner email addresses where this was an option. This allowed an administrator to push notification reminders to those learners who were either absent or did not complete the ASpT for other various reasons. This enabled easier tracking of learner responses and meant that inputting information to be used for correlation purposes was easier to align. For example, student email, gender, ethnicity, year level, OTJ, and language data were able to be downloaded from schools' Student Management Systems (SMS). This was aligned through the use of emails to match individual students ASpT results within a spreadsheet. Where this was not possible it required more manipulation and consideration of the data by the administrators. Again, this information was consented to by Schools and their BoT's to obtain the pre gathered data sets and identification of students through the use of their emails were omitted within the study so that all learners remain anonymous.

It is important to note that all responses were collected within a two week time frame; however teachers were able to choose the most appropriate time for learners

to complete the survey and allowed for this during the school day. Once the ASpT had been completed, administrators within each school made sure that I was able to access required information and variables. Data was available to me due to my role in the school and in using the data for the purpose of this study it was ensured that any identifiable data was removed.

3.9.5 *Validation of the Agency Self-perception Tool*

To validate the ASpT the team and I looked at a complete factor analysis and cronbach alpha coefficients were calculated to ensure the tool was reliable. For further details and information see section 4.2.

3.9.6 *ASpT Analysis*

Quantitative data was collected through the use of a Google form which had the ASpT loaded, and learners' email addresses were able to be directly embedded to accurately track responses. Data was analysed using Google forms and spreadsheets, statistics were able to be generated to show a summary of all fields and individual responses. These are presented in Chapter 4.

3.10 QUALITATIVE PROCEDURES AND ANALYSIS

Qualitative Data was captured using six learner focus groups and one teacher focus group. This ratio reflects the student/ teacher population. No effort was made to compare the incidences of comments between the learners and teacher participating groups. The risk in doing so would skew the data because of the ratio of 6:1 groups and audio recording time.

3.10.1 *Learner Focus Groups*

The learner focus groups were formed from one of the four primary schools (Stonefields School). This enabled me to gain a deeper understanding of the existing practice in a New Zealand School. Mixed gender, year level, and achievement levels were represented within the six focus groups. Parental permission was sought for all participating learners, they had freedom to refuse without any consequences as addressed in section 3.10.3.

Context: New Zealand Primary School
6 Learner Focus Groups & 1 Teacher Focus Group

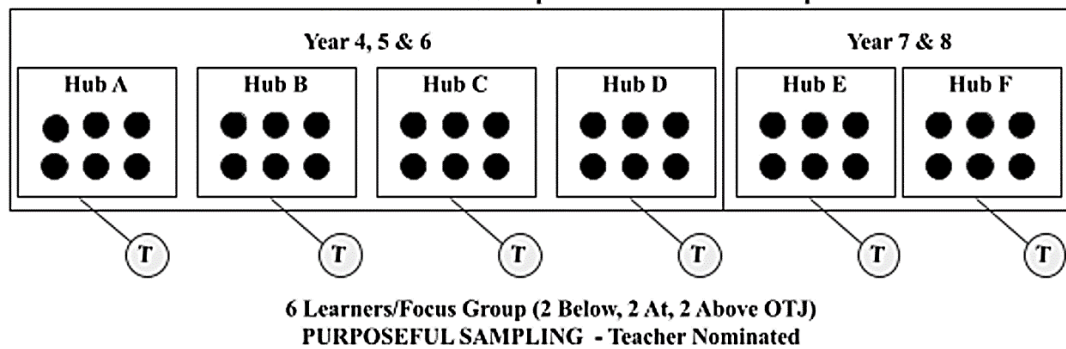


Figure 3.15

Depiction of the Qualitative Data Focus Groups

Qualitative Data collection which were the focus groups took part in the second half of Term 3 in 2019. This meant that the learners had more than 6 months of instruction in their learning hubs with their teachers, and perhaps, more able to talk about their learning and articulate practice that ‘occurs’ in their hub. Learners had also experienced and completed the Agency Self-perception Tool during that school year and at the end of 2018. The questions that were used to guide the conversation and discussion of the learner focus groups can be found in Appendix K.

3.10.2 Teacher Focus Group

In addition to the six learner focus groups, there was one teacher focus group formed by one representative teacher from each hub. Teachers within the focus group represented various and different years of teaching experience, years employed at Stonefields School, gender, ethnicity, and involvement in the Agency inquiry. Teacher permissions are addressed in the following section, 3.10.3.

A disciplined approach to collaborative inquiry transforms schools into more innovative learning environments where those involved gain the mindset required to design new and powerful learning systems (Timperley et al., 2014). Bergold and Thomas (2012) identify that initially it is best from a scientific perspective to “evade demands for pragmatic utility” (p. 9) for the practitioners. I am a colleague and recent classroom practitioner, dealing with data collection and analysis in a sensible and realistic way was taken into consideration along with all the other heavy demands and workload of a practicing teacher. The data collection and analysis are useful for the teachers and made their participation in this study as co-researchers

and collaborative inquirers beneficial for their own teaching experience. The questions that were used to guide the conversation and discussion of the teacher focus group can be found in Appendix L.

3.10.3 *Focus Group Permissions*

All focus group participants were required to give consent to be a part of the study. All learners and teachers were provided with an information sheet (Appendix C) and were required to sign a consent form (Appendix A - Learners; Appendix B - Teachers). Learners also required their parents' permission to be involved in the study (Appendix H) and they were informed about the study (Appendix D). All participants were given the right and opportunity to withdraw at any stage without it affecting their rights or any of my responsibilities. Involvement in the focus groups was entirely voluntary.

3.10.4 *Focus Group Administration*

All focus groups were held in a shared space which is often used by teachers for professional learning and the learners during their library visits. This meant that participants were comfortable in the room, and it was a familiar setting to them. It also reduced the distractions and/ or interruptions that could occur in their own learning spaces. The focus group conversations ranged between 23 and 46 minutes long, the average focus group conversation lasted 36 minutes. All participants were given the opportunity to ask questions and clarify any information prior to the focus groups starting.

The voice memos app on my personal, passcode protected, iPhone was used to record focus groups/ mediated conversations. These were uploaded into a folder in Google Drive and were able to be opened and replayed using the Music Player for Google Drive. The folder was able to be shared with the transcriber and the services of Transcription Puppy were engaged to complete this.

3.10.5 *Focus Group Analyses*

Three main documents were key to enabling the focus group analyses, the report or in this case Chapter 5, highlighted transcripts, and thematic analysis. Many researchers choose to present descriptives to establish occurrences of the thematic analysis of qualitative data. Frequency analysis in qualitative coding needs to be used

very carefully. NVivo12 was used for analysing the qualitative data, thematic analysis created overarching themes which were used as subheadings throughout Chapter 5 to organise the qualitative findings and quotes from the focus groups.

3.10.6 *Sample of Convenience*

The participants were previously discussed in sections 3.10.1 and 3.10.2, indicating that all learners and teachers had varied traits and a range of factors were taken into consideration for the selection of focus group participation. This section addresses the fact that all focus group participants were a sample of convenience. The availability of the participants and ensuring an adequate range across different variables were represented within the focus groups, was the main reason for this to occur.

3.11 ASSUMPTIONS/ CONSIDERATIONS

Assumptions and considerations that were made during the study have been organised in the following sections.

3.11.1 *Exposure to the ASpT language*

The ASpT was designed with thirty six statements and six overarching capabilities. The language in some of the statements may have been difficult for some learners/ schools to access. An example is a statement which references the Learner Qualities or Learning Process. As explained in section 1.4.3 Stonefields School has a language of learning and those learners would have been familiar with the language used. Likewise, schools which have a Learning Process or Qualities of their own would have been familiar with the language. Other schools/ teachers may have been required to explain to their learners that ‘Learner Qualities’ are similar to their schools’ virtues or values, depending on the language and framework their school uses.

3.11.2 *Exposure and understanding of Learner Agency*

The use of the phrase Learner Agency varied within and across schools. This did not impact learners' ability to complete the ASpT, however it was taken into consideration and learners' interpretation of the statements may have altered their response. Learners identified that the scale changes as students learn more about Learner Agency and each of the capabilities. This is a consideration to keep in mind and is evidenced in section 5.4.1.1.

3.11.3 Responses to the tool and participation during conversations

Learners were assured that pseudonyms would be used that would ensure their anonymity in the publishing of this study. Learners were reminded of this prior to participating in any focus group conversations, also that there were no ‘right’ or ‘wrong’ answers. The ASpT is often completed with a learners Google login, this was for the purpose of the schools/ teacher to cut the data, also to make sure that other correlated information such as ethnicity and achievement data was aligned with the correct ASpT responses. At the time of analysing and presenting the data, all traces of identity were removed. Honest and true answers/ responses were therefore assumed while conducting this study.

These assumptions and considerations were made prior to and throughout the duration of this study. The next section will discuss the ethical considerations that have been made.

3.12 ETHICAL CONSIDERATIONS

Ethical considerations have been considered and presented according to the different stages of this study; before, during, and after data collection. “As a researcher you are both ethically and legally bound to protect the participant in your research. The role of the researcher is to minimize the potential risk” (Howitt, 2008, p. 4).

3.12.1 Ethical Issues Before Data Collection

Permission was obtained through Curtin University before data collection, this ensured that the study had support and met acceptable standards. A candidacy proposal was submitted, and an ethics form was reviewed, approved with the following approval number (HREC number HRE2016-0311-05). The support and approval of each school and their BoT who were contributing to the ASpT data were informed (Appendix E) and signed consent (Appendix F). This meant that individual consent for the ASpT responses was not required as I was applying to the BoT to access a pre-gathered data set. Parents were notified of their BoT’s decision (Appendix G). The schools were each completing the ASpT irrespective of this study. The Stonefields School BoT approved an application for me to apply to the MoE for a study award to complete the study during 2021. I was successful in my application and was granted 32 weeks leave to complete the study.

Initially teachers identified learners within their hub who would participate in the study, then the learner was invited to participate; they were given verbal and written information about the study. Only six learners were required from each of the learning hubs, a diverse sample of gender, year level, and academic ability was required. Teachers helped identify students through using the Student Management System, e-Tap, where student spreadsheets with relevant information were able to be generated. After students had been identified they were talked through an Information Sheet which provided them with the aims of the study and the nature of their involvement (Appendix C). Most identified learners chose to be a part of the study. There were two instances where other learners were required and chosen by their teacher. One learner was absent on the day of the focus group conversation, the other learner chose not to participate. Consent forms for students and their caregivers were used (Appendix A - Learners and Appendix H - Primary Carers/ Parents). Signing the consent form indicated a willingness to participate in the study, however students were aware at all times that they had the option to withdraw without prejudice or negative consequences. Caregivers and participants were assured they would be informed and updated on the study through newsletters, email, and website information if necessary.

Teachers were a sample of convenience as discussed in section 3.10.6. The factors for consideration as discussed in section 3.10.2 consisted of teaching experience, years employed at Stonefields School, gender, ethnicity, involvement in the Agency inquiry, and availability of the teacher. Teachers were told that a range of factors were taken into consideration and were given the option whether they wanted to participate without any repercussions if they chose not to. All identified teachers willingly participated and consented.

The ethics committee reviewed this study and identified that it is 'low risk', prior to data collection.

3.12.2 Ethical Issues During Data Collection

The data collection phase required careful ethical consideration especially as the study involved working with learners. Data collection was inside school hours and deemed to be a part of regular classroom activities and routines so there was minimal disruption to the learning of the participants. Hattie (2015) states there is a need to hear

the students' view and include their voice about the impact in learning and teaching, therefore their participation is essential. Using learners in this study required ethical and legal responsibilities that needed to be carefully adhered to. In all phases of research, the researcher has to reflect the basic ethical values towards the participants; these include respect, research merit and integrity, beneficence, and justice. The relationship between the researcher and participants is shaped by these values which results in trust, mutual responsibility and ethical equality (Howitt, 2008). Living the shared story of narrative inquiry is also reliant on the nature of the relationship and constructing it so that both voices are heard (Connelly & Clandinin, 1990).

Focus groups and mediated conversations were convened at a time convenient for the teacher, these often took place outside the classroom to minimise disruption and background noise. The use of audio recordings were used as I was interested in the conversations and stories that the participants shared. These methods captured the information that was required, and they were considered less intrusive than video. Videoing can be problematic as a form of data collection (Howitt, 2008).

3.12.3 Ethical Issues After Data Collection

Evidence was a main focus for ethical consideration after the data collection. Evidence in this study was mainly narrative. Earl and Timperley (2009) identify that evidence is made up of symbolic representations of some underlying ideas and have a degree of uncertainty. They noted that whether evidence consists of statistics or stories, the collection, analysing, and summarising is not infallible. However, "the value and utility associated with evidence comes from the care with which the information has been collected and collated and from transforming it into knowledge by shaping it, organizing it and thinking about what it might mean" (Earl & Timperley, 2009, p. 7).

As this study used focus groups of Year 4 - 8 learners, ethical consideration regarding generalisation across other year levels and classes was important. Robinson (1950, as cited in Sammons 1989) refers to a term 'ecological fallacy', where the interpretation of results pertaining to a certain year level could be generalised across year levels or the entire primary population. Carefully defining some of the teaching and learning activities within the class was necessary for the research, and ethical consideration was given to how this is incorporated. As a critical participatory action

research, the involvement, monitoring, and intervention of learning was carefully considered alongside teaching roles, for myself, and the co-researchers.

The information relating to data and storage of files was included in the information sheet and consent forms for parents, learners, teachers, schools, and BoT's. This was in relation to the use of data for this study, in some cases it may be required that further consent is sought for future publications, research, or presentations. Storage of data was mainly electronic and kept on my password protected computer, in some cases information was stored in a Google Drive account. Some data was shared with the co-researchers (teachers) of this study, this will be kept for a period of 5 years at which point the data will be destroyed as is required by Curtin University ethics approval for this study. In some instances, some information will remain as a part of the schools' pre-gathered data sets and will be destroyed as and when they see fit.

An ethical issue that arises when writing and publishing research is 'plagiarism' - using someone else's work, idea or words as though they are your own. Ensuring that all data collection was filed, stored, retrieved, and referenced correctly was important in this study. As there were different participants and forms of data collection coding/ abbreviation was used to reference the 'evidence' and ensured confidentiality of participants. Each different conversation or participant was also numbered so that data could be easily traced back if required, this coding/ abbreviation is presented below. Much of the coding was not required for the purpose of writing up this study, however it is still worthy to note the process I used in making sense of the information that was collected, collated, and/ or omitted.

- Data Collection: Focus Groups (FG), Questionnaire (Q), Researcher Journal (RJ), Student Artefacts (SA), Professional Conversations (PC).
- Participants: Teachers (T), Class (C), Group (G), Students (S).

For example, a student who commented during a focus group from the second learning hub would be referenced as 'LFG2'. The focus group and all participants received the one reference code, learners and teachers were not individually allocated a reference code. This made it hard to illuminate comments from a variety of participants in the discussions as presented in Chapter 4, however the pros of assuring

anonymity for participants outweighed the ability to identify individual comment sources as opposed to a group source.

Bracketing (epoche) is the act of suspending judgement about the natural world (Husserl, 2012, p. 3). I was required to suspend previous assumptions, opinions, and beliefs about Learner Agency and take a fresh perspective towards this phenomenon under examination (Creswell, n.d.). Bergold and Thomas (2012) refer to “personal reflexivity” (p. 54) which is a focus on personal assumptions, values, experiences etc. that shape the research. They highlight that reflexivity is particularly important for action researchers who are intimately involved in the subject, context, and other stakeholders within that context. This is particularly important for this study as I am passionate about Learner Agency, an employee of the school and the learners and co-researchers (teachers) are also stakeholders in the context of this study.

3.13 SUMMARY

This chapter presents the methodologies pertaining to this particular study, it outlines the research title, significance, and research questions. The research design discusses the research methods and the spiral of inquiry framework.

Triangulation and data collection methods are also presented in this chapter. The procedures and analyses for both qualitative and quantitative data collection methods are discussed, followed by assumptions, and ethical consideration before, during, and after the study.

The next chapter is Chapter 4; it discusses the validation of the ASpT and presents the quantitative data.

Chapter 4

QUANTITATIVE DATA

4.1 INTRODUCTION

This chapter presents the quantitative data of the 1089 Year 4 - 8 students who completed the Agency Self-perception Tool (ASpT) across four New Zealand primary schools. The first part of the chapter presents the validation of the tool. Results from the ASpT are presented in tables and figures with an explanation of what the data means. Comparing what is happening in schools, identifying capabilities of Learner Agency, and correlating agency data was required to support the aims of this study. In particular associations with gender, ethnicity, year level, achievement/ overall teacher judgements in Reading, Writing and Mathematics, school differences, and English spoken at home were made. The ASpT was an important part of this research as it explored a school's solution in response to 'How do you measure shift in Learner Agency and how might you evaluate progress over time'? It also provided data as evidence to inform teaching recommendations and reflecting on how to best focus, cause, and facilitate learning which are aims of this study. It is acknowledged that quantitative data and validation was a skeleton approach to ensuring validity of the ASpT. Many other approaches could be applied for further research, however fell outside the scope due to the qualitative nature of the thesis. Further qualitative data is covered in Chapter 5.

4.2 VALIDATING THE AGENCY SELF-PERCEPTION TOOL

The ASpT was used to measure students' perceptions of how agentic they were by responding to statements in relation to six different capabilities. This provided the quantitative data for this study. Quantitative data was analysed using IBM® SPSS version 25. This section looks at the validity and reliability of the survey in a New Zealand Primary context as it was the first time that the survey had been administered since being created and tested early in 2018. This section presents the Cronbach alpha, mean correlation, mean value, standard deviation, and F value in support of the ASpT.

4.2.1 *Reliability*

To ensure the ASpT was a reliable survey, Cronbach alpha coefficients were calculated. This measured each of the six items within each of the six scales/

capabilities, it highlighted that each scale is internally consistent. It is important that the reliability and internal consistency relating to any learning environment survey is established within the particular setting and context that it is used. Through establishing this, other results are therefore able to be trusted. There have been other Learning Environment Surveys used and researched in New Zealand schools (Benson, 2012; Chard, 2011; Koul, Fisher & Shaw, 2011; Snell, 2012; Snell-Siddle, 2012). The ASpT was designed and developed by Stonefields School. This study reports the first trial of the tool, determining the validity, and reliability is paramount in this research to inform and support further use of the ASpT in New Zealand primary contexts.

4.2.1.1 Cronbach Alpha – Internal Consistency

Cronbach Alpha scores were adopted to measure reliability. In this research the Cronbach alpha scores ranged from 0.60 to 0.79 for Self Aware, Assessment Capable, Collaboration, Resilience, Using Tools and Strategies, and Take Action. These values all indicate that the ASpT is reliable (Cronbach, 1951) for use in primary schools in New Zealand as they are all acceptable levels. For each scale, the internal consistency reliability of the ASpT using a generally-applied ‘rule-of-thumb’, this range is considered acceptable (De Vellis, 1991; George & Mallery, 2001). In Table 4.1 the Cronbach alpha coefficient scores/ alpha reliability assures the use of the ASpT in New Zealand primary school classes, particularly in Year levels 4 - 8.

4.2.1.2 Mean Correlation – Discriminant Validity

Traditionally the mean correlation score has been used in learning environment research.

Koul, Fisher, and Shaw (2011) reported that determining if the different scales in the learning environment questionnaires are measuring different aspects of the learning environment is indicated by the discriminant validity. In this research the six scales/ capabilities are presented in Table 4.1 with the discriminant validity calculated and presented as the mean correlation. The scales/ capabilities of the ASpT are all measuring distinct aspects of Agency although there is some overlap within the survey indicating it is measuring a part of a whole. For this reason, we did not report Factor Analysis; when we started doing Factor Analysis all scales were indicating it was one construct.

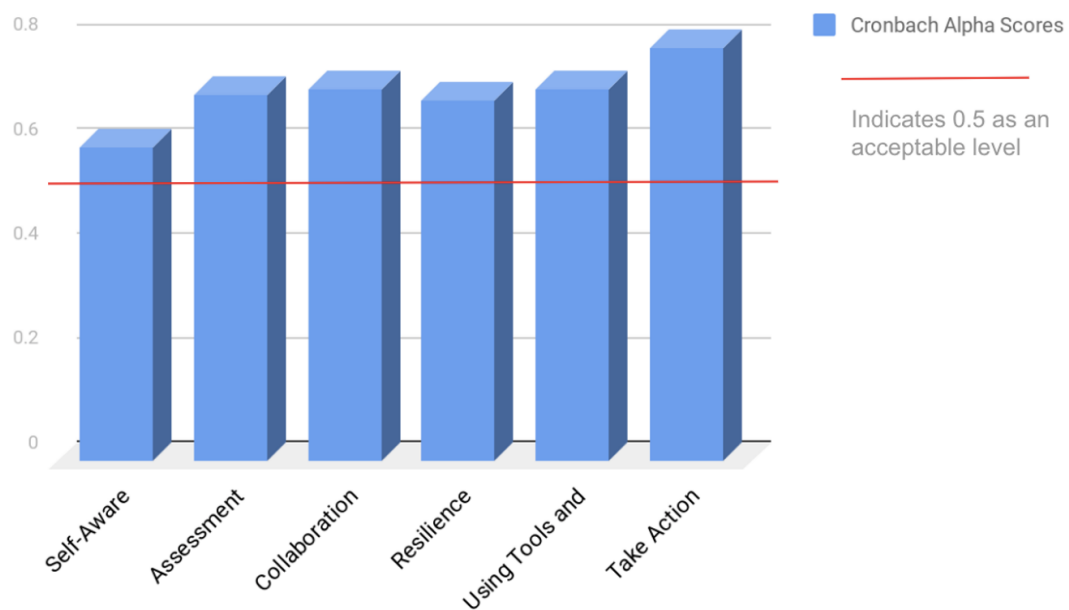
Table 4.1

Scale Mean, Standard Deviation Internal Consistency (Cronbach Alpha Reliability) and Mean Correlation for the Capabilities of the Survey

Scale	Mean	S D	Alpha Reliability	Mean Correlation
Self Aware	3.26	0.42	0.60	0.55**
Assessment Capable	3.01	0.47	0.70	0.61**
Collaboration	2.99	0.50	0.71	0.57**
Resilience	2.99	0.49	0.69	0.63**
Using Tools and Strategies	3.01	0.49	0.71	0.61**
Take Action	3.03	0.49	0.79	0.63**

** $p < 0.01$, *** $p < 0.001$ $N = \text{Total } 1089 \text{ students}$

This is confirming that we can keep these scales within the same survey questionnaire. The ASpT measures six different aspects of Agency. The survey is not measuring six different things, rather it is measuring Agency which is considered to be the whole. This data from the group of 1089 students (N) across the four schools indicates that the scales of the ASpT can be used with confidence in a primary New Zealand setting.



Indicates 0.5 as an acceptable level (red line) (Cronbach,1951).

Figure 4.1

Cronbach alpha scores for each scale/ capability of the ASpT

4.2.1.3 Mean Value

The mean value which is the average score of the items within each scale/ capability is presented in Table 4.1. Comparisons and interpretations of the students' self-perception of their Agency can be made by looking at these scores. It indicates which of the aspects of Agency is perceived to be stronger or weaker across the cohort of these 1089 students. Of interest these students perceive that their Self Awareness is much stronger than any of the other capabilities.

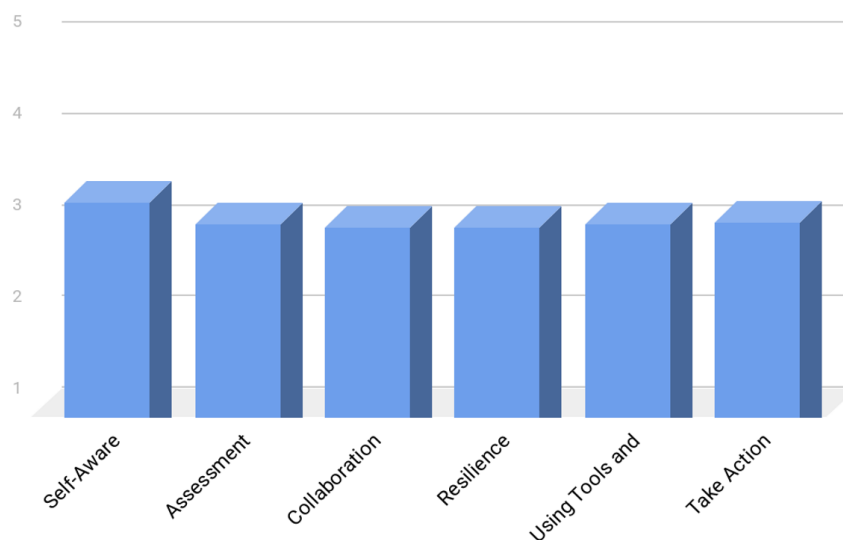


Figure 4.2
Mean scores for each scale/ capability of the ASpT

4.2.1.4 Standard Deviation

Table 4.1 also presents the Standard Deviation for each scale. This measures how far the responses to each item were spread around the mean score. It indicates how much the students' perceptions varied within each of the scales. The data shows that Self Aware had the lowest deviation with 0.42, while Collaboration had the highest deviation of 0.50 indicating student perceptions are clustered closely around the mean.

4.2.1.5 F value

The next univariate analysis was computed to look into the F value for each of the ASpT scales/ capabilities in relation to gender differences, ethnicity, year levels, achievement/ overall teacher judgements in Reading, Writing and Mathematics,

school differences, and language spoken at home. These are explored further in section 4.3. Univariate analysis describes the pattern of the response to the variable, it looks at the range of values, as well as the central tendency of the values (California State University Long Beach, 2011). It explores each variable in a data set, separately (California State University Long Beach, 2011).

Calculations for F values determine the significance of each scale/ capability in relation to what correlation is being made. In the data the probability level and statistical significance value is represented by the following $*p<0.05$, $**p<0.01$, $***p<0.001$. This means that a value of $p<0.05$ is statistically significant, it infers that there is 5/ 100 that the result is by chance and proves its statistical significance. Likewise with $p<0.01$ there is 1/ 100 that this result is by chance and is even more statistically significant. For $p<0.001$ this indicates the greatest statistical significance in that there is 1/ 1000 that this result is by chance.

4.3 RESULTS FROM THE STUDENTS

All students completed the ASpT in Term 4 of 2018. This section presents the correlations of the ASpT with student gender, ethnicity, year level, achievement in Reading, Writing and Mathematics, school differences, and language spoken at home.

4.3.1 Associations

In all the correlations that are made in this section, the scale/ capability mean was the chosen unit of analysis to make the association. Tables and Figures have been used to present this data.

4.3.1.1 Gender difference

To investigate the gender differences between male and female perceptions relating to the scales of the ASpT, an independent t-test was used. The differences in students' perceptions of their Agency according to gender are presented in Table 4.2 and Figure 4.3. They both present the results of the six Agency scales/ capabilities in relation to student gender. The total number of students who were involved in completing the ASpT for this study were split into 535 male and 554 female students. The chosen unit of analysis to examine the differences in male and female perceptions of the six scales/ capabilities of Agency was the gender mean. These results show that the females

perceive themselves higher in all six of the scales/ capabilities. For Self Aware there was a significant difference between male and female. This was statistically significant at 0.05 level and substantiated with a low effect size score of 0.14.

Table 4.2

Item Mean and Standard Deviation for Gender Difference in Students' Perception of the Agency as Measured by the Capability Scales

Scale	Mean		S D		Difference	
	Male	Female	Male	Female	t	Effect size Cohen's d
Self Aware	3.23	3.29	0.45	0.39	6.43*	0.14
Assessment Capable	2.93	3.09	0.48	0.44	2.65	0.35
Collaboration	2.92	3.05	0.52	0.48	1.16	0.26
Resilience	2.91	3.06	0.49	0.47	1.02	0.31
Using Tools and Strategies	2.99	3.02	0.49	0.48	0.43	0.06
Take Action	2.97	3.09	0.50	0.47	2.27	0.25

N=Total students=1089; Males= 535; Females=554

* $p < 0.05$

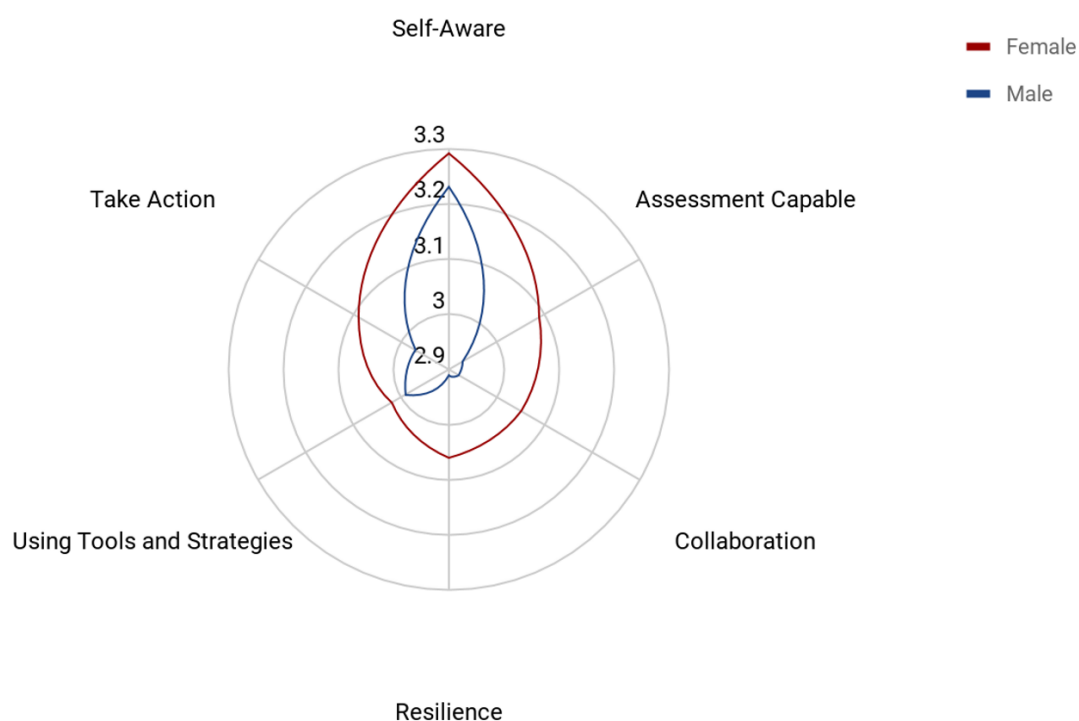


Figure 4.3

Differences in the scores for each scale/ capability of the ASpT as perceived by the gender of students

4.3.1.2 Ethnicity difference

Students' perceptions of their Agency was also analysed using ANOVA in relation to their ethnicity. Student ethnicities were categorised with the following number of students Pakeha (European)= 572, Asian= 212, Māori = 76, Pacific= 51 and Other= 178. Table 4.3 and Figure 4.4 show the findings of students' perception of their Agency broken down into the six capabilities and correlated to their ethnic background. These results show that Pakeha scored higher in Self Aware and Take Action than the other ethnicities, while Pacifica students scored highest in the remaining capabilities, Using Tools and Strategies, Resilience, Collaboration, and Assessment Capable.

Of particular significance, Pacific students' perceptions of Using Tools and Strategies was higher than other ethnicities. Pakeha perceptions of themselves Taking Action were significantly higher. Although, of highest significance, Pakeha students had a stronger perception of being Self Aware. It is of interest that Māori students had the lowest self-perception for all six capabilities compared with the other ethnicities. This is important for policy makers, education leaders, and teachers to notice, recognise, and respond to in New Zealand as we continue to ask ourselves how we can better serve and meet the needs of our Māori learners in our education system. Statistically significant differences were found for Self Aware with an F value of 4.60, Using Tools and Strategies with an F value of 2.85, and Taking Action with an F value of 2.30. Self Aware is statistically significant at a $p < 0.001$ value. Both Using Tools and Strategies and Take Action were statistically significant at a $p < 0.05$ value.

Table 4.3

Item Mean and Standard Deviation for Ethnicity Difference in Students' Perception of the Agency as Measured by the Capability Scales

Scale	Ethnicity	Mean	S D	F
Self Aware	Pakeha	3.31	0.40	4.60***
	Asian	3.20	0.43	
	Māori	3.17	0.50	
	Pacific	3.23	0.43	
	Other	3.24	0.43	
Assessment Capable	Pakeha	3.02	0.47	0.66
	Asian	3.01	0.49	
	Māori	2.93	0.42	
	Pacific	3.05	0.44	
	Other	3.01	0.47	
Collaboration	Pakeha	3.02	0.50	1.96
	Asian	2.94	0.50	
	Māori	2.89	0.57	
	Pacific	3.06	0.53	
	Other	2.97	0.48	
Resilience	Pakeha	3.02	0.48	1.86
	Asian	2.95	0.49	
	Māori	2.92	0.52	
	Pacific	3.05	0.52	
	Other	2.95	0.48	
Using Tools and Strategies	Pakeha	3.04	0.49	2.85*
	Asian	2.97	0.48	
	Māori	2.90	0.50	
	Pacific	3.13	0.49	
	Other	2.97	0.48	
Take Action	Pakeha	3.07	0.47	2.30*
	Asian	2.99	0.53	
	Māori	2.94	0.52	
	Pacific	2.99	0.57	
	Other	3.02	0.47	

N= Pakeha= 572, Asian= 212, Māori = 76, Pacific= 51, Other= 178

* $p < 0.05$, *** $p < 0.001$

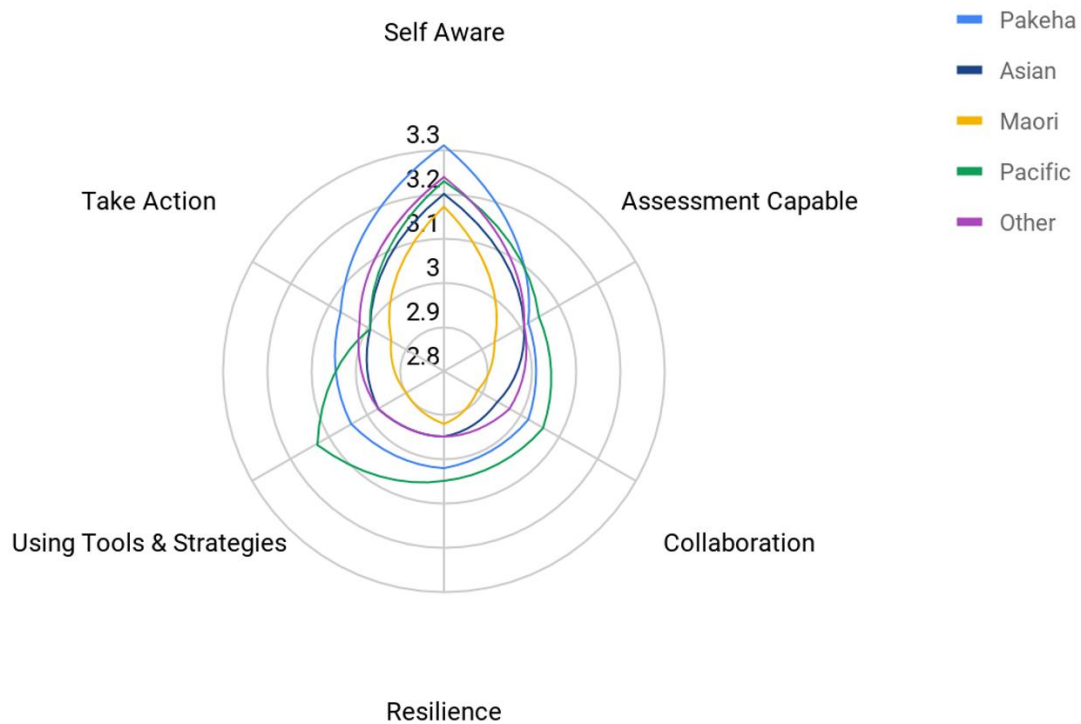


Figure 4.4
Differences in the scores for each scale/ capability of the ASpT as perceived by the ethnic backgrounds of students

4.3.1.3 Year-level difference

This study measured the perceptions of learners in Years 4 - 8 at primary schools in New Zealand. It is therefore of interest to use the year groupings of the learners to analyse the findings and measure this correlation. Splitting the learners into their year groups (Year 4 =264, Year 5 =284, Year 6 =227, Year 7 =186, Year 8 =128) allowed for the mean score, standard deviation, and significant differences for each year group within the six scales of the ASpT to be calculated.

Table 4.4 and Figure 4.5 present the findings for the year level difference and student perceptions for each scale/ capability of the ASpT. Only one scale of Taking Action demonstrated a statistically significant difference in perception of students, with Year Four students having highest scores for the scale.

Table 4.4

Item Mean, Standard Deviation, and F Value for Year Level Difference in Writing for Each Capability

Scale	Year Level	Mean	S D	F
Self Aware	4	3.25	0.46	1.20
	5	3.23	0.41	
	6	3.28	0.40	
	7	3.31	0.43	
	8	3.28	0.42	
Assessment Capable	4	3.02	0.54	1.36
	5	2.98	0.45	
	6	3.03	0.44	
	7	3.07	0.40	
	8	2.97	0.51	
Collaboration	4	3.00	0.53	0.31
	5	2.96	0.46	
	6	3.01	0.50	
	7	2.99	0.50	
	8	2.97	0.53	
Resilience	4	3.01	0.53	0.88
	5	3.01	0.44	
	6	2.97	0.47	
	7	2.95	0.49	
	8	2.97	0.52	
Using Tools and Strategies	4	3.04	0.55	0.70
	5	3.01	0.46	
	6	3.02	0.45	
	7	2.98	0.47	
	8	2.97	0.49	
Take Action	4	3.10	0.53	2.37*
	5	3.04	0.46	
	6	3.01	0.49	
	7	2.98	0.47	
	8	2.98	0.49	

N= Yr 4 n=264; Yr 5 n= 284; Yr 6 n=227; Yr 7 n =186; Yr 8 n=128

* $p < 0.05$,

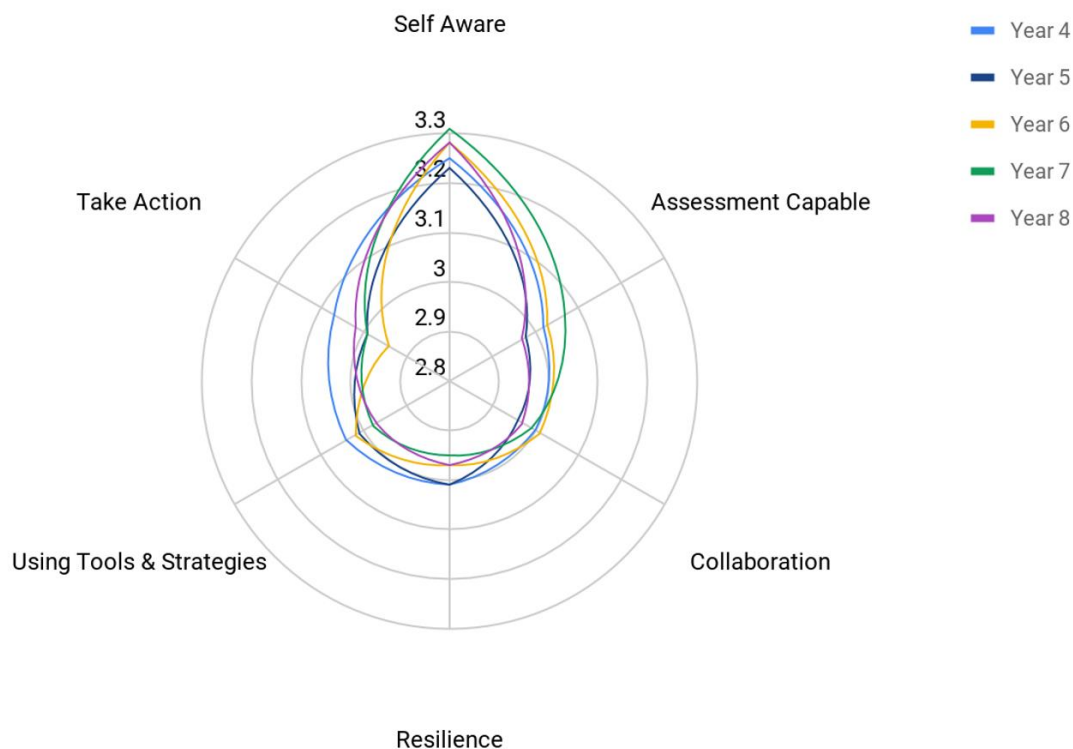


Figure 4.5
Differences in the scores for each scale/ capability of the ASpT as perceived by the year level of students

4.3.1.4 Writing Achievement/ Overall Teacher Judgement Difference

Across the four schools the only standard measure of assessment/ achievement indicators were Overall Teacher Judgements (OTJ's) which are explained in section 2.4.9. Associations between teacher OTJ's in Writing and students' perception of Agency for each capability were calculated. The following participating students were split as Well Below= 25, Below= 181, At= 615, and Above/ Well Above= 267. Above and Well Above numbers had to be reported together as not all schools separate the Above and Well Above student data. Below and Well Below student data are separated to ensure better tracking of these learners is possible. Table 4.5 presents the calculated item mean, standard deviation, and significance. Figure 4.6 shows the variance of teacher judgements of learners who are well below, below, at, or above/ well above the expected curriculum level for their age with the student perceptions of each scale/ capability of the ASpT.

Table 4.5

Item Mean and Standard Deviation for Overall Teacher Judgement/ Achievement Difference in Writing for Each Capability

Scale	Overall Teacher Judgement	Mean	S D	F
Self Aware	Well Below	3.01	0.59	14.07***
	Below	3.13	0.52	
	At	3.28	0.40	
	Above/ Well Above	3.35	0.35	
Assessment Capable	Well Below	2.68	0.69	13.62***
	Below	2.89	0.53	
	At	3.02	0.45	
	Above/ Well Above	3.12	0.42	
Collaboration	Well Below	2.81	0.65	7.56***
	Below	2.84	0.60	
	At	3.02	0.47	
	Above/ Well Above	3.02	0.45	
Resilience	Well Below	2.66	0.75	13.22***
	Below	2.84	0.57	
	At	3.01	0.46	
	Above/ Well Above	3.08	0.42	
Using Tools and Strategies	Well Below	2.75	0.60	10.11***
	Below	2.88	0.56	
	At	3.02	0.46	
	Above/ Well Above	3.10	0.45	
Take Action	Well Below	2.82	0.68	13.39***
	Below	2.86	0.57	
	At	3.05	0.46	
	Above/ Well Above	3.14	0.45	

N= Well Below= 25, Below= 181, At= 615, Above/ Well Above= 26 *** $p < 0.001$

Results show extremely strong correlations, Writing OTJ's/ achievement is statistically significant for each of the six capabilities. Learners who are above/ well above their curriculum level expectations perceive themselves as more agentic in all six of the capabilities; Self Aware, Assessment Capable, Collaboration, Resilience, Using Tools and Strategies, and Take Action. The learners who are achieving well below the expected curriculum level perceive themselves as less agentic in all six capabilities.

Writing

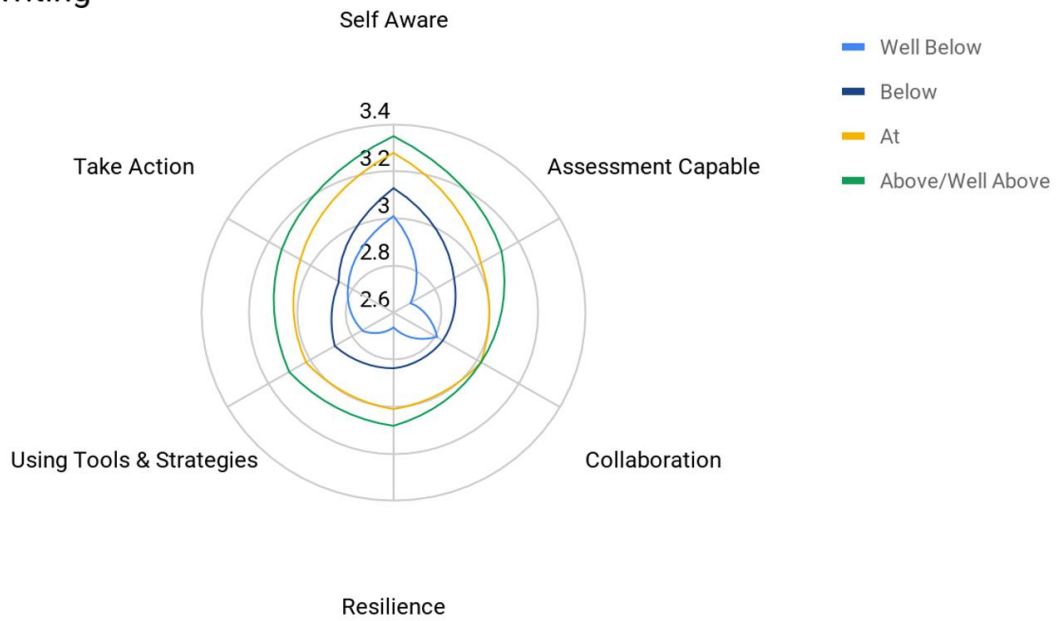


Figure 4.6

Overall Teacher Judgements of students Writing achievement correlated to student perceptions of each scale/ capability of the ASpT

4.3.1.5 Reading Achievement/ Overall Teacher Judgement Difference

Similar to the Writing Achievement in section 4.3.2.4, associations with the Overall Teacher Judgement in Reading and students' perceptions of the six capabilities were calculated. Splitting the children as Well Below= 23, Below= 97, At= 496, and Above/ Well Above= 473 supported this analysis. As reported in section 4.3.2.4 the Above and Well Above numbers were combined as not all schools separate the data.

Table 4.6

Item Mean, Standard Deviation, and F Value for Overall Teacher Judgement/ Achievement Difference in Reading for Each Capability

Scale	Overall Teacher Judgement	Mean	S D	F
Self Aware	Well Below	3.16	0.46	18.03***
	Below	3.03	0.59	
	At	3.23	0.41	
	Above/ Well Above	3.35	0.37	
Assessment Capable	Well Below	2.89	0.59	9.84***
	Below	2.81	0.58	
	At	3.00	0.45	
	Above/ Well Above	3.08	0.44	
Collaboration	Well Below	2.83	0.58	8.88***
	Below	2.76	0.63	
	At	2.99	0.49	
	Above/ Well Above	3.04	0.47	
Resilience	Well Below	2.79	0.61	10.23***
	Below	2.77	0.66	
	At	2.98	0.45	
	Above/ Well Above	3.05	0.46	
Using Tools and Strategies	Well Below	2.91	0.52	12.13***
	Below	2.83	0.62	
	At	2.96	0.47	
	Above/ Well Above	3.10	0.46	
Take Action	Well Below	2.98	0.55	12.04***
	Below	2.78	0.67	
	At	3.02	0.46	
	Above/ Well Above	3.10	0.46	

N= Well Below= 23, Below= 97, At= 496, Above/ Well Above= 473

*** $p < 0.001$

Table 4.6 and Figure 4.7 show the results of these correlations. The six capabilities were all highly significant. This highlights that students who are above/well above the Reading Curriculum level expectation perceive themselves as more agentic as they have a higher self-perception across all six of the capabilities. It is of interest for the Reading OTJ's that the students who are well below scored themselves higher across all six capabilities than those students who are below. This is different from the Writing data and scores where this correlation was reversed.

Reading OTJ's

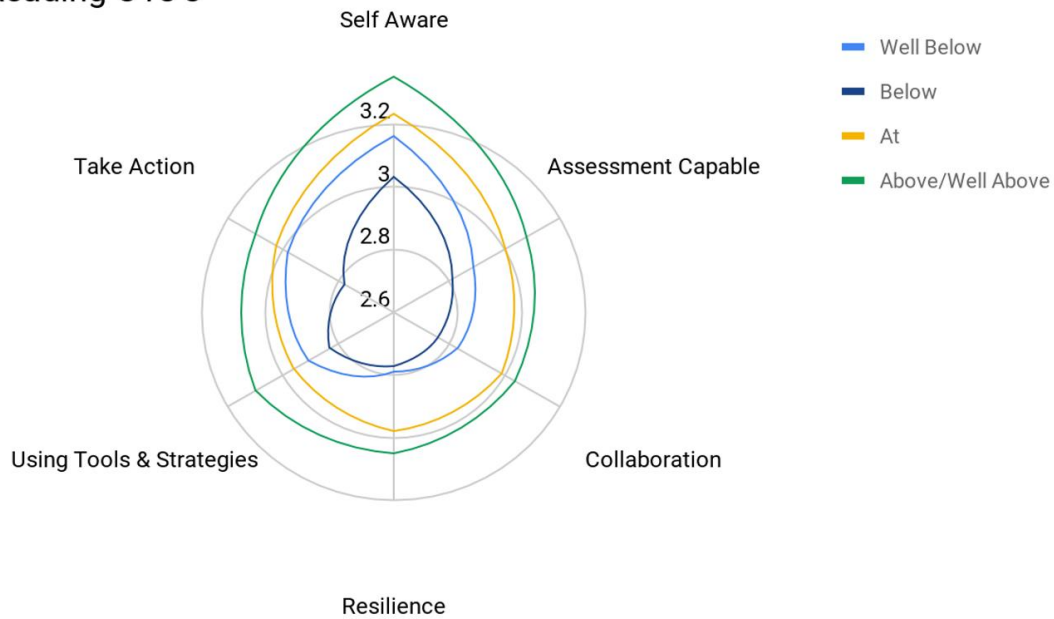


Figure 4.7

Overall Teacher Judgements of students Reading achievement correlated to student perceptions of each scale/ capability of the ASpT

4.3.1.6 Mathematics Achievement/ Overall Teacher Judgement Difference

Analysis of Mathematics was similar to Writing and Reading, Overall Teacher Judgements (OTJ's) of students' achievement in relation to the curriculum level expectations were associated with the students' perception of their Agency across the six capabilities. The data was split with the following students classified as Well Below= 15, Below= 142, At= 550, and Above/ Well Above= 382.

Table 4.7

Item Mean, Standard Deviation, and F Value for Overall Teacher Judgement/ Achievement Difference in Mathematics for Each Capability

Scale	Overall Teacher Judgement	Mean	S D	F
Self Aware	Well Below	3.04	0.80	8.16***
	Below	3.14	0.49	
	At	3.26	0.41	
	Above/ Well Above	3.32	0.38	
Assessment Capable	Well Below	2.82	0.75	5.40**
	Below	2.89	0.47	
	At	3.01	0.46	
	Above/ Well Above	3.06	0.46	
Collaboration	Well Below	2.80	0.78	2.62*
	Below	2.90	0.54	
	At	3.00	0.48	
	Above/ Well Above	3.01	0.50	
Resilience	Well Below	2.86	0.82	4.01**
	Below	2.87	0.56	
	At	2.99	0.48	
	Above/ Well Above	3.03	0.45	
Using Tools and Strategies	Well Below	2.88	0.63	11.95***
	Below	2.86	0.55	
	At	2.98	0.47	
	Above/ Well Above	3.12	0.46	
Take Action	Well Below	2.92	0.90	4.86**
	Below	2.91	0.52	
	At	3.03	0.47	
	Above/ Well Above	3.09	0.48	

N= Well Below= 15, Below= 142, At= 550, Above/ Well Above= 382

* $p < 0.05$, ** $p < 0.01$, *** $p < 0.001$

As discussed previously, not all the schools separate the Well Above and Above learners which means the data needed to be presented together in this study. Results for this data are presented in Table 4.7 and Figure 4.8, it shows that the six capabilities and students Mathematics achievement are significant. Collaboration is statistically significant with students OTJ's in Mathematics. Of even greater value is Assessment Capable, Resilience, and Take Action. Of most significance was Self Aware and Using Tools and Strategies.

This data indicates that students with higher achievement in Mathematics have a higher self-perception of their Agency across all six capabilities; Self Aware, Assessment Capable, Collaboration, Resilience, Using Tools and Strategies, and Take Action.

Mathematics OTJ's

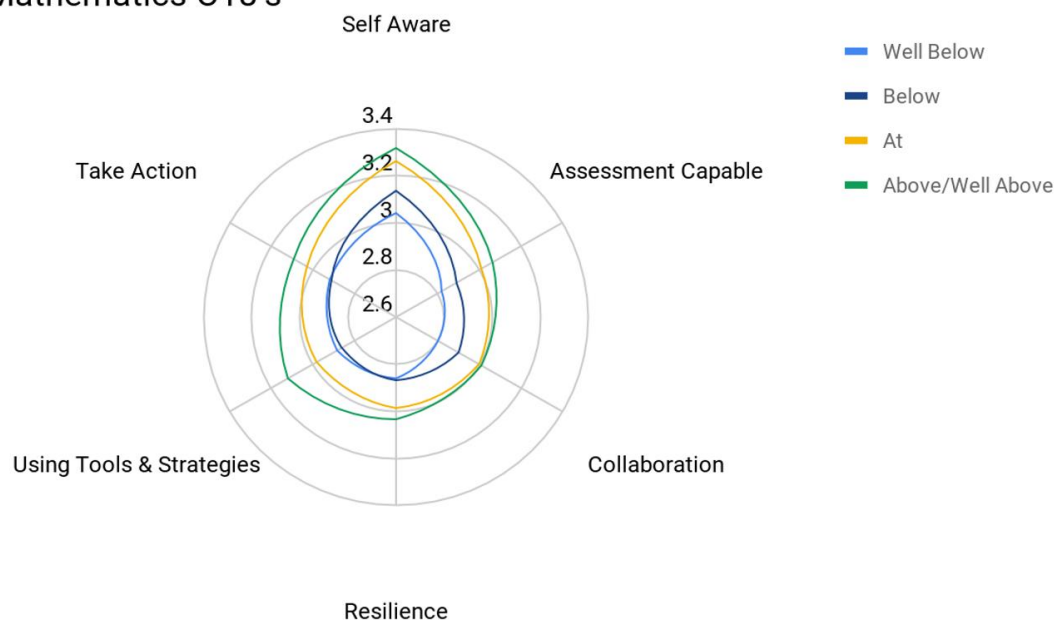


Figure 4.8
Overall Teacher Judgements of students' Mathematics achievement correlated to student perceptions of each scale/ capability of the ASpT

4.3.1.7 School Differences

As there were four primary schools that were involved in the validation of the ASpT, the schools were used as an effect size to investigate the difference between the students' self-perception of the scales/ capabilities. The 1089 students across the four schools were split by School A= 226, School B= 107, School C= 316, and School D= 440. Information is shared in Table 4.8 and Figure 4.9.

It shows that across the four schools Using Tools and Strategies and Collaboration have a statistical significance attributed towards them. Due to ethical concerns it was decided that for quantitative data Stonefields School will not be identified. The aim of this correlation is to illustrate that variances across schools do exist and therefore practices across schools vary; this correlation was not intended to compare or contrast Stonefields School against other contexts.

Students at School A, have a statistically significant higher self-perception of Using Tools and Strategies and of more significance is their Collaboration. There were variances among the other schools. The greatest variance being Collaboration between the four schools with a significance of $p < 0.001$.

Table 4.8

Item Mean, Standard Deviation, and F Value School Differences for Each Capability

Scale	School	Mean	S D	F
Self Aware	A	3.29	0.42	0.48
	B	3.24	0.46	
	C	3.27	0.40	
	D	3.26	0.44	
Assessment Capable	A	3.05	0.51	0.77
	B	2.99	0.49	
	C	2.99	0.43	
	D	3.01	0.47	
Collaboration	A	3.09	0.39	6.85***
	B	2.87	0.51	
	C	3.01	0.50	
	D	2.94	0.50	
Resilience	A	3.01	0.46	0.19
	B	2.99	0.50	
	C	2.97	0.50	
	D	2.99	0.49	
Using Tools and Strategies	A	3.11	0.49	4.53**
	B	2.96	0.47	
	C	2.99	0.48	
	D	2.98	0.49	
Take Action	A	3.07	0.49	1.23
	B	3.01	0.51	
	C	3.06	0.44	
	D	3.00	0.52	

N= A= 226, B= 107, C= 316, D= 440

** $p < 0.01$, *** $p < 0.001$

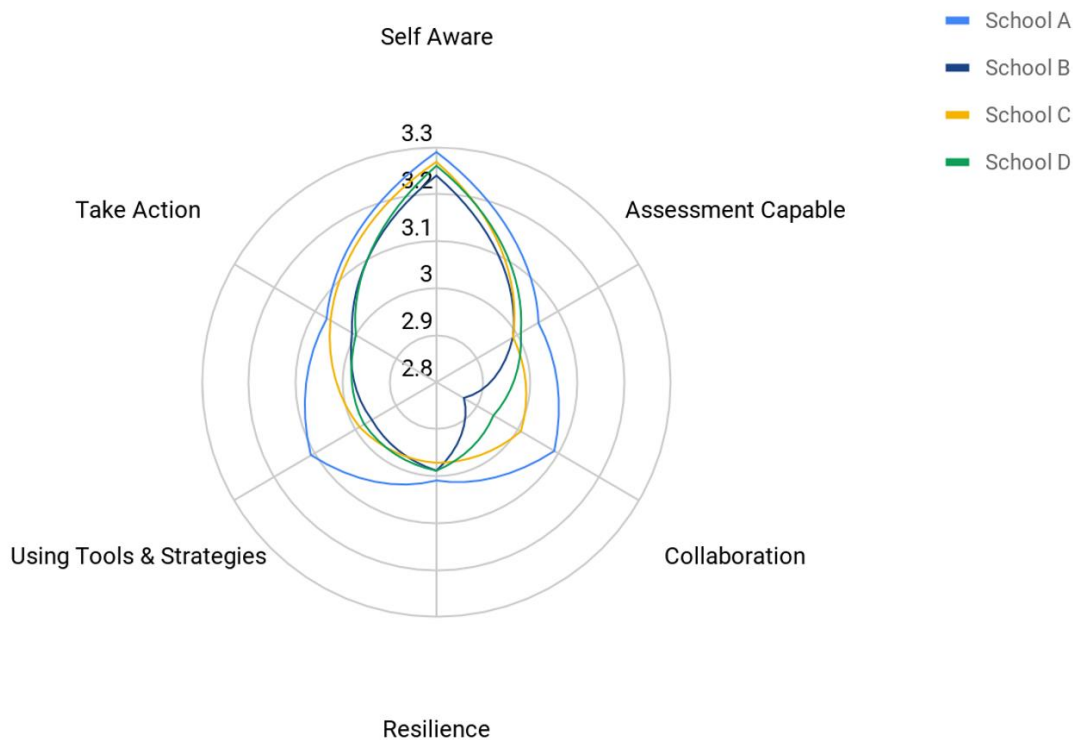


Figure 4.9
School Differences of students' perceptions of each scale/ capability of the ASpT

4.3.1.8 Language Spoken at Home

New Zealand is multicultural with many nationalities and languages spoken throughout the country. In the education sector students are often referred to as ESOL learners which means English as a Second Language. English is the language that is predominantly spoken in New Zealand while Māori is the native language. Students who speak Māori were classified as 'Other' Languages in this research. This study reports on students who speak English primarily at home and students who speak another language primarily in their household. The student numbers were represented by 854 English speaking students and 235 'Other' languages.

Presented in Table 4.9 and Figure 4.10 are the associations between the language spoken at home and student perceptions of their Agency in relation to the six capabilities. There was no significant difference between the learners who speak English at home or those students who speak a different language.

Table 4.9

Item Mean and Standard Deviation for Language Spoken at Home Differences in Students' Perception of the Agency as Measured by the Capability Scales

Scale	Mean		S D		Difference	
	Male	Female	Male	Female	t	Effect size Cohen's d
Self Aware	3.23	3.20	0.42	0.45	0.02	0.07
Assessment Capable	3.00	3.06	0.47	0.48	0.56	0.12
Collaboration	3.00	2.96	0.50	0.51	0.00	0.08
Resilience	3.00	2.96	0.48	0.51	0.89	0.08
Using Tools and Strategies	3.01	2.99	0.49	0.49	0.01	0.04
Take Action	3.04	3.01	0.49	0.49	0.16	0.08

N= English= 854, Other= 235

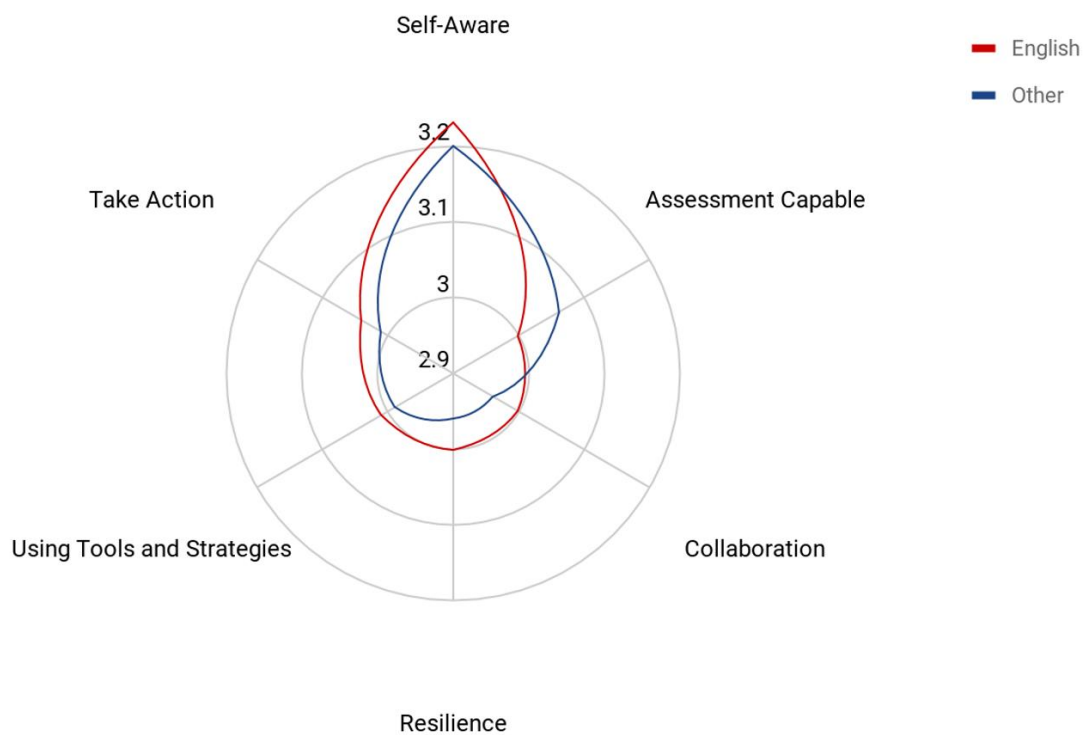


Figure 4.10

Language spoken at home differences of students' perceptions of each scale/ capability of the ASpT

4.4 SUMMARY

This chapter has presented the quantitative results based on the Agency Self-perception Tool that was completed by 1080 Year 4 - 8 students across four primary schools in New Zealand.

First the section presented the reliability of the ASpT reporting on the Cronbach Alpha Internal Consistency, the Mean Correlation and Discriminant Validity, the Mean Value, Standard Deviation, and F value to achieve this.

Associations between Gender, Ethnicity, Year level, Achievement Data as Overall Teacher Judgements in Reading, Writing and Mathematics, School Differences, and Language Spoken at Home were made across the six scales/capabilities. The data showed that the aspects of Agency/ capabilities that had statistically significant correlations and associations were:

- Self Aware with Gender, Ethnicity and Achievement in Reading, Writing, and Mathematics
- Assessment Capable with Achievement in Reading, Writing, and Mathematics
- Collaboration with School Difference and Achievement in Reading, Writing, and Mathematics
- Resilience with Achievement in Reading, Writing, and Mathematics
- Using Tools and Strategies with School Difference, Ethnicity, and Achievement in Reading, Writing, and Mathematics
- Take Action with Year Level, Ethnicity, and Achievement in Reading, Writing, and Mathematics

Achievement as determined by OTJ's had a significant impact on student perceptions of their Agency, whereas gender, ethnicity, school difference, and year level showed that there was a significant correlation with certain aspects/ capabilities of Agency. Language spoken at home appeared to have no association to the students' perception of their Agency or any of the six capabilities.

The next chapter presents the qualitative data from the focus groups of students and teachers.

Chapter 5

QUALITATIVE RESULTS

5.1 INTRODUCTION

The previous chapter presented quantitative data, in particular validating the Agency Self-perception Tool and the student results from the survey from across four primary schools. As described in the methodology, qualitative data from both teachers and students at Stonefields School was gathered through the use of focus groups. This chapter presents the qualitative findings of the focus groups as perceived by the students and teachers. Six student focus groups composed of Year 4 - Year 8 learners and one teacher focus group were all convened in mid 2019. Each focus group had six participants. The focus groups provided further insights into each of the research questions and this section is presented using the structure of the research question as headings, discussion prompts as subheadings, and both student and teacher responses to support the information. Care was taken to ensure all comments were captured, included, and reflected in the most appropriate subheading.

As previously discussed in section 1.4.1.2 the school had been a part of a Teacher Led Innovation Fund which enabled a team of teachers to be collaboratively inquiring into Learner Agency. Therefore, teaching staff in particular had been a part of prior conversations about Learner Agency and the school had created a shared understanding/ definition of what it meant. With new staff inducted year upon year, understandably the ownership, involvement, and understanding of the definition varied. Consequently the ways that teachers scaffolded learners to understand the teaching and learning practices of the Agency varied too. It is important to note that the six learner focus groups varied from hubs that had teachers who were a part of the Teacher Led Innovation Fund, teachers who were a part of staff discussions and new to Stonefields teaching staff. Likewise, the Teacher Focus Group had varied teachers represented from those who were a part of the team, those who were a part of the thinking in different forums and those who were new to the organisation.

As explained in section 3.12.3 specific codes were derived to support the analysis of data and to create anonymity for participants. For example, LFG3 represents Learner Focus Group 3, numbering learners or people within the focus

group was avoided to assure further anonymity. TFG represents Teacher Focus Group, as there was only one teacher group, numbers were not required.

All comments were included that were of relevance to the sub headings, the reader is cautioned to note where quotes may all be from one focus group, this in itself is a finding. It does not mean to say that other groups may not have either agreed or disagreed, it may just be evidence that the discussion and conversation focussed on other areas of interest.

5.2 WHAT TEACHING AND LEARNING PRACTICES ENABLE LEARNER AGENCY?

This section presents the findings relating to the first research question ‘What teaching and learning practices enable Learner Agency?’ Students and teachers answered questions in their focus groups that were designed to elicit thinking that would support the findings to this research question. These questions/ discussion prompts are presented in Table 5.1 below and are aligned to Research Question 1.

Table 5.1
Research Question 1 Aligned to Focus Group Questions/ Discussion

Research Question 1:	What teaching and learning practices enable Learner Agency?
Student Focus Group Questions/ Discussion	What is Learner Agency? What helps you as a learner to be ‘agentic’? What does/ can the teacher do to help you to be a better learner or more agentic?
Teacher Focus Group Questions/ Discussion	What is Learner Agency? What do you think helps your learners to be ‘agentic’? What do you do or what can teachers do to help learners to be more agentic?

In order to discuss what teaching and learning practices enable Learner Agency it was important to first of all surface with each of the Focus Groups what Learner Agency is. Discussion then elicited what they think helps learners to be ‘agentic’ and what the teacher does or can do to help learners to be more agentic. Through asking these three questions, the focus group discussions triangulated evidence and responses, many of the same terms associated with Agency, factors that help learners to be agentic, and roles of the teacher aligned. While use of the language ‘Learner

Agency' varied across the hubs, it is important to know that the school culture had/has a focus on Learner Agency, especially through use of the ASpT, therefore the vocabulary used in the focus groups was not new to the respondents.

5.2.1 What is Learner Agency?

This section presents the terms associated with Learner Agency as perceived by the students and teachers. Terms that were identified included:

- Self Awareness/ understanding of own learning (metacognition), independence, on task, Collaboration, ownership/ in charge/ take action, having a direction/ goal-oriented, decisive, related to autonomy in future workplace/ connection to real world, know when to work independently and when to seek help, time management/ use of learning space, responsible, resilience, capacity to affect change, ability to recognise and avoid distractions.

These are explained below and provide a framework to discuss the findings. Some of the terms have been combined.

5.2.1.1 Self Awareness/ understanding of own learning (metacognition)

Students and teachers both perceived that Self Awareness was associated with Learner Agency. Being Self Aware includes an understanding of your learning- the how, what, who, and where you learn best. The purpose of the learning (the why) is important, this enables students to better reflect on their learning and talk about how they could improve being metacognitive during the process. Students and teachers commented:

[Learner Agency is] being aware of what you need. (LFG3)

I like doing things digital and I don't have very good Learner Agency if I'm on paper. I prefer to do it with a device. (LFG6)

[Learner Agency is] knowing what your preference is for learning? (LFG6)

[Learner Agency is] knowing where we learn best and who you learn best with because they could help you if you're stuck but they wouldn't just give you the answer but guide you through it. (LFG6)

I think Learner Agency is when a learner knows what they're doing and is capable and agentic. (LFG6)

You talk about your learning and what you think you could improve and what you like about it. (LFG6)

It's [Learner Agency] being Self Aware. To me a lot of being Self Aware as a learner, and being aware of our strengths, weaknesses, being aware of our learning style, but also having the skills to work on what you need to work on and then mindset to know that sometimes some things are hard. (TFG)

5.2.1.2 Independence/ Collaboration/ Know when to work independently and when to seek help

Independence was a term that learners associated with Learner Agency. In particular the term independence was associated with the idea that a teacher was not needed or required, and that students could progress with their learning without a teacher's support. One learner clearly identified that the flip side of independence is Collaboration, and it is important to know when to work independently and when to collaborate. This concept ties closely to Self Awareness as presented in section 5.2.1.1. Students also referenced the school values and vision of breaking ground and bringing their best together. Students commented:

[Learner Agency is] doing your own stuff and making sure you can be independent and do your own work but then also, sort of, kind of knowing when you need to talk to someone. (LFG3)

Students are independent on their own actions. (LFG1)

[Learner Agency is] not needing a teacher to hold your hand on the way. (LFG1)

[Learner Agency is] being independent. (LFG3)

If you finish an activity, then you are carrying on with the next thing by yourself. Like being independent. (LFG4)

[Learner Agency is] being able to guide your own learning and not having to always get help with stuff. But you can already do most of the learning yourself, like being independent. (LFG5)

[Learner Agency is] like bringing our best together. Breaking Ground (LFG4)

5.2.1.3 On task/ Focussed/ Time management/ Use of learning space/ Ability to recognise and avoid distractions

Students referenced 'being on task' (LFG1), helping people, not mucking around, and going deeper into learning during discussions about what Learner Agency is which relates to the idea of being focussed. If students are 'on task' and 'focussed' it could be perceived that they are also choosing who they work with, managing their time, and utilising the learning space well. Equally students' ability to recognise and

avoid distractions would mean that they are on task and focussed. These terms have therefore been presented in one section; it is closely linked with the theme of Self Awareness in section 5.2.1.1.

A sample of student comments about being on task included:

Make sure you're on task and helping people. (LFG4)

If someone's stuck, you help them. Don't muck around. (LFG4)

If you finish all your tasks, you could push yourself further and go deeper into the understanding. (LFG4)

Students' comments explaining time management and the use of learning space:

Choosing your own place, your own work space to work and choosing... who you sit with so that you know you're going to be the best student. (LFG3)

You can choose your time well, know that you're going to get stuff done and be on task. (LFG3)

You have to be Self Aware about when you're being agentic like... where you're working, who you're working with, be Self Aware about those choices. (LFG3)

The ability to recognise and avoid distractions was explained by students commenting:

You try to do the best learning that you can and you don't get distracted with other people. (LFG2)

I definitely can [self-manage] if I'm at a table [without friends]- maybe one person sits at one table and the other sits at the other table or something. (LFG2)

Not stick around with your friends and let them distract you. (LFG5)

Knowing where and how you learn best. So, like not sitting with your friends. (LFG2)

You could sit with your friends as long as you're going to get something done. (LFG2)

5.2.1.4 Ownership/ in charge/ take action

The theme of ownership was raised through the use of the terms in charge, Taking Action, control, and driving learning by both students and teachers. If students have ownership over their learning, they are more capable of Taking Action, driving their learning, decisive and therefore in charge; demonstrating Agency. “Learning to be significant, must result in the learner ‘owning’ what is learnt”

(Absolum, 2006, p. 12). Students and teachers highlighted this in the following statements:

[Learner Agency is] sort of like when you take charge of your own learning and you do it without lots of teacher help. (LFG2)

[Learner Agency] can be when you drive your own learning. (LFG2)

[Learner Agency is] driving your own learning. (LFG3)

[Learner Agency is] taking charge of your own learning. (LFG3)

[Learner Agency is] Taking Action on what you need to do. (LFG3)

[Learner Agency] means to like, drive your learning and be responsible. (LFG4)

I think to me, Agency is about the kids having some control over their learning. (TFG)

Agency itself is the kids having a say in their learning. For some kids, that say might be minimal because they need the scaffolds to support them, and for some it might be a large amount of say over their learning. (TFG)

Agency as a whole is knowing what to do, to be able to drive yourself, like be able to say, "Oh, that's something I've got to do", having a gap in it, and say I'm going to Take Action on this piece of it. (TFG)

I think a really big part of it [Learner Agency], is being able to actually move forward with yourself. (TFG)

[Learner Agency is] making decisions for yourself. (LFG3)

5.2.1.5 Having a direction/ goal-oriented

Having a direction and goals would support learners to have ownership, drive their learning, and Take Action. This theme and these terms are closely related to section 5.2.1.4. It is important to highlight this as a section of its own because of the importance of Assessment for Learning (discussed in section 2.4.1) and Assessment Capability (discussed in section 2.3.2) even though these terms haven't been directly referenced. Goals, next steps, clarity about what is to be learnt are all closely interconnected and enable previous themes of self-awareness, independence, focus, and ownership. Students' comments included:

Knowing what you need to work on, knowing what your goals are. (LFG1)

Leading your own direction in learning and knowing what it is and going forward with it. (LFG1)

When you know what your goals are and what you need to Take Action. (LFG5)

[In SchoolTalk] you can look into the calendar and see the progressions for what you're working on and work towards the progress of making the goals green. (LFG5)

5.2.1.6 Related to autonomy in future workplace/ connection to real world

Designing Real Learning, Rich Tasks, and Rich Learning Opportunities are all phrases that are discussed at Stonefields School and throughout New Zealand in the education sector. What these phrases have in common is the connection to real world skills and contexts that better prepare students for an uncertain future. The autonomy students will have in their future workplaces is important when we consider developing Learner Agency in our teaching and learning practices. A connection to the real world is vital with a Volatile, Uncertain, Complex, and Ambiguous (VUCA) future. These student and teacher comments support these ideas:

[Agency is important because] when you are working in your job, like in the real world you don't always have someone to guide you. (LFG3)

[Agency is] about enabling the children and giving them the opportunities to develop the capabilities in order to make the changes that they want to make, goals in their own life that they need to work on. (TFG)

Agency depends on us because this will also matter in our future. In our future, we won't have teachers to tell us what we need to do and it will all depend on us. (LFG1)

[Agency is] the power and capacity to affect change in our world. (TFG)

5.2.1.7 Resilience

The theme of resilience is closely linked to a Stonefields School Learner Quality - 'determined'. Students often need to be determined and experience resilience when they are stuck and need to get out of the Learning Pit. The Learning Pit is a part of the school's Language of Learning and is a Signature Practice/ high leverage practice. The pit is an analogy for the feeling of being stuck and challenged in learning situations.

[Learner Agency is] when the learner is being determined and even if they feel like they can't do it, they just keep on trying. (LFG6)

Being resilient and keep going if you can't do anything and knowing what you need to do and if you are stuck, asking for help. (LFG6)

Keep going no matter what you're facing. (LFG6)

5.2.1.8 Interpretation

Focus group discussions highlighted that Learner Agency is students having an understanding of their own learning and Self Awareness. Students know when to work independently and when to collaborate, they have a direction, and are goal oriented. To enable this it is preferable learners have autonomy, that learning is connected to the real world, and relates to their future. Students need to be resilient in order to manage the true Agency of their learning.

Both learners and teachers highlighted many of the same terms that they associated with Learner Agency. It is important to note that while some terms may not have been referenced by teachers, they would generally agree with the terms and ideas that students referenced based on my interactions and conversations with teachers as part of the school community.

5.2.2 *What helps learners to be ‘agentic’?*

This section presents the factors that develop Learner Agency as perceived by the students and teachers. Factors that were identified included:

- Self Awareness, (understanding self, learning styles, values such as attitude towards learning, determination, plans); feedback; progressions (goals, next steps); access to information and help (Collaboration, online resources); SchoolTalk (next steps, progression, timetable, options, flexibility, feedback, learning content); mastery - learning strategies (Learning Process, Learner Qualities); learning from mistakes, taking risks; scaffolding; teacher guidance/workshops.

5.2.2.1 Self Awareness, (understanding self, learning styles, values such as attitude towards learning, determination, plans)

Self Awareness was identified in section 5.2.1.1 as a term associated with what Learner Agency is. It is therefore prevalent that it is an identified factor that helps learners to be agentic. In this section it is unpacked as understanding self, learning styles, one's own values such as their attitude towards learning, and level of determination. Students' comments support this finding and are presented below:

Knowing your personality, like it can help you bring change in, it can help you with what you need to do. (LFG1)

I think being agentic varies on very different things because it can link to your goal. Your actual plan can be following your steps and basically everything and how you feel towards what you need to actually do. (LFG1)

Most of these values already kind of covered it, which is the progressions, like attitude towards learning, which is for example, the value like Self Aware, determination, and stuff like that. But also things like progressions and next steps and planning, you can test those because you either completely don't know it, you know some, or you know all of it. (LFG1)

Being Self Aware of your actions and knowing the reaction that might cause those actions? (LFG1)

5.2.2.2 Feedback

Feedback as a part of formative assessment was discussed in section 2.4.1. In particular students identified that feedback is related to things that they need to work on such as their next steps and those being closely linked to their progressions. Feedback impacts a student's ability to be Assessment Capable therefore helps students to be agentic. Students did not reference the different sources of feedback other than teachers and peers, however they acknowledge that feedback is important for continual improvement and confidence. Comments from students included:

[Feedback] can be an indicator. Something you need to do. (LFG1)

When I say feedback, I kind of say constructive criticism to know what I need to do next, because I know I'm not the best at it. (LFG1)

Feedback can be anything because it can be directed towards your next goal, or it can also be directed to what you're doing now, because you're always improving, you always have something to improve on, you always have a next step. Like even the greatest leaders, the greatest people in the world, they always have next steps to build on. They always have things to improve, which is why feedback is always so helpful. (LFG1)

Feedback. Like usually from a teacher that knows lots of things and knows how you work, it [feedback] can give you a lot more confidence in yourself. If I wasn't confident in my learning I'd like to try to get help from teachers or like a peer in my hub, but if I am confident and I have feedback from teachers it could really help me because I can check back on their feedback and try to use that feedback to improve my learning. Feedback is really important. (LFG3)

Pretty much every time we finish our learning we take a screenshot or something, we go in to one of those progressions and write down a description of what we've

been doing, and then we'll put the screenshot and submit it for the teachers to mark achieved for us and sometimes they can give us feedback face to face or on SchoolTalk sometimes. (LFG3)

[Useful] feedback is on stuff you did well and stuff you can improve on. (LFG3)

[Teachers/ Feedback] question for the little details and point out some small things that you've done really well and then you get your feedforward which is like the next steps and stuff. (LFG3)

5.2.2.3 Progressions (Goals, next steps)

Progressions were closely linked to goals and next steps. Students identified that having access to their own progressions help them to manage their own learning and track what they need to do. It is important to note that Stonefields School uses an online platform called SchoolTalk (discussed in section 1.4.6.2) to help teachers and learners manage their learning. SchoolTalk is referenced by the students, their progressions are within this platform which they access. Students' comments included:

[Progressions] they're sort of like, levels.... you progress up them and so maybe for like your year level or what stage you're learning at, it shows the ones [the progressions] that have been turned green, then you can move on. (LFG2)

When you want you can choose to upload evidence to which ones [progressions] you want. Say there was one thing in year 7 that was green, then you could do something in year 6 or year 8 if you really wanted to. (LFG2)

The progressions could be next steps or goals. (LFG2)

For the colors of SchoolTalk, yellow means we're working on it at the moment. Bright green means you've completed it. Pale green means it's backfilled and if it's grey, then you're not working on it yet. (LFG2)

You can also go on SchoolTalk and if you click into one of the events, there's some specific ones [progressions] that specifically match your learning that you are doing... the teachers have uploaded for you to do. (LFG2)

[SchoolTalk] Yes, like a calendar and you have your copy of progressions. It's all digital. If you click on the thing you're doing they'll have resources for you, and then there are also progressions that you can mark different colors. So green means you've achieved it, yellow means it's your next step, blue means you've submitted it for the teachers to check, and gray means you've not done it. (LFG3)

If you are going to like a workshop or task, click that, on the side you'll have goals that link to progressions that you can upload your evidence to. (LFG3)

Your progression, they can tell you your goals, like what you need to work on or sometimes the tasks. (LFG1)

[Progressions help you to] know what your next steps are. (LFG1)

Knowing what the next steps are and how you can improve and not needing someone else to help push you. You can push yourself. (LFG1)

5.2.2.4 Access to information and help (collaboration, online resources)

Access to information including online resources and support from the teacher or through collaborating with peers are factors which help learners to be agentic as perceived by the students. Collaboration and access to resources are scaffolds which teachers can enable and deliver within their teaching practice. Interestingly collaboration featured across all three discussion prompts which is illustrated in Table 5.2. Learners again noted that knowing when to collaborate and when to work independently helps with Agency.

Students commented on help and resources:

How we need to work on it? What you need help with? (LFG1)

It helps me when I have a lot of resources that I can use to figure stuff out or help do my learning or ask the teachers. (LFG2)

It could be like Khan Academy because we do lessons there everyday. And it can help with a lot of strategies and having videos telling you how to do it like the best way that they think that kids could learn it. (LFG2)

Collaboration was also referenced during discussion about what helps learners to be agentic:

Sometimes collaborating with your peers can help as well. Some people have their own preferences when they're independent learners and then there's people that like to work with other people. (LFG3)

To do things independently and sometimes collaborate. Because when you do that, when you're collaborating, it'll be good because then you can combine all your ideas. (LFG5)

5.2.2.5 SchoolTalk (next steps, progression, timetable, options, flexibility, feedback, learning content)

As previously discussed, progressions (section 5.2.2.3) at Stonefields School are within an online platform, SchoolTalk. Other features that are referenced through the use of SchoolTalk by the students in their focus group discussions include, next steps, timetables, calendars, overviews, progress, options, flexibility, and learning content. Other schools have different ways of managing and providing access to these features, students within these focus groups have clearly linked the features of SchoolTalk as factors that help them to be agentic. Evidence of this is presented in the student comments below:

It [SchoolTalk] gives an overview of where you're at. (LFG1)

You don't need to ask your teacher for everything [when using SchoolTalk]. (LFG1)

It's [SchoolTalk] really clear because usually when people look at next steps, it means like basically getting others to help and you have to look through other things to find your next steps. But here [on SchoolTalk] your next steps are already laid out for you. You know where your next steps are because they are like right there. (LFG1)

SchoolTalk is basically an app where you can progress your learning and see what you're up to and what your next levels are or challenges. You can do the learning that you have done recently and you put it into different sections of your learning. Then your teachers will mark that off to see if it's good enough. (LFG2)

SchoolTalk is also like an online timetable so we can see what we are going to do after morning tea or lunch. (LFG2)

It [SchoolTalk] also goes ahead maybe one or two days as far as the teachers have made our calendar for us. So we can prepare for the next day and things like that. If we need to go back a day, to remember what we did yesterday, then we can do that as well. (LFG2)

Sometimes on SchoolTalk, they [teachers] put multiple activities for the different groups, then sometimes you can pick or sometimes you get assigned one thing. Then there's multiple things that you can do if you've finished. (LFG2)

[SchoolTalk] you can check your next steps on what you've achieved. (LFG3)

It [SchoolTalk] helps you achieve your goals and your learning throughout all year levels without having to have a teacher with you by your side. (LFG3)

5.2.2.6 Mastery - learning strategies (Learning Process, Learner Qualities)

Students referenced particular learning strategies that are used at Stonefields School that help them to be agentic. These learning strategies are outlined as the school's language of learning in section 1.4.3. A Learning Process or thinking process helps with mastery of learning and problem solving. A previous Stonefields School student who was not a participant in this research said the Learning Process gave them a place to start and an order for their learning. Student comments also referred to the school's Learner Qualities and the phases of the Learning Process (building knowledge, making meaning, and applying understanding). Student comments about the Learning Process and Learner Qualities follow:

When you're agentic, it [the Learning Process] will help you get out of the Learning Pit. (LFG5)

If you get stuck in the Learning Pit, (you're in the Learning Pit you don't know what to do) you can use the Learning Process and figure it out and try to find a way to achieve what you're trying to do. Also take a step back and recap what you have just done and then when you find that mistake that you've made, you can... [say] "I've done this. I need to change that." (LFG5)

The Learner Qualities [help us]. So, you can be determined to get out or you can think of a way to achieve the goal. (LFG5)

So, you can use the learner quality question and reflect. You can ask questions if you're stuck. And you can reflect on what you've done and what Lucy (pseudonym) said, take a step back and try again. (LFG5)

Students' comments evidence a deeper understanding of the Learning Process and the phases:

Research and try experiments thinking, connecting and make meaning then you can actually apply understanding. (LFG4)

If you take your time, and don't rush, you're actually going to get better results than the people who just jump straight to apply understanding. Even if they do know it. You're going to get better than them. (LFG4)

Know the purpose of what you're doing it for. So you need to know the purpose if you want to actually do what you're doing. (LFG4)

The Learning Process, there's three stages: building the knowledge, making meaning and applying understanding. So, building your knowledge is basically

taking what you already know about what you're learning about and putting it into something to create. And as you go up in the Learning Process, you start thinking about how you're going to do it. And then when you get to apply understanding, you create what you're going to make or how you're going to show your learning. (LFG5)

5.2.2.7 Learning from mistakes, taking risks

Mistakes are learning opportunities. Mistakes help students to become increasingly resilient and have the courage to try new things. Resilience and determination were linked with the concept of the Learning Pit in section 5.2.1.7 when discussing what Agency is, it is reemphasised in this section as a factor that helps learners to be agentic. Students emphasised this by stating:

When I make a mistake, I'll have a mental note in my head, "Okay so I need to work on this for next time." (LFG1)

Being resilient, that is one. (LFG3)

Not giving up? (LFG3)

Learn from my mistakes. Like working for something that you haven't done before and trying out new things. Instead of sticking to what you already know. (LFG5)

5.2.2.8 Scaffolding

Teachers identified that scaffolding learners in the right way helps them to be agentic, this could be through asking the right questions and personalising learning for an individual, making it fun, and enjoyable. One particular student noted that coherency and consistent use of similar tools is important for scaffolding learners. Comments included:

It helps if you have got the right tools like we have, and you've all [teachers and students] got them, like the Learning Process, Learning Pit and stuff. The tools to help you with your learning, if that makes sense? (LFG3)

Scaffolds, I think scaffolds in place for what to do when they don't know what to do. (TFG)

[Asking the right questions] What do I need? How can I get there? Who can help me? What are my tools and strategies? Then what skills do I actually need in order to Take Action and get what I want? (TFG)

Agency in itself is not a thing. It's a collection of things that come together. It's very personalised for the individual. (TFG)

Making sure it's not boring learning where you just go do that, do that, do that. Like make it kind of fun-ish. (LFG4)

5.2.2.9 Teacher guidance/ workshops

Students identified particular ways in which their teachers guide them, such as running workshops around gaps and next steps, choosing particular progressions to focus on, being available if further help was required, sharing their planning, and clarity about what is to be learnt. Teachers addressed how to access learning, awareness of learning styles, strengths and weaknesses, and sharing what good learning looks like are ways that they are able to guide learners. Teacher guidance is a factor that both students and teachers highlight that helps learners to be agentic. Section 5.2.3 discusses what the teacher does/ can do to help students be more agentic in more detail.

After your tests they [teachers] will have a look at some gaps that we all have and look at the WALT's [We are learning to - Learning Intentions/ Progressions] that a lot of people haven't covered or teaching that people haven't covered on SchoolTalk, then they [teachers] run workshops based on those or around them. (LFG3)

About the progressions, our teachers usually choose the progressions that they put into a workshop or whatever, they usually choose it so that if we do finish we should be doing those instead of like other work that we think we should be doing. (LFG3)

So they [teachers] have it [teacher planning] on SchoolTalk, and then recently we had like one about shape where she brought us all down to the mat and she explained deeper into the questions and then we'd go off and answer them. And if we need help, then we could go back to her. (LFG4)

How to attack learning, how to actually access learning and how to make sense of it. Making them aware of their learning styles as well, making them aware of how they learn best. (TFG)

[Making them aware of] what good learning is because I think learners don't come in necessarily with this skill set. (TFG)

Similar to the identity piece, being Self Aware things that start [us thinking] who am I, what are my strengths, what are my weaknesses, what are my goals? (TFG)

[Teachers share what it is that we're learning] usually on a whiteboard or SchoolTalk, or slides or using a WALHT We Are Learning How To. (LFG1)

5.2.2.10 Interpretation

Many factors help learners to be agentic, these include Self Awareness, understanding self, learning styles, values such as attitude towards learning, determination, and plans. Feedback, progressions, goals, and next steps which are all a part of being Assessment Capable were included and highlighted throughout discussions. Access to information and help (including collaboration and resources), learning strategies, learning from mistakes, scaffolding, and teacher guidance were connected. SchoolTalk which is an online platform that students use to access their learning and the features that it enables were also discussed.

5.2.3 What does/ can the teacher do to help learners to be more agentic?

This section presents the teachers role in building Learner Agency as perceived by the students and teachers. Roles that were identified included:

- Provide guidance and opportunities for students to learn to be independent learners, help learners to be independent, self-sufficient, discipline, focussed, help learners to find their passions, provide workshops and activities with strategies and tasks that develop Agency, provide videos, links and learning resources for independent learning (content and learning strategies), supervise, encourage and explain, provide feedback, use online resources to help manage learning, highlight study plan for the day/ period, use small groups to build confidence and collaboration, use questions/ clues/ tasks to scaffold learning, model (content and learning, e.g., reflection, provide learning experience through mistakes and making connections, the learning design

5.2.3.1 Provide guidance and opportunities for students to learn to be independent learners.

Teacher guidance as highlighted in section 5.2.2.9 and providing opportunities for students to learn to be independent is an important consideration for teachers when considering how they can support learners to be agentic. Student comments highlight that there is a certain level of scaffolding which is ‘not telling students the answers’ that provides them with the right guidance and opportunity to be independent. These comments support these findings:

They can only guide you in your learning. They can't tell you the answer. (LFG1)

They can't force you to learn because for most schools, especially what's so different about Stonefields is that teachers don't tell you everything. (LFG1)

When a teacher tells you everything and everything you need to do, you're almost taking the learning part away and the fun part away from the experience of discovering new things in school. (LFG1)

You need to know your goals and what you have to achieve because the teachers can't help every student with what their goals are. (LFG5)

Further comments from learners and teachers which highlight that guidance to be independent, self-sufficient, disciplined and focussed are:

That's where I think the the teachers can help us with it. They guide us to know what we learn next, but we learn it ourselves. (LFG1)

Teachers teach us to help ourselves. The teachers teach us how to do it to get us there. But the rest we need to apply that in what the teachers taught us, to actually get to our goal. (LFG1)

They can also help us discipline ourselves, like, at an age where we're not disciplined enough to be able to be like, "Okay, I need to do this now." They help us with that. Like help us staying focused if we're going off track? (LFG1)

I think the big three [Learning Process, Learner Qualities and Learning Pit] helps the children to learn how to learn rather than subject specific and context specific. You can really see the difference between learners here [Stonefields School] and learners elsewhere, in terms of capability. (TFG)

5.2.3.2 Provide workshops and activities with strategies and tasks that develop Agency

Providing workshops is a way that teachers are able to differentiate and personalise the learning that students experience. Designing learning activities with specific strategies and tasks that develop Agency and making help/ support available to students was also evidenced through these comments:

[Teachers plan for us to] experience Collaboration. (LFG1)

Sometimes in Math they give you workshops, and then after you've been to that workshop, you figure out the strategy and how to work it out. (LFG2)

[Teachers] give workshops if we're stuck. (LFG4)

They [teachers] give us a choice of workshops like grammar or punctuation, they choose the one that has the most people or say, "most people voted for punctuation", they put a punctuation workshop on and that helps us. (LFG4)

Like if you need help on it, you can just go onto the mat and the teacher will help you get more understanding of what it is. (LFG4)

I think the teachers can check back on your SchoolTalk and they can see what you can and can't do. Then if the majority of people, like for example, for Mathematics, if the majority of the people can't do something, and they haven't put evidence in [SchoolTalk] for it. Then the teacher would probably make that the next thing [workshop] for the week. (LFG5)

They'll [teachers] check your progressions. And they'll see this is like a hard thing, they could split up. We can split up and look into things that we think we are weak at and the things that we already know. And then go to a group that the teachers have set up to help you with that instead of you go out and you do it. They say, "If you want help doing this, come to us and we'll help you in a group." (LFG5)

5.2.3.3 Supervise, encourage and explain

Examples of teacher supervision as perceived by students was when teachers walk around and check in with students and ask how they are progressing with their learning. Equally the way teachers interact and have conversations with students should be encouraging and motivating. Students said:

Yeah, they go and walk around the hub, they check in with us. (LFG3)

They check in and ask if we are in the group, if we say yes, then they'll check in with us, [we] say what we're doing, how we're going, see how far we're done. (LFG3)

Hapara is basically this thing that the teachers have where they can see what you're on... And they can close tabs and there's this feature, a new feature where they can pause your screen. (LFG4)

Like the way they speak as well - Encouragement and Motivation. (LFG4)

They encourage us. And if we don't know a word then they explain it to us. (LFG4)

5.2.3.4 Provide feedback

Smith (2011) and Taylor (2016) noted that embracing technology has enabled changes in feedback in particular for learners to be less dependent on teachers. Students have acknowledged in the following section that when the teacher provides online resources, videos, and links this is useful. These resources are likely to be supporting students in their learning when feedback would have been required had they not been available enabling a higher sense of Agency. Student comments were:

[Teachers provide] like a baseline of what we need to do and then we figure it out from there... Having feedback helps. (LFG1)

Sometimes they [teachers] talk to you about how you've really nailed it on that test or something. (LFG2)

So sometimes when we do a piece of writing, we upload that onto a Google sheet and she [the teacher] can have a look at them, and then she does comments on what we can improve. (LFG4)

5.2.3.5 Provide videos, links and learning resources for independent learning (content and learning strategies) and the use of online resources to help manage learning

SchoolTalk is designed where each of the learning progressions has a resource bank which can be coded as either teacher, parent, or learner resources. These resources which may be videos or links are identified in the comments below. In some other instances students have acknowledged that teachers may have included learning resources within their planning such as Google Slides which are also known as an online modelling book. Students shared their point of view:

One of the things that they [teachers] also do to help you is they put little videos or links to things that can help you work out strategies or understand things better. (LFG2)

[Strategies & resources] that's mainly when they give us slides. They put it in slide shows or sometimes on SchoolTalk. (LFG2)

[SchoolTalk] has like learning intentions on it. And like the videos and next steps on how you can accomplish that progression... And that shows you how well you're going with the Learning Process. (LFG4)

Comments by students that highlight the use of online resources to help manage learning include:

When you upload, the teacher can automatically see it and then they can turn that progression green if you know what it does and how you do that type of thing. (LFG2)

SchoolTalk shows your progression and shows you what your learning gaps are and what you can improve on, what your stage is, what you've learned and what you haven't learned, what's going on daily. (LFG6)

Because you upload it and then they [teachers] can see it. They can see everything we've uploaded to our goals, so they can check our work off and they can fill in

our progressions and if we've done it right, they might make it green if we've done it really well or they could make it yellow or red or empty. (LFG6)

You know where your gaps are, from SchoolTalk, you can see them visually, that's really helpful for the learners because they can see (the colours) the next steps, identify them, and then work back from what they've just learned towards their next step. (TFG)

5.2.3.6 Highlight study plan for the day/ period (Calendars, timetables, overview)

Personalised calendars and timetables are a feature within SchoolTalk which students identified as useful to enable their Agency and a role for the teacher. Other schools may enable this differently, a common strategy is an overview of the day written up on a whiteboard and/ or group task boards. Easily accessing progressions and these being clearly linked to the learning task is a way that teachers can support learners in their Agency. Students acknowledged:

On the timetable, you can click on what you're doing and it will bring up the presentation and you can open it and make your copy and start your learning. On there, there's this bit to the left where it says all the progressions that if you complete this, we're going to start working towards these progressions. And you can click on them, and then click upload, and then you can upload your presentations. So it's much easier than going into your progressions and trying to find out the right ones. (LFG4)

It might get frustrating for the teachers having to constantly tell everyone, "We're doing this, not that," and the learners have to keep on going up to them each day, what are we doing today? What are we doing today... It's better for you to know what's going on throughout the day so you can remember what to get ready for. (LFG5)

5.2.3.7 Mindset and use of small groups to build confidence and Collaboration

Focus group discussions with students highlighted that a positive mindset or growth mindset as Carol Dweck (2015) would say gives students a better sense of self efficacy, it is this belief in their own capacity which undoubtedly impacts their ability to be more agentic. As with any of the teacher's roles, themes, or factors expressed, it is likely to be a combination of many that helps a learner to be agentic. The use of small groups is an example that builds students confidence in

their ability, impacting their growth mindset, and therefore Agency. The following student comments support these findings:

If you're confident it definitely helps. If you think that you can it makes you do better because you think that you can so you've got a positive mind set and then you're not thinking that you can't. If you think that you can't then you'll be fixed on not being able to do it. If you haven't done it before, you might be able to do something that you didn't know you can do. (LFG2)

What they [teachers] do is we have small groups where you normally do things or you swap so you can actually experience it like when someone asks you something in a big crowd, you don't always want to answer because it's a bit scary. So having a small group, you feel like you can talk more and later on, they [the group] can get bigger and you can feel more confident to be able to speak in front of a larger group. (LFG6)

5.2.3.8 Scaffold learning (use questions/ clues/ tasks)

A learner articulated that scaffolding learning is not telling you the answer, it is showing strategies to help you solve a problem. Teachers referenced the Learning Process and Learner Qualities alongside other examples such as accessing the right tools and strategies. Comments included:

Help, but not tell you the answers, showing you a strategy on how to get out of that problem. Not letting the whole problem be solved, just give me half of it. (LFG6)

The Learning Process is going to help them [students] because then they can see where they need to begin, where they need to get to, and then they can work through their process. It's a good start. (TFG)

The Learner Qualities, obviously, you have got to have those attributes and qualities to be determined, get there and work with the right people during collaboration, or have access to the right tools like computers and books and be able to synthesize. (TFG)

5.2.3.9 Model (content and learning, e.g., reflection)

The role of the teacher in this section as identified by both students and teachers is to provide exemplars, success criteria, opportunities for reflection and modelling. If active teaching is about monitoring every aspect of the teaching and Learning Process, against benchmarks, standards or indicators so that connections are made (Absolum, 2006), the success criteria, exemplars and modelling provide these scaffolds for monitoring. Students and teachers explained:

Examples, I use examples a lot... When I look at an example I say, "Okay, so that's what I need to do, and you know, you just practice doing that." (LFG1)

The success criteria... When the teachers lay out points that you need to achieve, and then we can just base our work against the success rate to see where we're at. (LFG1)

I think it's the art of reflection, and the planning of targeted experiences, actually boosting their capabilities. When we did this, what happened? The ability to reflect on learning afterwards, but also the desire to want to reflect whether for better or for worse. (TFG)

Teacher modeling as well, modeling and being in the pit, modeling their reflection, modeling the process that we go through when we're learning. (TFG)

5.2.3.10 Provide learning experience through mistakes and making connections/ The learning design

Planning learning experiences and the learning design is often referred to as Designing Real Learning at Stonefields School. The school offers Breakthrough learning which is similar to passion based/ led learning, where students pursue and follow their passions, interests and things that they are curious about for 20% of the week. Breakthrough is an example of how teachers scaffold learning and provide opportunities for students to develop capabilities and provide authentic, personalised learning for students. Comments included:

Previous experience. (LFG1)

The actual planned intentional learning design, either to ascertain how you might learn best or how you're feeling, but also for some kids that have a problem taking action. So, the capabilities...[if] their Take Action phase is really hard, then actually how you design learning for those kids where they are scaffolded to Take Action, support them in this way, and how you're reflecting backwards. I believe that it's a really, really important part, the actual physical learning design. (TFG)

That real learning and so, for us being able to use something like breakthrough as a vehicle for driving Agency, it's really valuable, because it's their own interest, their own projects, but you can wrap the scaffolding around it and give them the resources, and the opportunity to reflect and all of that. So breakthrough done really well, is a great way to develop Agency. (TFG)

Helping us do our passions, (LFG1)

If we get that breakthrough right, that's all we ever need to do. (TFG)

It's that real world connection that can be quite tricky, especially if you've got 17 learners. How do you make them all have an experience which is authentic for them? It's a challenge we're always going to have. (TFG)

Experience failing and then coming back from it, and making those connections to what they [students] had previously done, and where to go to next. (TFG)

5.2.3.11 Interpretation

The previous sections highlighted the terms associated with Agency and the factors that help students to be agentic. Naturally, the role of the teacher is to support and scaffold the understanding and implementation of the terms and factors into their learning design. Within this section students and teachers were asked specifically what the teacher does/ can do to help learners to be more agentic.

The ideas that were expressed include providing guidance and opportunities to be independent. Workshops are a way to provide differentiation and personalised learning, they are also a time where teachers can build confidence and Collaboration. During these workshops and general supervision, the interactions and conversations teachers have with learners should be encouraging and motivating. Scaffolded learning through careful questioning, clues and tasks, making connections, and modelling is a benefit of teaching smaller groups. Feedback is further enabled through embracing technology and resources can be provided to support the learning. An overview of the learning is useful for students to enact Agency in the learning.

Table 5.2

Research Question, Terms, Factors, and Roles Identified in Student and Teacher Focus Group Discussions – Alignment

Research Question 1	Research Question 2	Research Question 3
<i>What is Learner Agency?</i>	<i>What helps learners to be 'agentic'?</i>	<i>What does/ can the teacher do to help learners to be more agentic?</i>
Terms	Factors	Roles
Self Awareness/ understanding of own learning (metacognition)	Self Awareness, (understanding self, learning styles, values such as attitude towards learning, determination, plans)	
Independence/ Collaboration/ Know when to work independently and when to seek help	Access to information and help (collaboration, online resources)	Provide guidance and opportunities for students to learn to be independent learners.

Research Question 1	Research Question 2	Research Question 3
<i>What is Learner Agency?</i>	<i>What helps learners to be 'agentic'?</i>	<i>What does/ can the teacher do to help learners to be more agentic?</i>
Terms	Factors	Roles
		Provide videos, links, and learning resources for independent learning (content and learning strategies) and the use of online resources to help manage learning
On task/ Focussed/ Time management/ Use of learning space/ Ability to recognise and avoid distractions		
Ownership/ in charge/ take action		
Having a direction/ goal-oriented	Progressions (Goals, next steps)	Highlight study plan for the day/ period (Calendars, timetables, overview)
	SchoolTalk (next steps, progression, timetable, options, flexibility, feedback, learning content)	
Related to autonomy in future workplace/ connection to real world		Provide learning experience through mistakes and making connections/ The learning design
Resilience	Learning from mistakes, taking risks	
	Feedback	Provide feedback
	Mastery - learning strategies (Learning Process, Learner Qualities)	
	Scaffolding	Scaffold learning (use questions/ clues/ tasks)
		Model (content and learning, e.g., reflection)
	Teacher guidance/ workshops	Provide workshops and activities with strategies and tasks that develop Agency
		Supervise, encourage, and explain
		Mindset and use small groups to build confidence and Collaboration

5.3 WHAT CURRENT PRACTICES EXIST AND HOW MIGHT CAPABILITIES OF LEARNER AGENCY BE IDENTIFIED?

The findings of the second research question ‘What current practices exist and how might capabilities of Learner Agency be identified?’ are presented in this section. Table 5.3 below presents the questions/ discussion prompts that were used in both the student and teacher focus groups aligning to the second research question. The Focus Group Questions/ Discussion provide the structure for this section.

Table 5.3

Research Question 2 Aligned to Focus Group Questions/ Discussion

Research Question 2:	What current practices exist and how might capabilities of Learner Agency be identified?
Student Focus Group Questions/ Discussion	<p>These are some things that teachers have said an Agentic Learner would need to be capable of or be:</p> <p><i>Self Aware, Assessment Capable, Resilient, Collaboration, Using Tools & Strategies, Take Action</i></p> <ul style="list-style-type: none"> • What do you think of these? Do they help you to learn? Why/ Why aren’t they important?
Teacher Focus Group Questions/ Discussion	<p>What Language supports your teaching and learning here at Stonefields School?</p> <p>These are some identified capabilities of an Agentic Learner:</p> <p><i>Self Aware, Assessment Capable, Resilient, Collaboration, Using Tools & Strategies, Take Action</i></p> <ul style="list-style-type: none"> • What do you think of these? Do they help you to teach and your learners to learn? Why/ Why aren’t they important?

5.3.1 *Language of learning - What Language supports your learning here at Stonefields School?*

This section presents the teacher and student ideas about the language that supports their learning at Stonefields School. Particular language that is used includes the Learning Pit, Learning Process, Learner Qualities, and breakthrough. As we talked of this language the following ideas were expressed highlighting some of the practices that currently exist:

- [The Language] gets more complex as learners grow, understanding the importance of learning as a process (progression and scaffolding), keeping students on track and focussed, applicable in life (planning etc.), following own passions, leading own projects, strategies and steps to overcome problems in

learning, using Learning Qualities and process to get out of the Learning Pit, using Collaboration and finding information to get out of Learning Pit, using different ways of thinking, teacher helps with strategies, connecting with Learning Process and Qualities, determination, failure in a safe space.

5.3.1.1 Gets more complex as learners grow

Learners articulated that many of the learning tools and strategies that they use such as the Learning Process and the Learning Pit get more complex as they get older or as the work becomes more challenging. Learners commented:

Then you go on to another pit which is when you go and learn even more about the same topic or a different topic. So you're always in it [the Learning Pit]. (LFG1)

When you get older, it [the Learning Process] gets more complicated since building knowledge, for a little kid it might just be exploring your school as you build knowledge. But for us, we are doing a lot of research... making meaning would be note-taking and then for little kids it would be... taking notes in their minds of what they saw. (LFG3)

I think the opposite to (name omitted) I think it [the Learning Process] gets easier as you get older because you kind of got something that you've known and... (another child continues) and you get used to it, but the steps just become bigger. So maybe it just becomes more complex. (LFG3)

5.3.1.2 Understand the importance of learning as a process (progression and scaffolding)

The focus groups highlighted that understanding the importance of learning as a process is key to their learning journey - it is therefore useful for them to use a Learning Process as a tool/ strategy for them to progress and scaffold their learning and enable them to be agentic. “Learning to be effective, must enable the learner to ‘own’ the Learning Process” (Absolum, 2006, p. 11). Comments below highlight that these learners were ‘owning’ the Learning Process and were able to articulate its importance:

It's building knowledge, making meaning and applying yourself. So that is like a step that we can follow, but we can fill in how we take those steps. (LFG1)

Each one [step within the Learning Process] has verbs that we need to focus on to complete a goal, then we move on to the next one and know how you might apply your understanding. (LFG1)

It's like a blueprint of how to build stairs and then we need to build the stairs to try something new. (LFG1)

You can always go back, you can always go forward, you can go anywhere, because it's a process. For this process, if one thing doesn't work, you can always go to another [step] and that will help you. (LFG1)

It sort of helps you know where you're going in your learning. So like you can use a different part of it to know what you need to sort of achieve. (LFG2)

We sometimes use the Learning Process to evaluate where we are in our learning and what stage we are so that we sort of know where we are in our learning, if we don't already. (LFG2)

There are three different stages, they start off with build knowledge which is just about like, kind of gathering up knowledge and kind of trying stuff out and finding and researching and then you have making meaning which is like connecting all your information and comparing it and then you have to apply understanding which is Taking Action. (LFG3)

With, the Learning Process, the good thing is you can go up and come back to build knowledge to make meaning to apply understanding to make meaning to build knowledge to apply understanding. (LFG3)

The Learning Process is a way of breaking down how we learn. (LFG6)

Because we are naming and labeling the different aspects of where the child is on the Learning Process, the children can make connections easier to help transfer to different areas. (TFG)

5.3.1.3 Keeping students on track and focussed, applicable in life (planning etc.), following own passions, leading own projects

Learners expressed that the Learning Process is key when leading their own learning. Learners used breakthrough learning as an example, they often plan, manage, and track their own progress and learning with a passion based project. Comments below support this:

For the Learning Process, I think that's one thing that really helps us, especially in breakthrough. (LFG3)

[The Learning Process] is also going to help you keep on track and focus instead of just doing something that leads to nowhere. It can also be like our goals, because in Breakthrough, we use this as kind of like our goals. Like, from week to week – who will be building knowledge, make meaning, and apply understanding. (LFG1)

5.3.1.4 Strategies and steps to overcome problems in learning

The Learning Process was highlighted as a strategy that helps learners problem solve in their learning. Breakthrough learning was mentioned again as a great

opportunity to put the Learning Process to use and experiment with how it can be used. Comments below made by learners support this:

Yeah, it applies for everything almost. Like your entire life. (LFG1)

Yeah, you're planning to do something, it's a guide to help you but it [the Learning Process] mostly works in Breakthrough. (LFG1)

I think it helps guide us through our learning, you can be agentic and stuff but if you've got the right tools it makes it a lot easier and it helps, it just kind of guides you. (LFG3)

You don't always have to use the success criteria. You could always just use other things like what [name omitted] said, the Learning Process or the Learner Qualities. (LFG5)

If you're stuck and you don't know what to write or if you've made a mistake, using success criteria, it doesn't always help. It mostly just helps with thinking about how you need to write, not what to write. (LFG5)

5.3.1.5 Use Learner Qualities and process to get out of Learning Pit.

Learners gave examples of how they use the Learning Process and the Learner Qualities as strategies to get out of the Learning Pit. They talked about the Learner Qualities as attributes and an attitude that they need in learning and life. One learner made a connection to the Learner Qualities in that they help to foster a growth mindset. Comments below support these findings:

It gives u168odelliies that we need to showcase, It shows us a guide on what qualities everyone should have, and like what to use. Attributes. (LFG1)

These qualities, we should understand them and be able to apply them by the end of year 8, because these are what will help us in life, and basically high school to university... I's like this basically leads our attitude. (LFG1)

Learner Qualities are like qualities that can help you learn. I's like to learn you need to be Self Aware, say you did't know what yo're doing. Ther''s collaborate, so they like tell you to work together. (LFG2)

If yo're stuck then the Learning Pit, you can use that to get out of it by following the steps on the Learning Process or the Qualities and ther''s stages to the Learning Pit. So first, yo're at the bottom, then you go to the next stage, and then you go higher until yo're out of the pit. (LFG1)

The Learning Pit is likl' It's like where you get stuck -when you get stuck and you need to use the Learning Qualities and tools to get out of it. (LFG3)

So the Learner Qualities, t'ere's seven of them and sometimes it helps us learn more. So t'ere's reflect, think, question, wonder, determined, Self Aware, and connect. And sometimes it helps us with our learning when the teachers ask us to like reflect to go back and reflect to what 'you've done. (LFG4)

A growth mindset? Yeah, what might help with our growth mind–et - Learner qualities! (LFG6)

5.3.1.6 Use collaboration and find information to get out of the Learning Pit

Collaboration is one of the Stonefields School Vision Ro–ks - this was referred to by many learners in the focus groups as a key strategy that enables them to get out of the Learning Pit. One learner referenced the notion of asking a friend, collaboration pushes that idea further as learners have pointed out that people who may have already experienced the learning or who may be ahead of you can lead you and help you to get out of the pit. Other ways of finding information such as using picture cues and google were also noted. Comments included:

If 'you're stuck in the Learning Pit with somebody else, right? That person can help you out of it, or you can work together to get out of it. (LFG1)

Most people, when 'hey're in the pit, they go to Collaboration, because ideally, you would get some information or like a guide, or like a step guide from people who have already experienced it. So they can kind of like, you know, lead you but you still get to do your own learning. (LFG1)

It helps me because in some of the pictures t'ere's like little things and it shows how you can get out of the pit by collaborating or using some tools. (LFG2)

Sometimes asking a teacher for help or sometimes looking back at what 'you're meant to do or searching something up on Google to see if it can help you. (LFG2)

If 'you're stuckId... 'ou don't know what to do. You just use the Learner Qualities, determination, Self Awareness. And then ask for collaboration and stuff to try to get yourself out of it [the pit]. (LFG3)

We have ask three people before you ask the teacher so then they can maybe help you. Because just in ca'e they're ahead of you, you can ask them. (LFG4)

Ask a friend then ask someone 'ou don't know. Then 'if you're still stuck, ask someone from a different group. (L'G4)

It's like when you start off really well and you start feeling like 'ou can't do it anymore, you just give up. Well, if you use the Learning Pit then it means l'ke

you're trying to get back out of that pit. Then, when you get to the t'p, you've achieved your goal. Thinking that you can do it and 'ou won't give up no matter what. (LFG6)

5.3.1.7 Use different ways of thinking

Learners and teachers referred to mindsets, critical thinking, and thinking differently as current practices that exist. The Stonefields School Language of Learning is referenced again as a resource and guide to support learning. The Stonefields Language of Learning enables learners to think for themselves. Comments in support of this include:

[Being stuck in the 'it] It's a tough time and I g'ess it's like all these, like the Learning Process, the Learning Qualities, and the Learning Pit all connect together to form like a guide. (LFG1)

You usually get stuck when you are agentic because you rea'ly don't know the answer. 'ou don't have any teacher around you, so you try and get by yourself like try to get out of the pit, using your resources, research, and then ask your teachers. (LFG1)

W'en you're stuck in the pit, you go and look at the Learning Process or the qualities. They can help you with different mindsets. They sort of help you with different ways of thinking. (LFG2)

The whole point of it [Agency] is to get them thinking for themselves... 'hat we're trying to do is prepare them for the future, like that problem solving aspect and the critical thinking aspect. (TFG)

The thinking part of 'it, it's really helped me as an adult actually organise my thinking, but bringing it to the forefront and understanding 'hy you're doing it helps you with the transfer piece of doing it the next time bec'use it's more intentional. (TFG)

5.3.1.8 Teacher helps with strategies, connecting with Learning Process and Qualities, and providing just the right amount of information

A careful amount of scaffolding by giving examples, referencing the Learning Process, using modelling books, making learning challenging enough, and providing explicit links are used by teachers. Teachers are using these scaffolding techniques to support their learners and involve them in their learning. The following learner and teacher comments support this:

And like when you get stuck in the Learning Pit, you just like go to the teachers a'd they'll tell you about the Learning Process so you can start using all those parts of the Learning Process and the Learner Qualities. So then you can start going on with your learning so you can achieve your learning. (LFG4)

What I think is really helpful is when [teacher name omitted] will come over if we get stuck on the learning path. 'ut she'll tell us a bit about 'hat we're actually doing. And 'he won't tell us the answer to everythin'. She'll give us examples of it. Like strategies. [Another child interrupts] Yes. Like strategies to get out of the pit or of how you can do it. (LFG4)

Bringing the children along wi171odellingodeling books and saying this part of your learning relates to this part through the Learning Process, this is an opportunity for us to bring in things like Collaboration. (TFG)

Talking the learning through rather than just telling the kids wh't they're going to be doing next, involves them in their own learning, which I think helps them to ultimately take control of it wh'n they're trying to do the right learning. (TFG)

I think as a teacher to set up the learning in that Zone of Proximal Development (ZPD), so they are experiencing a true challenge. And that idea that learning can be really, really difficult and that if you get past those [challeng's], it's where some of your best learning happens. 'We don't want that to be easy. (TFG)

5.3.1.9 Failure in a safe space

Importantly the teachers referenced the Learning Pit as somewhere that is safe to fail, and that failure is a part of learning. The Learning Pit supports the notion of failing forward. To fail forward is about leveraging mistakes and using setbacks, struggles, and challenges as positive learning opportunities. Teacher and learner comments include:

Teachers getting in the Learning Pit and showing that and modelling that. The Learning Pit allows them to get in the pit and see what it's like to fail. Failure's a big part of learning. (TFG)

Actually, failure in a safe space, the Learning Pit allows that, because they live their life to actually feel like it's okay to get in the pit, it's okay to like to feel that. And that's a really good part of the transfer piece, because they know what to do next, whenever they get in the pit another time. (TFG)

Yeah you build on those experiences and failures to help you in your next endeavor. (TFG)

An agentic learner would get themselves into and out of the Learning Pit. Because that means that you're learning something. If you never get into a pit, that means everything is too easy. (LFG1)

5.3.1.10 Interpretation

Discussion with the Focus Groups highlighted that there is a language of learning that is used at Stonefields School that supports learners/ learning. In particular the Learning Process, Learner Qualities, and Learning Pit which were discussed in section 1.4.3. Also noted was Breakthrough which is similar to Passion Led Learning. Breakthrough learning was referred to previously in section 5.2.3.10.

The language of learning becomes more complex as learners get older and as work becomes more challenging. It is important to understand learning as a process. The Learning Process is a useful tool and strategy to scaffold learners, it enables them to take ownership, lead their own learning, problem solve, and think for themselves. In particular the Learning Process along with the Learner Qualities and Collaboration were given as strategies that learners use to get themselves out of the Learning Pit. Examples of current practices that exist include providing just the right amount of information and making explicit connections to the language of learning. The Learning Pit also provides a safe place for failing forward - leveraging mistakes, setbacks, struggles, and challenges and treating them as learning opportunities.

5.3.2 Capabilities

“A ‘capability’ is demonstrated in action. It is what the student shows they can do—and is willing to do—as a result of their learning” (Hipkins, 2017, p. 1). An extended inquiry had already identified 6 capabilities of Learner Agency that are presented for this research. An agentic learner would show they can be and are willing to be Self Aware, Assessment Capable, Resilient, Collaborative, Use Tools & Strategies, and Take Action. Teachers and learners were asked what they thought of the capabilities, if they help teachers to teach and students to learn and why are/ why aren’t they important?

This section presents both teacher and learner responses about the capabilities which include:

- Capabilities – as a set, interconnected; useful, sometimes unconsciously or can be useful at different times for different students; sometimes collaborative, sometimes independent - Awareness of when each is appropriate; real-life application; important in agentic learning: Self Aware, Collaboration; Assessment Capable can be confusing; different capabilities can be useful at different times for different students; Resilience is the driver; importance for students to really understand the language, not just verbalising it.

5.3.2.1 Capabilities – as a set, interconnected.

The capabilities as a set have been identified as being interconnected by the learners. In Chapter 4 they have been identified as being the interconnected capabilities of an agentic learner. Capabilities are things demonstrated in action that a learner can do and is willing to do (Hipkins, 2017). Both teachers and learners identified the importance of the Taking Action capability as the piece where you do something as a result of your learning. Comments included:

Self Aware, is that you're Self Aware when you're stuck, and then you Take Action, as in Use Tools and Strategies or do Collaboration to help you get out of it, and be resilient throughout and being able to be determined enough to go through with that entire process. (LFG1)

I guess like all of these kind of have a set, because once you know you're Assessment Capable, you Take Action, Take Action upon Collaboration, and it's like Using Tools and Strategies, and you'll be resilient, and you'll also have to be Self Aware of what you're doing. (LFG1)

Wait, if you're Assessment Capable then you're also Self Aware, because that means you know where you're at. (LFG1)

If you use one, you would generally use another one as well. (LFG1)

Take action is an important one because if you're writing a story, you can't just spend the whole time writing the story/ just planning it. You need to plan it but then actually start writing it. (LFG5)

Collaboration because when you're collaborating with people you don't know that much and you work well with, then it'll be good because when you're collaborating, it'll give you ideas and then you could combine them. And then when you combine them, it could make this good story. (LFG5)

I think it all leads to the Take Action, I think that whatever we're trying to achieve, the ultimate aim is to do something about it. And everything leads towards how

well we are able to Take Action. And to use these things to take positive actions, ethical action. That goes back to Self Aware. (TFG)

Some of them relate really closely to the Learner Qualities and things that we're taught before we even picked up on the idea of Agency. But yeah, if we're starting a new piece of learning, or even starting the year, and trying to understand things like identity then Self Aware is coming into it. If we're thinking about how we're cooperating and negotiating there's Collaboration and getting out of the pit, Tools and Strategies, Assessment Capable we use all the time. (LFG5)

5.3.2.2 Capabilities used sometimes unconsciously or can be useful at different times for different students.

One of the learner focus groups noted that the capabilities can be used unconsciously at times. They may not be explicitly focused on or at the forefront of the learning design, but they are using them without realising it. Another focus group commented that the capabilities can be useful at different times for different learners. Focus group one and five commented:

Yeah, because sometimes even though we don't have these things, like for example, some students may say they don't really use this [holds up a capability], what I found out is actually I kind of use that unconsciously. (LFG1)

Yeah, similar to the design thinking process, when you just use it [a capability] without realising it. It's not like in your mind. (LFG1)

Because when you're using it, if you're using it all the time, if you're in a situation where you're stuck you generally, use all of that. (LFG1)

All of them are important in their different ways. They might not help sometimes but they might come back when you need them. (LFG5)

You might use different capabilities at different times. (LFG5)

5.3.2.3 Sometimes collaborative, sometimes independent. Awareness of when each is appropriate.

The learner focus groups highlighted that there is a certain amount of Self Awareness needed to know when Collaboration is appropriate and when it will support your learning. Learners identified that there is often a need to work independently, and that Collaboration can be distracting. Equally working with different people can help to build resilience. Their comments included:

You'd need independence there as well cause you need to be collaborative and sometimes there's a need for independence? (LFG1)

When to collaborate and when not to cause sometimes collaborating can distract you in some sort of learning. (LFG1)

Working with different people that you don't normally work with which helps you to be resilient. (LFG6)

5.3.2.4 Real-life application

The ability to use the capabilities in learning and in life outside of school especially when they were 'older' was referred to by two of the learner focus groups. This illustrates that learners acknowledge the importance of the capabilities and how they support life long learning. Comments below are supportive of real life application:

This is like going to help emotionally isn't it. Friendship problem, you need to know when to Take Action. (LFG1)

You can use it in all parts of your life. I mean you use all of these, as part of learning you can use it and as part of your actual life outside of school and stuff. (LFG1)

You can't avoid this. There is no way to avoid any of it. (LFG1)

It's gonna be with you all the time even when you are a baby, you are Using Tools and Strategies to learn how to speak - walk. (LFG1)

It helps you in life and in general when you're older. (LFG3)

Yeah, it's not just something that you need in school. If you're not resilient if you don't have the right strategies to use. If you're not aware of yourself and others. If you don't know your next steps, if you can't collaborate, if you can't Take Action, you're not learning, you're not going to be very successful, in my opinion. (LFG3)

Basically practicing it in school and then when we get older and use it more often. (LFG3)

5.3.2.5 Important in agentic learning: Self Aware, Collaboration

Learner Focus groups two, four, and six talked specifically of Self Awareness and Collaboration and how these capabilities support agentic learning. They identified that Self Awareness is about managing distractions and driving their own learning. Collaboration was identified as being useful to leverage other peoples'

ideas, seek feedback, and accomplish something greater than what could have been achieved on your own. The following learner comments supported these capabilities:

Self Aware is a good one that you can find in a lot of learners because most kids in our hub, they are very Self Aware of where they sit and what they're doing at the time and they don't go on games and they don't get distracted all the time. We can Take Action by driving our own learning. (LFG2)

Sometimes Collaboration helps you because sometimes I don't always have the best ideas for things than other people do. So I like to collaborate with not only my friends but other people. And I think Collaboration helps me because if I've done something then I can get feedback on it and then I can collaborate with someone to make it better. (LFG2)

Collaboration is really helpful because if you have an idea and another person has an idea, you can put them together and make something better than it would if it were just your idea. (LFG2)

Collaboration is when you collaborate with other kids in your classroom and you try to accomplish something. (LFG4)

Self Aware is where you make sure you're on task like [cross talking], you're like basically making sure you're doing the right thing. The strategy to do that is by saying I'll do this slide and this slide while you do this slide and this slide. And then we'll come back together and see what we've done. (LFG4)

I think Self Aware is quite important because you need to know what you should do at the right time or what space you can learn it properly or what space you think is not too appropriate to learn in. (LFG6)

5.3.2.6 Assessment Capable

Learners commented that certain terminology or phrases such as Assessment Capable can be 'confusing'. If we want to communicate clearly with our learners, using child speak language and avoiding jargon are ways to achieve this, or teaching what the phrases or terminology mean. Some learners in the groups were able to articulate what Assessment Capability means in their own words. Examples of their interpretations are below:

Assessment Capable, sometimes I get confused by what that exactly means. (LFG1)

Assessment Capable is, it's from, like from tests, Looking at your test results and like looking at how far you've achieved, what your gaps are, where your strengths are. And it's steps so you can go back and learn from what you don't know. (LFG3)

Like knowing where you are and what your next step and things like that. (LFG4)

You don't want them saying words for the sake of saying words. It's more meaningful, having a conversation about using your progressions, and then we'll understand why these are progressions, rather than just saying, "I'm being Assessment Capable". So it's like, it's what is behind those terms, the words that we use as well. Yeah. (TFG)

5.3.2.7 Resilience is the driver

Resilience was identified by focus group three and the teachers as being the driver of the other capabilities. Resilience is linked to the school's learner quality of determination and the feeling of being in the Learning Pit. Their comments highlighted:

[Without Resilience] I don't think you'll be as successful, Resilience is really a big thing and if you're not resilient, it makes it a lot harder to achieve things especially in Taking Action... (LFG3)

I think Resilience is key to driving the whole thing forward, how well we can cope with adversity, how well we challenge ourselves and how well we get over things. (TFG)

It all makes sense Self Aware to Take Action and Resilience drives it. (TFG)

5.3.2.8 Teacher use of the capabilities

Teachers talked about how the capabilities are used and interpreted in their teaching. Links to the Stonefields Language of Learning and explicit examples of how the Qualities, tools, and strategies are connected to the capabilities was referred to. Below are some comments of teacher thoughts:

We used to talk to the kids about being Self Aware. And what we meant by that was, are you Assessment Capable? Do you know what you need to do to help you in your learning? And do you know who you need to work with and what tools and strategies will help you? I totally appreciate that Take Action is a big part and I love the addition of Resilience. But for me, a lot of this actually used to sit under Self Aware anyway. That's what we used to talk about when we talked about are you Self Aware about what you need? Why you need it? (TFG)

I mean, I don't use these terms specifically with the kids often, Collaboration, obviously I do; Tools and Strategies, a little bit. We talked about being Assessment Capable. I use resilient as a general term, but I don't think of it as being a Stonefields term compared to the Learner Qualities, for example, which to me is super embedded. (TFG)

Using Tools and Strategies, you will use that all the time as the Learning Process, and the Learning Pit are connected to tools and strategies. (TFG)

5.3.2.9 Interpretation

The Agency capabilities are interconnected and can be thought of as the parts which make up Agency as a whole. At times capabilities are used unconsciously. Different capabilities are useful at different times for different learners and there is a certain amount of Self Awareness needed to know when to use the capabilities. Real life application helps to draw awareness to the relevance of the capabilities and how they may be applied in other contexts. Particular capabilities were discussed and elaborated on, including terminology, and meaning. Teacher use of the capabilities was also highlighted. These ideas not only highlight what practices exist but also give insights in regards to how capabilities of Learner Agency can be identified.

5.4 HOW CAN EVIDENCE OF THE CAPABILITIES BE USED TO INFORM LEARNING DESIGN?

The third research question ‘How can evidence of the capabilities be used to inform learning design?’ is presented in this section. The third research question and aligned focus group questions and discussion prompts are presented in Table 5.4. Again the focus group questions/ discussion are used to structure this section.

Table 5.4

Research Question 3 Aligned to Focus Group Questions/ Discussion

Research Question 3:	How can evidence of the capabilities be used to inform learning design?
Student Focus Group Questions/ Discussion	<p>You have completed a survey....; Your results show....</p> <p>What do you think this means for you in your learning?</p> <p>How might you use this information to support your learning?</p> <p>How would you like your teacher to use this in the learning hub?</p> <p>Show students Appendix N, Gender/ Boy vs. Girls. What other things might impact on Learner Agency?</p>
Teacher Focus Group Questions/ Discussion	<p>Your learners have completed the Surveys....</p> <p>What do you think this means for you in your teaching?</p> <p>How might/ do you use this information to support your teaching?</p> <p>How would you like to see this information used across the school or for other NZ teachers?</p>

5.4.1 *What do you think the ASpT means for you in your learning?*

Learners were shown their personal data which was presented in the layout of Appendix I. This section presents the responses and ideas of both the teachers and learners when asked what the ASpT means for their learning. Responses and ideas included:

- The scale changes as students learn more; strengths and areas for improvement/development; context of learning is an important consideration; discerning information - might not be representative of learning at times; conversations about understandings and misunderstandings, learning design, scaffolding, strength and weaknesses; discrepancy between how the students and teachers understand the analysis/ result; information might not be accessed or used appropriately (due to lack of understanding or time).

5.4.1.1 **The scale changes as students learn more**

It was insightful of the learners to recognise that as they learn more about the capabilities their responses to the ASpT may alter and that the 'scale changes'. As they learn about the capabilities there is more to each of them than what they had initially thought. Comments below give us an insight into the teacher and learners' thinking:

There's like improvement found in the variable work. As I go up the scale, I think of it differently, something like a one to make back then, might mean a lot less than it does now. (LFG1)

I look at it differently. The scale changes. (LFG1)

This is like words, gigantic might be not as big to somebody as to me. (LFG1)

Your view changes through time. You need improvement to learn more. (LFG1)

Like I might think I'm really good at this now, but in the future there's a lot more to it. (LFG1)

Especially when you look at how other people see it, their perspectives of what these mean, you understand and you begin to think maybe that's not all that's there. Like Take Action, you could know a lot of things that you can use in different things and that's why our perspective starts to change. (LFG1)

I mean from this it looks like I've gotten worse over the year, but I don't think that in my head I think that I've gotten better. (LFG3)

Well, from like the start of the year, since you've had like a big six/ seven week holiday it's like you end up probably overestimating sometimes? And then you

have those days where you just underestimate yourself and that's what I end up doing half the time - when I'm very hard on myself. (LFG3)

Perhaps as they learnt more about the capability, they learned that actually they probably weren't as high as they thought they were. (LFG3)

[The drop in perception of the capabilities] that's because they're actually realising what it means to be those things. (TFG)

5.4.1.2 Strengths and areas for improvement/ development

The ASpT data is able to show learners areas for improvement, what the learners are good at and what needs further development. Learners identified that the information could be used to leverage the strengths of others or identify where there may be needs when collaborating as a group. Learners commented:

It shows where we need to improve? Where we need to go and where we're at. (LFG3)

It can show us what our next steps are, what we might need to spend some more time on and what we're good at. (LFG4)

And like what we- if we say for example, mine. I've got really high in Self Aware, maybe I could focus on that Collaboration because that's probably my lowest. (LFG4)

It helps to focus areas of development. So with the learner say, if there are things that we might want to work on, like Collaboration or Resilience, and within certain groups that might highlight there's a need, or it might highlight that there's a strength, in which case we can leverage it. (LFG5)

5.4.1.3 Context of learning is an important consideration

A teacher noted that the context is important to ground the information when considering what it means for the learners in their learning. Learners expressed that the ASpT is a snapshot, and it depends on what learning is happening at that point in time. These findings highlight that we need to be careful when we refer to a 'measure' of Learner Agency as it leads people to think of a numeric value, however qualitative introspection lends deeper insights into the data for further meaning making. (R. Hipkins, personal communication, August, 16, 2018). Examples of comments by the focus groups include:

It is the context that is going to be able to do that, without the context is just a series of how you're feeling on the day? And those snapshots, well they're interesting, they're not necessarily very telling [without the context]. (TFG)

So, I've completed more work and got more progressions marked off. So, this is probably, I mean, from the forms it's probably correct but I don't feel that.

[Interviewer: Okay. So, that's a really good thing that you've highlighted in terms of... it's a point in time, right?] Yeah! (LFG3)

It probably depends on what was happening at that point in time. It might have been a different learning - Yeah, it might have been a different task or activity? (LFG3)

5.4.1.4 Discerning information- Might not be representative of learning at times

During the discussion with focus group three, learners acknowledged that the information can be discerning. This can be because of their feelings during the administration of the survey and survey fatigue where learners may become bored, tired, or uninterested resulting in them clicking randomly or marking all threes. Focus group three's comments were:

It's being just a point in time. I guess it depends on how you're feeling if you're having a bad day... (LFG3)

I know one of these assessment thingies, on one of the days we did it I wasn't having a very good day and then I, I mean like I'm marking myself down because I'm just not feeling good. (LFG3)

And sometimes we just want to get through it and go quickly, so we just kind of click random ones every time but just kind of read the question but don't mark it truthfully? (LFG3)

Some people just go: "three, three, three, three" Like the whole thing and then- It's not truthful. (LFG3)

5.4.1.5 Discrepancy between how the students and teachers understand the analysis/ result.

Shared understandings and differing points of view were addressed by the teachers. In particular shared understandings amongst the staff and across the school in relation to expectations. Also shared understandings to address the discrepancy between what the teacher and learner thinks. The ASpT was intentionally designed to be a learner self-perception tool as measures in SchoolTalk which were already in place are largely a teacher judgement of progression and achievement. These various results provide an opportunity for evidence to be triangulated? The teacher focus group discussion highlighted:

I think all the tools that we have in school gives us a really good understanding of where our children are. But I think what's really, really important is that across school understanding, meeting and talking with people about what it looks like in their hub. Because, again the children, especially when it comes from the children's voice, depending on their confidence, and their self-esteem, they've probably got a different perspective of how well they can collaborate compared to us [teachers]. And so these shared conversations are really useful for me. (TFG)

It [ASpT] acts as a sort of, a rubric of where kids are at because it's interesting to sort of map Collaboration with where they are at with Collaboration on SchoolTalk. So SchoolTalk is one thing, and then the Agency tool says something else, and what we say is something else, so it's like wow, and which one maps out more, I think the ability to do this regularly and week to week is quite powerful. (TFG)

So when you say we fail, but we had great Collaboration, you might not say it in those few words, but you might be able to unpack Collaboration. So we did talk to each other, we did look at diverse perspectives. (TFG)

It's like what do we expect and to what degree. (TFG)

5.4.1.6 Conversations about understandings and misunderstandings, learning design, scaffolding, strength and weaknesses

Teachers commented specifically about the learners and their understandings and misunderstandings of the capabilities or language that is used. Teachers identified that these mis/ understandings, strengths, and weaknesses can be used to inform the learning design and scaffold learners to reflect on what has caused the shift. Conversations are an important part of unpacking the information and what evidence means for their learning and the learning design. Excerpts from the teachers discussion is below:

It's also a nice place to start focusing the conversation. So it might highlight understandings or misunderstandings that you didn't think were there. Like do we understand what the terms are? Do we see success as the same thing? And again, so it's informing your learning design, but it's also scaffolding, or being done past those conversations about why Collaboration might be important, because I think it's interesting to unpack why the data is the way it is. And obviously, sometimes it's a strength or a weakness, which informs the learning design. But then there's also discrepancies between an understanding which is really, really beneficial for me in terms of talking to my kids about some of these things and wondering what it means for them and why some things work well, and why some things didn't. (TFG)

Learners that make shift, they can talk about what's happened. Why have I shifted? Why do I feel differently now than I used to? So yeah, you're right. That could be because of a discrepancy of understanding of the terms or it could be that they've actually made some progress. (TFG)

5.4.1.7 Information might not be accessed or used appropriately (due to lack of understanding or time)

Teachers acknowledged that the information may not be used as intended, accessed regularly or used appropriately. Looking at different levels of analysis and then interpreting results for an individual is important. An improved layout, functionality, and presentation of the results would better support teachers to use the information as intended to inform the learning design.

It's not something that I interact with as much as I should? (TFG)

I actually don't access it myself. I rely on [another teacher]. So I guess that's my wondering, is that something that across the school people are using often? (TFG)

Students (and teachers) might not look at the school-level analysis. (TFG)

Results need to be based on individual development, not age group. (TFG)

More visual and dynamic analytics would be good, such as the ability to hover to see more details. (TFG)

5.4.1.8 Interpretation

When using the capabilities as evidence to inform the learning design, in particular the ASpT, it is important to know that learners look at the scale differently as they learn more. There are strengths that can be leveraged and areas for improvement within the learning design. The ASpT is a snapshot at a given time and provides quantitative data; it is important to make meaning through qualitative data so that the context for the learning is taken into consideration. Conversations are important to check for understanding and misunderstandings of the results and of the capabilities in general. Teachers checking in on what they have noticed, recognised, and therefore how they might respond is key. Interpreting reliable and discerning data, using the data appropriately, and being capable of doing so is important if the capabilities are being used to inform the learning design.

5.4.2 *How might you use this information to support your learning?*

The information provided from the ASpT can be used to support learning, teachers and learners commented through their focus groups about how this might be used. Insights included:

- How emotions can affect learning; highlights strengths and weaknesses; independence, confidence and targeted workshops; teachers need to be more familiar with the tool, and build a collective understanding through shared stories of how it can be used.

5.4.2.1 **How emotions can affect learning**

Two learners from the first focus group associated that the way learners feel makes a difference to their learning and therefore learning depends on their mood. This connection is well researched by neuroscientist educator Nathan Wallis who has said that in order for your cortex to be highly active your brain stem has to be nice and calm, emotional wellbeing is important in order to access your higher intelligence, happier kids do learn easier (Borderless, 2019). Learner comments in support of this were:

The way I feel makes a difference to my learning so it depends on your mood. So if you're happy then you will probably learn more, if you're sad and depressed, you'll probably lose focus and be distracted. (LFG1)

So it's [the ASpT] based on their own view, their feeling, their personality going on to these things? (LFG1)

5.4.2.2 **Highlights strengths and weaknesses**

The information generated for the ASpT can be used to support learning by highlighting strengths and weaknesses. Learners also justify if they agree with what the results have shown. Learners have found it useful to see this information 'written down' and a computer generated report about what is happening in their learning based on the ASpT. Many of the focus groups commented on this, their comments are:

The strengths, the strengths are what you're good at and the next step is how you can improve on. (LFG1)

It can help if I [inaudible], on my next steps, it says I try to work with people who are different to me. I'm not really used to doing that in my hub. I usually sit with my friends or sit by myself if I want to get something done. (LFG2)

I agree with what it says in my strengths. I know what my passions are, I make good choices to help me learn, I am comfortable learning without a teacher and I know when I haven't done my best work. I agree with that very much. (LFG2)

I guess it could also be with the next steps, you could be like you thought you are good at one and, "Oh, maybe I'm not." But I think it's - Yeah, I think the strengths for the next steps help. (LFG3)

Because it's all well and good having like what you think you need to work on in your brain but having it written down, having a computer or kind of say, judging by what you've put in on this survey, this is what is happening. And it kind of helps seeing it written down and so you're like, "Okay, yeah. I thought I wasn't very good at this and I know I can work on this and I'm better at this than I thought I was." (LFG3)

Sometimes it gives you more confidence knowing that you could do something that you never did. But it actually gives you - It's better to have feedback from the next steps knowing that you thought that you were good at something but that's actually your next steps. (LFG3)

We could look at like the next steps and pick a couple and see if you could work on those. (LFG4)

See what you're missing in your learning. And you could work on the ones that are kind of lower. Like say, I'm kind of low on Collaboration. So I could collaborate more with people. (LFG4)

Knowing my strengths. Knowing what I need to work towards. What the next steps are. (LFG5)

5.4.2.3 Independence, Confidence and targeted workshops

Learners felt that the information from the ASpT can support their independence and grow their confidence. They also noted that teachers could design focussed workshops that support the capabilities and in particular the capabilities that they need. Comments included:

You can prepare yourself for what you can do next year and then the following years to come... Your teacher is not always going to be there for you when you get to work and stuff. (LFG3)

Sometimes it could give you confidence if you think that you've done well. Like on the strength, if you see something good that you didn't think that you were actually good at and that kind of makes you feel, "Oh, I am..." (LFG3)

They could design workshops that help us with this. They could give us more, they could focus us more on the other stuff we need. Like I could focus more on Collaboration and Resilience. (LFG4)

Support on how to do it properly and getting into detail about the work more. (LFG4)

5.4.2.4 Teachers need to be more familiar with the tool, and build a collective understanding through shared stories of how it can be used.

Being familiar with the tool, taking responsibility, and ownership of how it can be used is important to really understand the impact that it can have towards supporting the learning design and integrating the curriculum. One teacher identified that through creating shared stories and reflections of the learning design, it helps to build a collective understanding and can be used as a resource to support and guide the teaching of others. These ideas were expressed through the teacher comments below:

I need to become more familiar with it myself, I'd be pretty reliant upon [teacher name omitted] and the hub doing it and I think we need to take responsibility and ownership to actually really understand that and actually work with that. (TFG)

I think it's about still getting those stories out there. So it's whatever you're doing in the hub class, or wherever. What did you do? How did it go? And just it's about sharing those stories so other people can draw from them. Then other people can add to those stories. Essentially, we build a collective understanding or collective library of stories that people can draw on to guide their own teaching. (TFG)

[The ASpT is] another tool now to use and to track, but how we use this to integrate that curriculum design [inaudible] in SchoolTalk. (TFG)

5.4.2.5 Interpretation

Learners who use the information from the ASpT to support their learning require a level of consciousness of their emotional wellbeing to enable them to access their higher intelligence. Checking in with the strengths and weaknesses that the ASpT shows and justifying if they agree is a scaffold to enable them to reflect on learning. Learners could identify targeted workshops that support specific capabilities improving their independence and growing their confidence. In order for learners to access and use the ASpT to support their learning it is important that

teachers are familiar with the tool and that they have a collective understanding of how it can be used.

5.4.3 *How do you think your teachers could use this information to support you in your learning?*

Learners were asked how their teachers could use the ASpT information to support their learning. Naturally some of the responses overlapped with comments and ideas that were expressed in section 5.4.2 as the learners and teachers are both able to use the ASpT and particular strategies to support learning. Learner responses included things such as:

- Using the strengths and weaknesses to design learning opportunities; awareness of different perceptions; give students more tools and strategies with the capabilities; learners can tell teachers what they need - Agency; more advanced lessons and separate learning opportunities; give students options on what to improve

5.4.3.1 Using the strengths and weaknesses to design learning opportunities

A learner commented from focus group four in section 5.4.2.3 about creating targeted workshops to address the capabilities. Similarly, learners have identified that if teachers know what their next steps are, teachers are able to create activities and tasks to specifically focus on a particular capability. Through the use of the ASpT they can assess if the activity has had an impact on the learning. Learner comments included:

They can see that I'm kind of going down on my Collaboration, maybe they will create more activities that will make me collaborate and see what Qualities I actually need and they will see by end of the activity if they give me this test again how it will affect and change my level of Collaboration. (LFG1)

So they know what our next steps are and know what they need to teach us and what they don't need to teach us instead of just wasting your time on what you already know. And help us improve what we need to know. (LFG6)

5.4.3.2 Awareness of different perceptions

A learner from focus group one commented about how the teachers and learners may have different perspectives of the capability 'ratings'. Teachers spoke of this in section 5.4.1.6. An awareness of different perceptions and why they exist is

something teachers can utilise in support of their learning design. A learner from focus group one commented:

This is a reflection of how I think about myself because other people might rate me differently to how I rate myself - And that's basically Assessment Capable. And it's the same as being Self Aware and picking the right rating on how well you're doing on that [capability]. (LFG1)

5.4.3.3 Give students more tools and strategies with the capabilities

Learners commented on the need to learn strategies - their comments implied that apart from learning knowledge, teachers supporting the teaching of strategies for the capabilities is also important. This is a positive comment because of the known research with neuroscience and how the brain works.

There's a reason there is such a focus on social, emotional wellbeing, because it directly translates as academic outcomes. It's not just something we do to look after the kids' self esteem, a child who feels safe, who has a strong sense of belonging, and feels a strong sense of competence; that is going to translate as better academic outcomes, better Reading, better Writing, better Mathematics (Borderless, 2019).

I want to do some more strategies... if you actually learn it, it will stay with you a long time. (LFG1)

The teachers could help us by looking at this [the ASpT information] because then some of them they could - not like in Math or Literacy, they help us with different strategies and like being more confident around other people. (LFG2)

5.4.3.4 Learners can tell teachers what they need - Agency

Teachers could listen to the learners more about where they are at and what they need to work on with their learning. If learners are agentic and Assessment Capable the teachers can and should be able to rely on and use the information from the learners to support them in their learning. Learners from focus group five commented:

Going back to those workshops. Let's say lots of people don't know where their strengths are and the teachers just give them some work to do. The [learners] can look at it [ASpT] and tell them [the teachers] where they're at and what they think they need to do. (LFG5)

Because we've got three teachers in our hub now, and that can be three different things. We can choose what we do instead of the teacher saying, "This is what your report said, you have to come with me," but you might say, "Actually, I don't want to work on that right now. I want to work on this first." (LFG5)

5.4.3.5 More advanced lessons and separate learning opportunities

Focus group three feel that teachers could use the ASpT information to support their learning by providing 'more advanced classes' and providing separate opportunities from the usual learning programme. Several comments below are in support of this:

If they've seen that you're getting better throughout the year, maybe they can put you in advanced lessons. (LFG3)

So, I mean, you could also get more advanced classes like I know that in Mathematics at the moment, there's some separate things with [teachers name omitted] and they're doing very hard stuff in my opinion. (LFG3)

5.4.3.6 Give students options on what to improve

Learners feeling a sense of control or that there is a choice in what is being learnt gives them more Agency. This is something the teachers can do to actively support their learning. Learners felt that the capabilities are not something that can be forced upon them, a certain amount of willingness is needed from their part. Learners commented:

Things like Collaboration, Self Awareness, Assessment Capability and things like this aren't really things that you can force on students, if it's not in their personality it's not possible unless they are really going to learn it. (LFG1)

Well, they [the teachers] take note at what your strengths are and what your weaknesses are. And then they ask you themselves if you already know and then they guide you along a little bit. But that's not telling you exactly what to do, it's giving you that option and being agentic. (LFG3)

5.4.3.7 Interpretation

Learners felt that teachers could use the strengths and weaknesses from the ASpT to design learning opportunities. These could include teaching tools and strategies and creating targeted workshops which address the capabilities. This directly relates to academic outcomes ensuring learners feel safe and have a strong

sense of belonging and competence. Teachers need to be receptive to learners who are able to demonstrate Agency, offering separate learning opportunities where necessary, giving students options on what they might work on which gives them a sense of control and ownership.

5.4.4 What might impact Learner Agency?

It is important to consider what things impact Learner Agency if we are considering how evidence of the capabilities can be used to inform learning design. Appendix N highlights that girls perceive themselves as having more Agency than boys. This was shown to the learner and teacher focus groups, which they commented on and posed other variables/ constructs that they thought may impact Learner Agency. Their comments included:

- Gender; ethnicity, culture; age; maturity; peers/ role models; self-perception, confidence; mindset; emotions; achievement; passion; family/ relationship; abuse/ bullying - physical, emotional or online; learning environment: furniture, weather; reward/ motivation; social status; teachers (teaching, experience, relationship); parents' role in extracurricular activities.

5.4.4.1 Gender

Appendix N which was shown to the focus groups as a provocation and to provoke discussion, showed the perceptions of Agency for boys and girls. It was explained to the focus groups that it was data collected from lots of schools and over 1000 learners, so it was very reliable data. Interestingly, the learners agreed with the data and justified what the data was showing, saying boys get distracted, girls are more mature, on task, and have higher expectations of themselves. One learner pointed out that there is psychology to support the behaviour of different genders and how their brains work. One boy commented that the higher perceptions of the girls showed how high their egos were. There weren't any comments disagreeing with the data, perhaps this was due to the way this piece of data was presented to the learners. Comments below support these findings:

I'm not offended by it. It's actually true. Well, there's some really good boys, and some not-so girls. But that is mainly true, yeah. (LFG3)

I think there are definitely some boys who are more agentic than some of the girls. I think with the majority, I think that's true. (LFG3)

Boys get distracted really easily. I'm pretty sure I'm talking for every boy. The reason why they get distracted is because they are too involved in what they did at lunchtime. What they are gonna play after school. (LFG1)

Usually the ideas of girls are more mature than boys. Like if you're going to a class you would see girls being more on task. (LFG1)

There is psychology, the behavior of girls compared to boys. Your brain and how like boys are different to girls and the stereotype that usually goes with it. (LFG1)

That's what the girls think of themselves. That just shows their high ego. (LFG4)

I agree a lot with that piece of paper. Do you know why? It's because that piece of paper tells us how Self Aware we are. We're really better in Self Aware than boys. But boys are better in Using Tools and Strategies than girls. But just a little bit more for us girls, we're better. (LFG4)

It shows that girls have very high expectations of themselves. (LFG4)

It's scientifically proven that girls mature faster than boys. (LFG5)

5.4.4.2 Ethnicity, culture

Learners summarised about ethnicity and/ or culture and if it has an impact on Learner Agency. There were mixed opinions, some thought it does have an impact while others felt it wouldn't make any difference. Learners feel that they may be more motivated if they are learning about their own culture. Others felt everyone is born as a blank canvas, that the level of Agency is dependent on your personality, and if learning occurs within the same context, ethnicity wouldn't matter.

Examples of learner comments that feel ethnicity does have an impact on Agency:

If you're like working on things about your culture then yeah, because I'm Māori if we're working on stuff like that include Māori in it then I'll be a lot more agentic to try to get things done. (LFG3)

It could also be the other way like if you've come from another country and you're starting in New Zealand and then you kind of don't really understand the way things work, that could maybe set you back. (LFG3)

Not to be racist or stereotype, but mainly like different curriculum levels with different cultures. Maybe like Chinese going to after school Math and stuff. (LFG4)

I just kind of want to learn more about my culture and like what all the words mean in Māori so then I can actually talk to Māori people in Māori. So they understand what I'm saying to them. (LFG4)

[Ethnicity] Well since everyone would be so different in that respect, I don't think it would change too much because you wouldn't be able to compare one to another. Because they're all different. (LFG2)

I don't think it depends on the ethnicity because even if it's ethnicity it's like when you have different cultures we are still learning in the same area and stuff I don't think it makes any difference, it's just your personality and stuff. (LFG1)

Everyone is born a blank canvas and their environment is what shapes them so if there is someone born from a different country, and raised in a different country they will act differently. (LFG1)

5.4.4.3 Age group

Learners felt that younger learners don't know as much as the older learners. They thought that younger learners may be a bit sillier and not as focussed which could have an impact on their level of Agency. Some of the learner comments felt that the age of the learner does have an impact on Learner Agency. Some sample comments include:

I definitely think that the age group would make a difference because younger children might not be able to, they're still learning to do things. And older people, they don't know everything, they're still learning too. But they know a bit more knowledge than younger kids. (LFG2)

They might have learned a bit more if they're older because they've been around in the world a bit more. And they just go and learn things around us. (LFG2)

I think like the little kids, they're a lot more... Silly. They're a lot more silly and they're not focused as much because the older kids have learned more. (LFG4)

5.4.4.4 Maturity

A learner from Focus Group two identified that immature learners may incorrectly complete the ASpT and mark themselves higher and pretend to be better than they actually are. While only one learner has commented, this in itself is a finding, and it could mean that people possibly don't think about this construct much. This learner feels that maturity has an impact on Learner Agency commenting:

Probably your maturity would matter because if you're really immature, you probably wouldn't like say what you actually are [on the likert scale for the ASpT]. And you pretend to be the best at everything. (LFG2)

5.4.4.5 Peers/ role models

Learners from Focus Group two commended on the role of peers. They expressed that the behaviour of peers can influence how you might behave, and it is possible that you pick up on the attitude of friends. Your peers can have a positive or negative influence as a role model when considering levels of Agency. Comments were:

Sometimes it depends who you actually hang around. Because some people, they can be different to others and then you kind of pick that sort of thing up. (LFG2)

Like if someone had become not too mature and someone else is friends with them, they might pick that sort of attitude up. (LFG2)

5.4.4.6 Self-perception, confidence

A learner commented on self-perception, if you see yourself in a positive or negative way it can have an impact on your confidence and affect how you answer the ASpT. You may try to hide what you actually think of yourself. A comment highlighted:

How you look at yourself. Because if you look at yourself in a really negative way, you'll think that you're bad at quite a few things. But if you think of yourself positively, then you will be able to answer how you honestly think. Because if you know that you're happy, then you will be able to answer what you actually think. But if you're not then you might just say that you're bad at everything or you're good at everything to try to hide what you actually are. (LFG2)

5.4.4.7 Mindset

Mindsets have been mentioned previously in sections 5.2.3.7 and 5.3.1.5. In this section mindsets were referred to as having an impact on Learner Agency. One learner noted that knowing everyone has a weakness can help. Also, if you think you can't do something then there is a chance that you won't be able to. Another learner commented that your mood affects your mindset. Teachers reiterated the power of a growth mindset and that it can affect one's ability to achieve. Their comments were:

When you have a self mindset or something like that, everyone has a weakness and that can help. But if you think you can't do something it might not actually work. (LFG2)

Your mood. If you're not having a good day, then you're just like, "Oh." You won't be thinking straight. It's just that, you're not going to have a positive mindset, growth mindset. (LFG3)

Just like that self-efficacy piece is - I believe I can, I know I can. (TFG)

There are some people who might be low but they still believe they can. (TFG)

5.4.4.8 Emotions

The way you feel makes a difference to how you learn therefore emotions can influence a learner's ability to be agentic, as perceived by the learners. The concept of wellbeing and your outlook on life would be an interesting correlation to a learners perceived level of Agency, commented a teacher. Comments below support these findings:

Maybe if you had a fight with your older brother or sister, and then you're feeling down, they said something, and then you go to school. (LFG3)

Like what I said earlier, the way I feel makes me learn different. (LFG1)

The concept of well-being, how you're sort of generally feeling about, learning, life, and maybe home life or whatever. So just generally, your outlook on life and how that might correlate could be an interesting thing. (TFG)

5.4.4.9 Achievement

This research found that achievement has an effect on learners' perception of their Agency as presented in sections 4.3.2.4, 4.3.2.5, and 4.3.2.6. In this section a learner feels that students who are below standard in their learning may not be below in other areas. They said that achievement isn't a reflection on how well you collaborate or accomplish other capabilities. Another learner pointed out that if the focus was on people increasing their Agency, the achievement might increase as well. A teacher commented about the correlation which suggests that those people that are more academic feel more agentic. The comments below support these findings:

If you're below, you think that you're bad at everything even though you might not actually be. Like below is just a general standard. And that's based on your learning. It doesn't show how well you collaborate and stuff like that. (LFG2)

Except if we focus on people increasing their Agency, maybe the achievement will increase as well. (LFG1)

So we've looked at the connection with OTJ's and Agency. And there's a stronger correlation there suggesting that those people that are more academic feel more agentic. And so I would say that there's that sort of connection between (I don't know, it is quite crude to say but) it's what the smart people can do kind of thing and that might be a perception. (TFG)

5.4.4.10 Passion

Passion based learning has been referenced in section 5.3.1.3 and is known as Breakthrough learning at Stonefields School. Learners felt that they would be a lot more agentic and successful if the learning is something that they are passionate about. Their comments below highlighted these findings:

Sometimes I find, for me personally, that often I would be way more agentic when it's to do with a topic that I like, and something that I'm not very passionate about then I go along with it. I just don't have my normal enthusiastic self. (LFG3)

It's also about like if I'm interested in doing it. And also have better results on it. So if there's something for me about like a flower picking encyclopedia, and we had to re-write it in our own words, I probably wouldn't like that as much as I like something else. (LFG4)

5.4.4.11 Family/ relationship

Family dynamics and circumstances can have a positive or negative effect on how a learner acts, thinks about the learning, and therefore a learners' Agency. Several focus groups mentioned the effect of family or their home life. Comments included:

Family, yeah. It's what's happening in your house as well. (LFG3)

When one of your parents, or one of your family passes, it's very upsetting because it's just the people that you love. You'll just be thinking of that 24/7. Just thinking of them. You wouldn't really be thinking about the learning. (LFG3)

Well it's not all that sad, sometimes it could be fun because sometimes you find out at your house that you might be going somewhere or something like that. It could put you in a good mood. (LFG3)

If something happened at home the next day they would act differently. (LFG1)

Like if it's bad at home, it might lower their confidence levels. (LFG4)

5.4.4.12 Abuse/ bullying – physical, emotional or online

Exposure to abuse, bullying, or people that make you feel uncomfortable has the ability to affect your Agency according to the learners. They also identified that interactions with others and the environment you are exposed to both physically and online can have an impact too. A range of comments include:

Being around people that make you feel uncomfortable or not very happy. (LFG3)

It has to involve your life outside of school because you can get bullied outside of school, you can get picked on outside of school it doesn't just have to be in school it can be at home it could be at the park. (LFG1)

How about the way, the way you act to people. Think about the way you act to one other. (LFG1)

And now it's no longer just only the environment around you but also the internet environment it's what you watch or you have been exposed to. (LFG1)

Like if they have super mean parents like back in the olden days where if they were naughty, they used to whack them. That could make them sad and they wouldn't do as much learning. That would make an impact on their life... they're not going to be as focused as much if they have mean parents. (LFG4)

5.4.4.13 Learning environment: furniture, weather

A discussion about the learning environment includes things such as the furniture and weather for focus group three. Learners commented that the furniture they sit on needs to be comfortable, often they may prefer to stand to exert their Agency. The weather conditions can also affect your mood, learners highlighted that for different people the weather can do different things. Focus group three said:

The environment like where you're working. (LFG3)

Sometimes you're really uncomfortable like the chair right here. I wouldn't really get much work done because I had to move around a lot and find my comfortable spot which I can't find right now. (LFG3)

Yeah, and we have loads of those chairs where you don't have anything supporting your back I'd rather stand than sit on one of those. (LFG3)

Well, maybe if it's like raining. If it's really dark and raining, you just feel really tired.

[Another learner responds] Well, I like the rain, for different people it's different things. (LFG3)

5.4.4.14 Reward/ motivation

Rewards were mentioned as motivation behind why some learners try to complete learning tasks. The rewards may be intrinsic or extrinsic. Motivation for a reward may increase a learner's level of Agency. The following comments highlighted:

Sometimes, some kids are really, really good, they try to get all this stuff done for something that happens after what they've achieved.

[Another learner responds] Yeah, they'll try to do it for the reward. I don't think that's really a good thing. (LFG3)

For example in a test, if you try hard on the test and you get a good mark out of it, that would make you see all the stuff that you've done well and you'll be like, "Oh, that makes me feel good because I feel like I've achieved what I want to achieve." (LFG3)

5.4.4.15 Social status

A child from focus group one posed the question about social status, the household income, or if wealth would make you more agentic. Again, with only one comment, this is still an insightful wondering, and valid perspective. The comment below supported this wondering:

The social status like household income. Does the household income affect somebody? How richer would they be better? (LFG1)

5.4.4.16 Teachers (teaching, experience, relationship)

Relationships really matter and are known to have considerable potential in maximising student engagement and academic outcomes (Absolum, 2006; Borderless, 2019). Learners identified that teachers who are encouraging make a big difference and impact your work. Teachers and learners referenced the importance of workshops, while a teacher questioned a teacher's capacity to run structured, focused workshops. Experienced teachers would run workshops that meet the need of each learning phase, inquiring into the learners' understanding of the language and not assuming that they know. Comments include:

I feel like with not nice teachers, like mean teachers that don't encourage you, it's going to put an impact on your work. Like the teachers who don't give you full workshops or help you is going to be a big difference. (LFG4)

And it could be useful to have workshops where we could opt in and really understand what this phase of learning is about and I know that some of us would be doing it naturally. The question is, do all teachers, and I'm not stereotyping, beginning teachers or new to Stonefields, but I'm just wondering, there is a bit of a teacher capacity, isn't there. (TFG)

I know for me this year I had kind of like a 'ta-da' moment because all the way along, I'd just been assuming the children knew what I was talking about in terms of the Learning Process and Learning Qualities and Learner Agency. And then actually, when I started to question them, they didn't really understand it. I am now consciously teaching, kind of focusing my teaching around those things. And on picking what those things mean first, if I'm expecting children to do it, I really need to structure what that means. And I've noticed such a shift in that. But I know for me, coming into this organisation where these things are the core models of learning, I kind of just assumed the children knew it. (TFG)

5.4.4.17 Parents' role in extracurricular activities

Teachers questioned if the extracurricular activities that children may be involved in outside of the school have an impact on the Agency they demonstrate in the class. Activities such as music or sports and if there is a connection between how much involvement parents have and what role they have in their child's learning. The teacher comments below were in support of this:

Thinking about extracurricular things that might be going on. It'll be interesting to see how involved parents are in terms of taking kids to sports or music lessons or whatever. Is there some kind of a connection between how much outside involvement parents have and how much kind of extracurricular support the kids get, whether through sports teams; and then correlating that to what we see? (TFG)

Are you more resilient if you are prepared to learn to play an instrument, for example. (TFG)

Are you on a sports team? Are you better at collaborating? I don't know. It's just, it's a wondering and so you could start to see how much extra learners do outside of school and relate that back to how much Agency they're demonstrating within. (TFG)

5.4.4.18 Interpretation

Many contributing factors could impact Agency. Rightly or wrongly learners and teachers summarised about constructs that might influence one's Agency. Some have been explored within the parameters of this research while others fell outside the scope. Some constructs only had one comment that supported the idea although it

was deemed important to present. One comment in itself is a finding and may highlight that people possibly do not think about the construct very much. Constructs included gender; ethnicity, culture; age; maturity; peers/ role models; self-perception, confidence; mindset; emotions; achievement; passion; family/ relationship; abuse/ bullying - physical, emotional or online; learning environment: furniture, weather; reward/ motivation; social status; teachers (teaching, experience, relationship); and parents' role in extracurricular activities.

5.5 SUMMARY

This chapter presents the qualitative findings from six learner focus groups and one teacher focus group. The chapter was structured using the three research questions and the focus group questions which supported the discussion.

The first section answered the first research question 'What Teaching And Learning Practices Enable Learner Agency'? The second research question was then presented 'What Current Practices Exist and How Might Capabilities Of Learner Agency Be Identified?' Lastly 'How Can Evidence Of The Capabilities Be Used To Inform Learning Design?' was the third research question for this chapter.

The next Chapter will present major findings which answer the research questions and discuss the findings in relation to literature.

Chapter 6

FINDINGS AND DISCUSSION

6.1 INTRODUCTION

Chapter 5 presented qualitative findings from the learner and teacher focus groups. This chapter presents the major findings to the three research questions, followed by a discussion of literature in relation to these findings.

6.2 MAJOR FINDINGS

In this section the major findings are presented using the three research questions. The information that is presented is a culmination of key findings that were discussed in Chapters 4 and 5.

Extensive investigation of documentation that was undertaken at Stonefields School illustrated that the school believes the learners are our future problem solvers, leaders, design thinkers, and entrepreneurs. Teachers at Stonefields School think constructively about feedback and what to give feedback on. Teachers use teaching, learning, and assessment to inquire into what diagnostic evidence informs their teaching to better focus the learning design. Developing and measuring shifts across agentic capabilities has helped teachers at Stonefields to design and scaffold how to best facilitate the learning. Evidence is used to shape learning focussed conversations with learners. The team has collaborated with a wider community to validate the ASpT, helping teachers reflect and evaluate the impact of their teaching. It has been a messy, yet collaborative journey that is still evolving. The school strives for excellence, remains realistic with challenges that are encountered, exudes humbleness in what has been achieved, and continually innovates and reimagines possibilities.

6.2.1 *What teaching and learning practices enable Learner Agency?*

The following attributes are used to describe Learner Agency by teachers and learners in this study, it stands to reason that incorporating these as a part of teacher practice and planning for them in the learning design would enable Agency. Learner and teacher discussions highlighted:

- Self Awareness, understanding of own learning and metacognition
- Independence, collaboration, and knowing when to work independently or when to seek help
- Being on task, focussed, managing time, utilisation of the learning space, and an ability to recognise and avoid distractions
- Ownership, a sense of being in charge, Taking Action, having a direction which is goal-oriented, connecting the learning to future workplace, and to the real world
- Resilience
- Feedback and progressions,
- Access to information and help, SchoolTalk (which is the school's platform for making visible next steps, progression, timetables, feedback, learning content etc)
- Mastery of learning strategies, learning from mistakes and taking risks
- Scaffolding, teacher guidance, and workshops

All of these attributes and terms which describe agentic learners are able to be loosely associated with the Agency capabilities that have been identified; Self Aware, Assessment Capable, Collaboration, Resilience, Using Tools and Strategies, and Taking Action.

To help learners be more agentic teachers can provide guidance and opportunities for students to be independent learners; provide workshops and activities with strategies and tasks that develop Agency; supervise, encourage, and explain learning; provide feedback; provide videos, links, and other learning resources such as content and learning strategies for independent learning, as well as utilising online resources to help manage learning; make available calendars, timetables, and overviews/ plans for the day with learners; talk about mindsets and use small groups to build confidence and collaboration; scaffold learning through the use of questions, clues, and tasks; model content, learning, and reflection; carefully consider the learning design making connections and to experience mistakes.

6.2.2 *What current practices exist and how might capabilities of Learner Agency be identified?*

Stonefields School initiated and engaged with the process of developing the ASpT, in this study it is the primary case for quantitative methodology with multiple units of analysis. It is beneficial to consider the case when addressing what current practice exists and therefore how evidence of the capabilities can be used to inform learning design which is further explored in section 6.2.3.

Stonefields School is reputable for their Vision particularly the alignment it creates in all strategic directions and across learning for the entire community. The school's culture and collaborative approach are not left to chance and are constantly revisited. The Language of Learning provides particular tools and strategies such as the Learning Pit, Learning Process, and Learner Qualities. Farrington et al. (2012) acknowledge that the utilisation of appropriate learning strategies can lead to improved academic performance. Achievement is identified as the most significant association for students' perception of their agency further on in this section. The use of progressions provides a clear and deliberate use of Assessment for Learning strategies ensuring that all students have access to personalised next steps which are used to provide instructional scaffolding in workshops where deliberate acts of teaching are evident.

The school utilises SchoolTalk, a platform making teaching and learning more efficient and effective for all stakeholders including teachers, learners, parents, and school leaders. SchoolTalk ensures equitable access to learning is maintained and achieved when distance learning is required. In particular, when COVID-19 lockdowns were enforced across the country and region throughout 2020 and 2021 learning continued to have rigor and was evident across the school community. "The COVID-19 shutdown revealed starkly where schools had already enabled learners to exercise agency in this regard: such learners did not feel at sea in the same way that students who had been used to being closely directed on a daily basis did. (Hannon & Peterson, 2021, p. 175). As identified by Kyriazis (2021) "technology and digital learning can provide equity and access to curriculum and education" (p. 23). Access to the SchoolTalk platform is supported through the use of devices/ ICT, it undoubtedly enables the transfer of learning from being teacher directed to the learner so that they can execute agency. The COVID-19 pandemic along with the SchoolTalk platform has supported healthy conversations challenging traditional education. The innovative learning environment is conducive to the learning philosophy of the school when on site learning takes place under normal circumstances.

Along with these practices there is a very intentional scaffold which articulates what is 'Being an Effective Stonefields Teacher'. Included in this is the use of a Teaching, Learning, and Assessment Cycle which enables teachers to implement the vision to practice and scaffold good learning design.

Both learners and teachers identified through discussion many of these practices. In particular, the language of learning gets more complex as learners grow and it is important to understand learning as a process. They noted that both progressions and scaffolding support this along with the Learning Process. Keeping students on track; making explicit links to the relevance and application in life, allowing learners to follow their passions and lead their own projects are all practices which are used to foster Learner Agency. Teachers, parents, and learners can make sure learners are equipped with strategies and steps to overcome problems in their learning. At Stonefields School the use of the Learner Qualities and Learning Process are used to get out of the Learning Pit along with collaborating and finding information; these particular strategies enable Agency. Teachers encouraging learners to use different ways of thinking; helping with strategies, connecting learning to the Learning Process; providing just the right amount of information, and allowing for failure in a safe space are practices that teachers currently use in classrooms where learners have Agency.

Learners identified needing an awareness of when to work independently or collaboratively as at times they are both appropriate depending on the learning task. Capabilities are often linked to learning and real-life which indicates that the application of capabilities to lifelong learning is important; teachers using and modelling the capabilities are another way to highlight their relevance. Particular capabilities were discussed by the teachers and learners such as Resilience being the driver of the other capabilities; Self Awareness and Collaboration as important for agentic learning, and the use of the language, in particular the term 'Assessment Capable' being a little more abstract to understand the intended meaning. To support the intended meaning of each capability, further unpacking and interpretation of the six items within each scale can be used (refer to Appendix J). The items give practical examples and statements of what the capability is about; items within Assessment Capability include 'I know what my learning gaps are' and 'I use feedback to help me learn'.

Arguably the capability of Self Aware is inextricably linked with the other capabilities in that learners need to be self aware of their own strengths, weaknesses, tendencies, and biases in order to be able to honestly reflect on the items within the ASpT. The mean value which is the average score of the items within each scale/capability is presented in section 4.2.1.3; it indicates that students perceive that their Self Awareness is much stronger than any of the other capabilities.

Certain information was used to make correlations, these associations were made using the scale/ capability mean. While this information may not directly inform practise, it is worth considering when asking what practices exist, therefore what is or is not factoring into students' perception of their agency. Information and data used for the correlations was retrievable and standardised across the four participating schools; it included gender, ethnicity, year level, achievement in Reading, Writing, and Mathematics, schools, and language spoken at home. Table 6.1 in section 6.2.3 summarises the statistical significance of each correlation. The most significant correlation was achievement in Writing, Reading, and Mathematics. This identified that low achievement has a direct correlation with those learners perceiving themselves as having low agency. Likewise higher achieving learners perceive themselves as having higher agency across all six capabilities.

The primary language spoken at home proved to have no impact on learners' perception of their agency. Other information including gender, ethnicity, year level, and school had one, two, or three capabilities that were of statistical significance. More information regarding these significances are discussed in section 6.2.3 as they are more conducive in supporting how evidence of the capabilities be used to inform learning design.

When identifying capabilities teachers and learners recognised that often capabilities as a set are interconnected; sometimes capabilities are used unconsciously or can be useful at different times for different learners. Within the data for the ASpT the mean correlation score indicates the discriminant validity. This determines if the different scales in the learning environment questionnaires are measuring different aspects of the learning environment (Koul et al., 2011) which is Learner Agency in this study. The mean correlation as presented in section 4.2.1.2 ranged from 0.55 - 0.63 across the six capabilities each having a p value of $**p < 0.01$. This value reflects the probability and statistical significance indicating that there is 1/ 100 that this result is by chance. Factor analysis was not reported as these results indicated the scales/ capabilities were a part of one construct. This affirms the student and teacher comments that the capabilities are 'interconnected'; the survey is measuring distinct capabilities of Agency. The capabilities are considered to be measuring a part of a whole construct, namely Learner Agency. This is not to say that other aspects of Agency are not relevant, rather the six capabilities have been identified and are one way of representing some

constructs of Learner Agency. Cronbach Alpha scores measure reliability and range from 0.60 to 0.79 for the six capabilities as presented in section 4.2.1.1. These values ascertain that the ASpT is reliable for use in primary schools in New Zealand particularly in Year levels 4 - 8. Cronbach Alpha scores provided assurance in identifying each of the capabilities as reliable constructs of Learner Agency.

6.2.3 *How can evidence of the capabilities be used to inform learning design?*

Existing practices of the school and the case/ context in which this study took place are discussed in section 6.2.2. These are important considerations to keep in mind as we discuss how evidence of the capabilities can be used to inform the learning design.

Learners and teachers were asked what the ASpT means for them in their learning and teaching. Discussion with the learners highlighted; that they feel the scale of the ASpT changes as students learn more; strengths for improvement and development are also useful, however the context of learning is an important consideration, sometimes the information can be discerning as it might not be representative of learning at times. Caution regarding discrepancies between how the learners and teachers understand the analysis and results of the ASpT should be considered. Ensuring learning focused conversations about understandings, misunderstandings, the learning design, scaffolds, strengths, and weaknesses are happening alongside the ASpT better enable learning needs to be met. If the information is not accessed or used appropriately due to a lack of understanding or time, it has the potential to impact the learners, as teachers wouldn't be using the ASpT as intended which is to inform the learning design.

The ASpT can be used to support learning by making connections between the results of the ASpT and the emotions of learners, emotional wellbeing helps learners to learn easier (Borderless, 2019). Particular information on the items within the ASpT can be extrapolated from the data to show a group or individual's strengths and weaknesses (see Appendix I for an individual learner example), teachers can also use the indicator shifts to know which items may need to be focussed on within a particular capability (Appendix O). The ability for the ASpT to generate strengths and weaknesses enables learners to justify if they agree with their findings, supports reflection, encourages independence, and grows their confidence. Teachers using the

capabilities in their workshop design is key for student learning; to achieve this teachers need to be more familiar with the tool and build a collective understanding through shared stories of how it can be used.

Teachers can use the specific strengths and weaknesses to target-teach and design learning opportunities, also taking into consideration the different perceptions of learners and how they 'rate' themselves. Through these opportunities teachers can offer more tools and strategies to compliment the capabilities. Making the information visible for learners enables them to drive their learning and become increasingly Assessment Capable, telling the teachers what they need, demonstrating Agency. More advanced or separate learning opportunities could be possible through the use of the ASpT, giving students options on what to improve.

Equally group needs can be interrogated and inquired into to better meet learner needs and ensure equitable learning outcomes through the use of the ASpT. An example of this is school variance which illustrates that collaboration, and the use of tools and strategies is statistically significant when comparisons are made across the four schools. The F value for collaboration was 6.85 with $p < 0.001$ and using tools and strategies was 4.53 with $p < 0.01$. The F value presents the univariate analysis which describes the pattern of the response to the variable, this was previously explained in section 4.2.1.5.

Likewise, ethnicity and cultural background is an important consideration and can be used to inform the learning design. This study found that Self Aware had an F value of 4.60 with a $p < 0.001$, Using Tools and Strategies was 2.85, while Take Action was 2.30 both with a $p < 0.05$. Thus, indicating that for ethnicity there is 1/1000 that the significant association with Self Awareness is by chance and inferring that there is 5/100 that the result for Using Tools and Strategies and Collaboration are by chance.

Table 6.1

ASpT Capabilities, Associations and the Correlations of Statistical Significance

	Gender	Ethnicity	Year Level	Achievement			School differences	Languages Spoken at Home
				Writing	Reading	Mathematics		
Self Aware	√*	√***		√***	√***	√***		
Assessment Capable				√***	√***	√**		
Collaboration				√***	√***	√*	√***	
Resilience				√***	√***	√**		
Using Tools & Strategies		√*		√***	√***	√***	√**	
Take Action		√*	√*	√***	√***	√**		

* $p < 0.05$, ** $p < 0.01$, *** $p < 0.001$

Evidence of the capabilities can be used to inform the learning design by understanding what correlations have statistical significance. Table 6.1 provides an overview of the six capabilities, the associations, and the statistically significant correlations that were found.

The use of the asterisk indicates the significance of the correlation represented by the following * $p < 0.05$, ** $p < 0.01$, *** $p < 0.001$. For teacher use, the correlations with three asterisks are of more significance than one asterisk. More information on particular variables within those associations are discussed as follows:

This study identified that:

- Females perceive themselves higher than males in all six of the capabilities, however Self Aware was of particular significance with a * $p < 0.05$ indicating there is less than 5% that this result is by chance and is therefore statistically significant.
- Ethnicity has an impact on learners' perceptions of their Agency; highlighting that Self Awareness, Using Tools and Strategies, and Taking Action are statistically significant. This study found that Pakeha learners have a stronger sense of being Self Aware and Taking Action. Pacific learners have a higher perception of their ability to Use Tools and Strategies. It is pertinent to note that Māori learners had the lowest self-perception across all six capabilities; this is of significance as NZ raises questions around equity and how to better serve Māori learners in our education system.
- In relation to year level differences there was only one notable capability which had significance, this was Year 4 learners who perceived themselves higher in their ability to Take Action with an F value of 2.37 and less than 5% chance that this result is by chance. This is somewhat explained by learners commenting on the scale changing as they learn more about the capabilities.

- Writing achievement has extremely strong correlations with learners' perception of their Agency. Learners who are above/ well above their curriculum level expectation in Writing perceive themselves as more agentic in all six of the capabilities and likewise students who are well below/ below the curriculum Writing level perceive themselves as less agentic in all six capabilities. There is less than 0.1% that these results are by chance indicating all six capabilities are highly significant.
- Reading achievement indicates that those learners who are well above/ above expectations have higher perceptions across all six capabilities, these are all highly significant. Similarly to the Writing achievement, across all six capabilities there is less than 0.1% that these results are by chance.
- Mathematics achievement similarly shows that there is significance across all six capabilities; Collaboration is significant with less than 5% that the result is by chance; of greater significance is Assessment Capable, Resilience, and Take Action with less than 1% that the result is by chance; of most significance is Self Aware and Using Tools and Strategies with 0.1% that the result is by chance.
- Variances across four schools indicated that students' perceptions of Using Tools and Strategies was statistically significant with less than 1% that the result was by chance and even more statistically significant for Collaboration with less than 0.1% that the result was by chance.
- There were no significant differences found between learners who speak English predominantly at home and those who speak a different language.

While the quantitative data highlighted some factors which influence Agency through making correlations; teachers and learners were asked what might impact Learner Agency in the focus group discussions. They referenced gender, ethnicity, culture, age, maturity, peers/ role models, self-perception/ confidence, mindset, emotions, achievement, passions, family relationships, abuse/ bullying (physical, emotional and online), learning environment (eg. furniture, weather), reward, motivation, social status, teachers (teaching, experience and relationship), and parents' role in extracurricular activities.

Many of the correlations made in Chapter 4 were identified by the learners and teachers in the focus group discussions other than school differences and language spoken at home. Of particular interest are the factors that were raised in the focus groups, however, were not correlated in Chapter 4. Arguably many of which could directly or indirectly affect or influence a learner's wellbeing or state of mind. Key literature backs up that happier kids learn easier and that wellbeing impacts learning and academic outcomes (Borderless, 2019). This study found that academic

achievement in Reading, Writing, and Mathematics directly translates to learners' perceptions of their agency.

6.3 DISCUSSION

The literature review for this study identified capabilities and enablers of Learner Agency. The capabilities are Self Aware, Assessment Capable, Collaboration, Resilience, Using Tools and Strategies, and Taking Action. Enablers included assessment for learning, explicit teaching - instruction and scaffolding, technology, relationships, local curriculum, rich learning opportunities, pedagogical shifts, learning progressions, a language of learning, and teacher expectations. There is an art to integrating many of the capabilities and enablers, this becomes evident in the discussion below where particular enablers or capabilities lend themselves into others. The clear boundaries between them become obscured as they are either dependent on other enablers/ capabilities or the outcome is an incorporation of other enablers/ capabilities.

This section discusses personalisation as a prerequisite for Learner Agency. It follows on by discussing the different enablers of Learner Agency; Assessment for Learning, Progressions, a Language of Learning, Technology, Teacher Expectations, Relationships, Pedagogical Shifts, Explicit Teaching, Local Curriculum, and Learning Design.

6.3.1 *Personalisation*

Students and teachers seem to have similar ideas and understanding of Learner Agency with associated terms such as independence, ownership, Self Awareness, understanding own learning etc. that either directly link or can be associated with several of the Agency capabilities. Key themes of Agency were identified by researchers in section 2.2.3, and these were substantiated by teacher and learner comments in Chapter 5. Personalised learning (Patrick et al., 2013) was discussed by teachers and learners in that personalised calendars and timetables can be useful. Scaffolding, making connections, and linking to prior knowledge provides a level of personalisation of the learning design, along with workshops therefore enabling agency of the learner. Given Tomlinson (2014) identifies instruction as the core of differentiation this too has a bearing on the personalised learning an individual experiences and can enable Learner Agency. Personalisation of any learning experiences or design, arguably enables increased Learner Agency.

6.3.2 *Assessment for Learning & Progressions*

Understandings of practices that enable Learner Agency are also quite aligned for teachers and learners. They highlight the importance of a teachers' role; to guide learning, to provide a starting point and stepping stones in both subject content and Learning Process, and to help students develop their ownership and awareness of their learning. Many of the enablers of Agency that were identified in section 2.4 corroborate these ideas. In particular Assessment for Learning in that it focuses on what's next instructionally (Callingham, 2010; Charteris, 2015; Waldrup et al., 2008). For students, teachers and peers; Assessment for Learning is a part of everyday practice which enhances ongoing learning through seeking, reflecting upon, and responding to information from dialogue, demonstration, and observation (Klenowski, 2009). Enablers of agency such as feedback, goals, and next steps were discussed by the focus groups and are obvious ways to make learning more personalised. Other enablers play into the concepts of guiding learning and helping learners develop ownership and an awareness of where they are at such as instruction and scaffolding. Meyer & Turner (2002) note instructional scaffolding supports and facilitates student learning then requires teachers to step back in order for learners to exercise autonomy and demonstrate self regulation.

Learning progressions are inextricably linked to Assessment for Learning as they support teachers and learners in identifying and providing feedback, goals, next steps, and learning intentions. Learning Progressions are known to ground instruction and assessment, provide transparency, and clearly articulate goals (Heritage, 2007; Heritage, 2008; Sturgis, 2014). Progressions are an attempt to be more explicit and to clarify what we understand by progress, improvement, or growth within an area of learning, they map out either deeper understanding, more knowledge, or better skills. (ACER, 2018, 5:57). Many learners commented on the use of progressions in their focus groups especially when the progressions are personalised for them. Learners also referenced Assessment for Learning and progressions by discussing where they were at in their learning and their next steps.

6.3.3 *Language of Learning*

A language of learning ensures that there are accurate and consistent ways to describe learning, and builds a common culture of instruction (Treadwell, 2018;

Elmore, 2008). Progressions as discussed previously are an important aspect of Assessment for Learning, they also provide a great foundation and/ or can be integral to a Language of Learning. Supporting students' Learning Process, ensuring they become assessment capable and actively helping learners to select appropriate learning tools and strategies are further ways to achieve this (Frey et al., 2018).

Teacher and learner focus groups referenced the Stonefields School language of learning in particular the Learning Pit, Learning Process, and Learner Qualities. These are strategies considered to be mostly useful and important in developing Learner Agency characteristics. The teachers' role is considered particularly vital in using the strategies, especially to provide feedback, guidance, and information. Most learners seem to know the strategies quite well and can see how they connect to their future. A language of learning not only gives all stakeholders a shared language, it equips learners with a vocabulary to articulate their learning. They also reported that several Learner Qualities have been used and applied unconsciously, which indicates deep understanding. Further comments indicated that these tools and strategies enable learners to think for themselves, are a scaffold to provide just the right amount of information, are tools to support problem solving, and they keep learning focussed and on track.

A language of learning therefore is a teaching and learning practice that enables Learner Agency and is a current practice that exists. A language of learning supports capabilities. Stonefields School's language of learning supports being Self Aware of where their learning is at; Assessment Capable in knowing what next steps to take to progress learning; Taking Action through applying understanding; Using Tools and Strategies namely the Learning Process, Learning Pit, and Learner Qualities; Resilience through the use of the Learning Pit; and Collaboration as it is one of the four Vision rocks.

6.3.4 Technology

Smart adaptive technology enables personalisation at a level that's impossible to achieve in the traditional classroom; it can integrate instruction, practice, feedback, make formative assessments more efficient, immediate, fair, reduce teacher bias, and allow for individual pace and progression (Bryant, Dorn, Hall, & Panier, 2020). Focus group discussions directly reference some of these in their conversation about

SchoolTalk. They commented on the ability for it to provide feedback, personalise progressions and next steps, provide access to learning, personalise calendars, provide choice of activities, resources and learning content, suggest workshop groupings, provide access to the learning design, enable Assessment for Learning practices, customise reports, and track progress. The SchoolTalk platform creates efficiency for teachers, enables Agency for learners, provides real time reporting on progress and achievement, and develops learning partnerships/ parent engagement (Ilyana Ltd. 2016). Technology is therefore a current practise that exists and enables Agency, it can support capturing and interpreting evidence of the capabilities which can be used to inform the learning design.

6.3.5 *Teacher/ High Expectations & Relationships*

Worthy to note is that Bryant, Dorn, Hall, and Panier (2020) point out that “while greater use of technology in education may be inevitable, technology will never replace a great teacher” (p. 3). They go on to say that a single teacher can change a student’s trajectory. This supports the enabler of teacher expectations and in fact a teacher having high (but not unrealistic) expectations and raising the bar (MoE, 2013; Rubie-Davies, 2015). There is evidence that teachers can influence and improve student performance, learning, and achievement (Hinnant et al. 2009, as cited in Rubie-Davies, 2015; McKown and Weinstein 2008, as cited in Rubie-Davies, 2015; Ministry et al. 2009, as cited in Rubie-Davies, 2015; Schwartz & Okita, 2004; Zhao, 2016). As discussed in section 6.2.3, achievement has the most significant association across all six capabilities directly translating to students' perception of their agency.

Relationships too are known to have an impact on student engagement, learning, and academic outcomes (Absolum, 2006; Bishop, 2019; Borderless, 2019). Learners identified teacher relationships as making a big difference and impact. Learning relationships are arguably the most important components in an education setting and things should only be introduced that enhances or improves the relationship without obscuring it (Robertson, 2005; Learning Without Frontiers, 2011). Robinson (as cited in Learning Without Frontiers, 2011) highlights that in some cases the learner or technology can be the teacher, therefore the traditional ‘teacher-learner relationship can be challenged. A wider set of relationships occur too with learners’ teachers, peers, families, and communities which influence their learning and the learners’ individuality to help enable Agency. Learners commented that external influences

such as the parents' role in extra curricular activities, family dynamics, and social status may be things that have the potential to impact agency.

6.3.6 Pedagogical Shifts

Pedagogical shifts in section 2.4.6 incorporated process change, teaching as inquiry, innovation, and creativity. These have a direct bearing on a teacher's ability to enable Learner Agency and use evidence of the capabilities to inform their learning design. Teaching practices require a deliberate shift of the teacher's role to enable learners to have the opportunities to exert Agency in their learning. Educators need to make sure they are not sticking to old patterns in new situations and remain open to alternative trajectories (Littky & Gabrelle, 2004; Loveless & Williamson, 2013).

Discontinuing familiar practice allows for innovation; innovators are at the cutting edge of change, pedagogical theory, and responsiveness (Hattie, 2009; Koudstaal & Pugh, 2006). Strong leadership is required here as Fullan & Stiegelbauer (1991, as cited in Hattie, 2009) note that it is not the resistance to innovation but the fragmentation, overload, and interference resulting from the uncritical and uncoordinated acceptance of too many different innovations.

Teachers cautioned in section 5.4.2.4 that they need to be familiar with the ASpT and build a collective understanding through shared stories about its intended use. Comments regarding the need for teachers to become more familiar with the tool could be consequences of those teachers feeling overloaded and not having spent justified time exploring the tool and its potential. More support is needed to help teachers use the tool more effectively, such as peer support and technical support. This would support and scaffold evidence of the ASpT (Appendix I) to be used in recognising individual strengths and weaknesses; designing workshops, tasks and activities, to improve capabilities, and help learners to plan their next steps. This applies both in content mastery and Learning Process.

Teaching as Inquiry creates the conditions of a learning classroom in that assessment capable participants understand their role in the Learning Process, their contribution is valued, and they undertake a continuous process of inquiry, decision-making, adaptation, and transformation (Ministry of Education, 2011). Through this process creative new ways of doing things can emerge and be discovered.

Robinson (2015) says that the appetite for discovery and a passion for the work is the real driver for creativity. Applying original ideas that have value and applying them in practice is the process of creativity (Robinson, 2015). At times this can happen by default when there are whole school implementations such as SchoolTalk. By default, and scaffolded over time, all learners and teachers at Stonefields School are engaged with new ways of working.

6.3.7 *Explicit Teaching/ Prompts*

Capabilities of Agency can be identified through learners completing the ASpT and teachers using the information to have informed conversations and sense make about which capabilities are, or are not, at play for individuals (Appendix I &/ or Appendix O). Hood & Mayo (2018) highlight using data to reinforce and inform iterative improvement as a component to system-wide scaling. This is pertinent for the four schools who have used the ASpT and are scaling its use throughout their contexts. The ASpT provides teachers with information and insights to inform learning design and provide experiences and opportunities for learners to further develop their Agency.

The ASpT data provides robust evidence for conversations to take place, it opens up the dialogue about how evidence of the capabilities can be used to inform the learning design. Of interest, learners revealed that the scale of the ASpT changes as they learn more (as presented in section 5.4.1.1.); and that ASpT results are dependent on the context of learning (as presented in section 5.4.1.3). Conversations would allow for a deeper understanding of these factors. The fluctuation of the scale, and the context of learning is supported by Bandura's findings (1986, as cited in Reid & Fisher, 2010). He revealed that

efficacy beliefs vary between individuals and will actually fluctuate within an individual for different tasks when they have similar ability. 'Schools should be aware that student self-efficacy decreases as students progress through school' (Pintrich & Schunk, 1995, as cited in Reid & Fisher, 2010, p. 435). Thus, if levels of self-efficacy are able to fluctuate then the role of the teacher becomes central to this issue. Teachers should be the catalyst for inciting students to strive for higher levels of self-efficacy in order to realize their potential, develop their confidence and ultimately improve their academic achievement (Reid & Fisher, 2010, p. 435).

Using the ASpT scale items (Appendix J) to prompt and scaffold learners is another way to identify capabilities. For example, if a teacher is to incorporate into the lesson design reflection time or prompt children with where they might learn best, who they might learn best with, what their weaknesses or strengths are, how they are feeling about the learning, and what passions may support the learning; they are naturally going to be increasing learner's Self Awareness. Similarly, if teachers scaffold learners to use information from assessments to help them learn, talk with them about their learning gaps, encourage them to check their learning and use feedback, make connections to progressions, and reflect on if the learning is their best work they will be increasing learners Assessment Capability. And in doing so, Assessment Capability practices for themselves and their learners are being identified.

The Ministry of Education (2016b) notes prompting is a deliberate act of teaching which is often incorporated into explicit teaching. Explicit teaching is paramount in developing learners Agency. It can therefore be said that explicit teaching and using the ASpT items as prompts are enabling practices of Learner Agency and current practices that exist, they also support in identifying capabilities and can be used to inform the learning design.

6.3.8 *Local Curriculum, Learning Design*

The learning design is key to engaging learners and providing varied rich learning opportunities. Teachers need to balance this with designing learning so there are a myriad of interactions at play with explicit teaching, which is built on a solid foundation of Assessment for Learning practice. Teachers are then required to carefully consider how other enablers are leveraged and incorporated into the art of teaching such as learning progressions, a language for learning, and technology while ensuring the local curriculum is honoured for every child. This is not an easy feat for education.

Learners and teachers addressed the need for learning to be related and connected to the real world and the future. This therefore starts to shape what is deemed to be important when designing Rich Learning Opportunities, it also provides opportunities for the planned use of the capabilities to better enable teaching and learning practices that impact Learner Agency.

Learning practices that enable Agency require learners to immerse themselves and grow their knowledge of the capabilities. An understanding of how, when, where,

and why the capabilities are useful in a given context and in real life situations are also required. Through increasing their competence with the capabilities learners are better equipped to have ownership, make responsible choices, and take meaningful action in the Learning Process. Calkins (2016) highlights that competence is a union of agency and capability. Agency is being in charge of one's learning and development while capability is the knowledge and understanding to use it in real life situations.

A teacher commented they are able to deliberately design learning to incorporate the capabilities;

I design my learning so there are elements of Self Awareness in there, there are elements of how we are going to Collaborate, how we are going to Take Action...and as much as possible I want to say as little as possible, I want to just prompt them in the right way so that they're then doing the talking and doing the figuring out (Stonefields School, 2019, 5:37).

Reid and Fisher (2010) raise a vital point regarding how evidence of the capabilities can be used to inform the learning design. Their suggestion for teachers to be the catalyst for inciting learners to strive for higher levels of Agency and realise their potential and ultimately improve academic success is key. One teacher perfectly posed the question “how can we direct the right kind of learning at the right time to really maximise the potential for these learners?” (Stonefields School, 2019, 5:19).

What we know about the learners who perceive themselves with higher Agency is that their achievement correlates. This could be key to an alternative approach at increasing achievement for Māori learners as an example of a group or cohort whose needs are not met. The existing approach of drilling harder for increased Reading, Writing, and Mathematics achievement could be flipped. Instead focussing on increasing their sense of Agency and observing the achievement gains that come with it in the hope that through this process disparity is addressed.

6.4 CONCLUSION

This chapter has answered the research questions as major findings and there has been discussion of Agency enablers in relation to the literature. The next chapter, Chapter 7, presents the conclusion for this thesis. It will present an overview of the thesis, implications of the research, significance, limitations of the study, suggestions for further research, and final comments.

Chapter 7

CONCLUSION

7.1 INTRODUCTION

This is the concluding chapter for this study. In this chapter an overview of the study, implications of research, limitations of the study, suggestions for further study, and final comments are presented.

7.2 OVERVIEW OF STUDY/ RESEARCH

This study was instigated many years ago when I somewhat regretted the focus of a Master's Thesis. It was the closing comment from the thesis in some ways that launched the desire to embark on this study and focus on Learner Agency.

We need to empower our children to take ownership of their learning and become assessment capable so they have the motivation and ability to lead their learning. The children have proven that they are passionate and we as teachers need to find the courage to let go of our traditional structures with support from management. We need to ask ourselves if we love our children enough to change our practice. If we don't adapt the children may perish (Benson, 2012, p. 168).

Arguably, Learner Agency has been researched for many years, however recent interest in many NZ schools and communities saw the growing need for this study to be completed. This study has taken several turns since inception from research title, to supervisor, to employment, and context of the study. My employment in 2017 at Stonefields School enabled this research to truly gain traction, the school strategy and my role also supported developing and validating a tool to assess Learner Agency and understand existing practice in a NZ Primary School. The ASpT was developed and has been validated as a part of this study. Understanding existing practice has been leveraged from a live site with years of experience of leading courageously and transcending vision to practice in all that the school does.

Over 1000 entries enabled the ASpT to be validated, these consisted of Year 4 - 8 learners across four NZ Primary Schools. This quantitative data was presented in Chapter 4. The study then took a deeper dive into the practice of Stonefields

School and worked with focus groups of learners and teachers to better understand Agency and the practices which enable it. Qualitative data was presented in Chapter 5. Major findings in relation to the research questions along with discussion were presented in Chapter 6.

7.3 SIGNIFICANCE

The significance of this study as set out in section 1.6 sought to provide new information about how to measure shifts in Learner Agency, an ASpT was developed and validated which gathered perceptions of students' agency. It was hoped that through achieving this the study would contribute to a body of knowledge around assessment which incorporates student voice in New Zealand. Another outcome hoped that there would be implications for teaching practice by presenting quantitative and qualitative data which:

- illustrates how teachers can use qualitative data to further quantitative findings
- provides a tangible example of how we can think differently about what we measure
- gives an example of an assessment which is not based around academic subject knowledge

These all have implications for teaching practice through using diagnostic evidence to inform the teaching/ learning design, focussing the learning, valuing student perceptions, and shifting the locus of control.

An important aspect of this study has been validating the ASpT for use in New Zealand Primary Schools and in particular for Year 4 - 8 learners. This tool specifically measures self-perceptions of Learner Agency. As an assessment tool it is able to be used to interrogate individual, group or larger cohorts of data to track and/or measure shifts. Chapter 5 was a substantial chapter which incorporated qualitative findings from participants. This achieved giving the participants 'voice' which works well given the focus on Agency. Implications for practice are set out in the following sections which address implications for Stonefields School, other schools, classes, the Ministry of Education, Māori, and networks.

7.4 IMPLICATIONS OF RESEARCH

7.4.1 *Stonefields School Learning Map and Local Curriculum*

“Outcomes- focused education has been heralded in many countries as an approach to school reform in which planning, delivery and assessment all focus on the student’s outcomes/ results from teaching rather than on a syllabus or curriculum” (Fraser, 2012, p. 1210). Stonefields School developed a Teaching, Learning and Assessment (TLA) Cycle introduced in section 1.4.6.5 which focuses on planning, delivery and assessment. It is the development, refinement and improvement of models, frameworks, tools and diagrams such as the TLA that promotes a learning culture at the school, work is never complete and there is always room for improvement. It is important to note the iterative nature of the ongoing work and reflections within the school alongside this research. Both equally formed feedback loops, informing direction, and amplifying outputs for each that were mutually beneficial for the school and the research as illustrated in Figure 7.1.

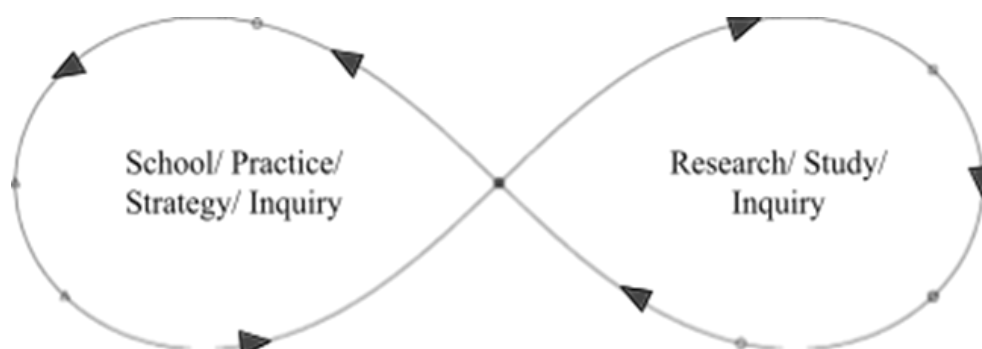


Figure 7.1

Diagrammatic interpretation of the iterative nature and feedback loops between what was happening in the school and this research

The cause and effect of what was happening within the school and this research is hard to separate, pinpoint or distinguish as separate endeavours given the nature of my role within the school.

Curriculum and progressions have been ways that the school has emphasised what learning is important for their learners. The learnings from the collaborative inquiry, this research and other strategic questions that were raised posed opportunities to reconsider the school’s graduate profile at the time. This created an opportunity to rewrite the vision essence statements and outcomes; all teachers were involved in this

part of the process. I led with a co-researcher and a smaller team of teachers (all of whom were a part of this collaborative inquiry) through a process creating understandings and indicators for each outcome. This began to shape the schools' learning map which informs the school's local curriculum.

Considering what curriculum entitlement every child will experience in their eight years at Stonefields School helps to shape what is the Stonefields School Local Curriculum. It includes weaving a balance of critical knowledge and concepts with critical to learn capabilities into a range of rich learning opportunities. It considers conceptual understandings, foundation learning, key capabilities, and other extra learning opportunities which includes Education outside the Classroom (EOTC - as it is often referred to) as a part of the learning design.

The learning map is structured using each of the school's four vision rocks, Building Learning Capacity, Collaboration, Making Meaning, and Breaking Through. These each have an essence statement and a set of outcomes. Each outcome has a hashtag phrase, these are intended to be used by teachers and learners over time to build up a rich record of learning. Each outcome also references the Agency capabilities which are addressed through focussing on the outcome and big understandings. The outcomes are designed so that learners know that they have been successful when they can demonstrate those outcomes. Each outcome is supported by three progressive Big Understandings. There was deliberation as to how these understandings should be referenced on a continuum. Year level representation with reference to the change in cognitive demand, referencing the phases of the Learning Process, or developmental wording were all considered. Each of these references posed limitations and potential interpretation concerns, as with any of the Big Understandings it is thought that learners could be working across multiple of them during a given year level/ age. Other references posed possible restrictions and/ or a tick sheet mentality. The Big Understandings support the teacher as an evaluator to ask what am I looking to notice or recognise in a learner who is demonstrating this outcome. Each Big Understanding is supported by a series of indicators. The indicators can act as success criteria so that a learner is able to recognise that they are working towards or achieving a big understanding. The indicators are not limited to what is presented in the school's Learning map therefore they have been purposefully omitted from this study, although a sample from the collaboration Vision rock is included in Figure 7.2.

#USING SOCIAL SKILLS

Outcome: I use a range of social skills to be an effective collaborator, including turn taking, active listening, compromising, and resolving conflict

Big understandings

BIG UNDERSTANDING: I know that developing social skills like taking turns and active listening helps me to collaborate in positive ways.	BIG UNDERSTANDING: I know that social skills are essential for effective collaboration and that different skills are required in different contexts and situations.	BIG UNDERSTANDING: I know that I need to apply appropriate social skills in different social contexts and collaborative situations to help achieve a desired outcome.
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Indicators

INDICATORS: <ul style="list-style-type: none"> I take turns when sharing ideas with other people. I listen to others' ideas and add onto them with my own. I seek to understand others' ideas I can describe what went well or not so well within a collaborative situation. I know that I can communicate in different ways, including through body language and gestures. I can describe how I collaborated and how this role supported my group. 	INDICATORS: <ul style="list-style-type: none"> I value engaging with other people's ideas, even when they are different to my own I listen to make sense of, and evaluate, others ideas and use them to inform my own thinking. In collaborative situations, I show a willingness to change my ideas and can compromise when necessary. I analyse and reflect on why some collaborative situations are more effective than others. I can describe how different people collaborated and the impact that they made through their role. I have a growing awareness of how I communicate (including through body language and gestures) and recognise the impact this can have on others. 	INDICATORS: <ul style="list-style-type: none"> I resolve conflict by seeking to understand other people's perspectives and ideas. I draw from a range of strategies to deepen my effectiveness in finding a resolution that works for everyone. I am aware of what my preferences and strengths are in collaborative situations and actively broaden the role I play in different contexts. I communicate appropriately and adapt the social skills I use to suit the collaborative purpose.
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Figure 7.2

Example of Stonefields School Learning Map Hashtag Phrase, Outcome, Big Understandings and Indicators. © Stonefields School (reprinted with permission - Appendix R)

The following sections present the Vision Rocks, Essence Statements, Hashtag Phrases, Outcomes and Big Understandings all of which have been reprinted with permission and evolved as a part of the school inquiry during the course of this study as discussed earlier in this section and illustrated in Figure 7.1.

7.4.1.1 Building Learning Capacity

Essence statement: Building learning capacity is about growing the foundation knowledge, dispositions, and attributes that are essential for further learning. It includes developing a strong sense of identity and actively strengthening personal hauora (health, wellbeing). Learners with a high degree of learning capacity are resourceful and use the Learner Qualities to get out of the Learning Pit.

#Being strategic

Outcome: I know how and when to use the Learner Qualities and other strategies when I am stuck in the pit (Using Tools and Strategies) (Resilience)

Big Understandings:

- I know there are Learner Qualities and other strategies that help me when I am in the Learning Pit.
- I understand that different strategies are better suited to different problems/situations.
- I understand that intentional application of appropriate Learner Qualities/ other strategies will help me in all the places I learn.

#Using reflection to improve

Outcome: I reflect on my learning to continuously improve. (Assessment Capable)

Big Understandings:

- Reflecting on my learning can make my work better.
- Reflecting on learning experiences allows me to state how successful I have been and consider my next steps.
- Reflecting on and improving my learning is most useful when it is purposeful and continuous.

#Building knowledge through rich learning

Outcome: I am growing a broad and deep knowledge base through a range of rich learning opportunities. (Assessment Capable) (Self Aware) (Collaboration)

Big Understandings:

- Having rich learning experiences helps me to remember and understand. The greater the range of rich experiences I have, the better.
- Being able to make connections between rich learning experiences allows me to grow a deeper understanding.
- Being able to design my own rich learning experiences allows me to challenge myself, work towards goals, and apply my learning strategies.

#Strengthening hauora

Outcome: I understand the importance of my hauora (and that of others) and am working actively to strengthen it. (Self Aware) (Resilience)

Big Understandings:

- I understand what my hauora is. Having a healthy hauora allows me to express myself to others and be my best self.
- My hauora is influenced by the choices I make.
- My hauora is important to me and I actively seek to maintain and improve my own health and wellbeing and that of others.

#Being Self Aware and Assessment Capable

Outcome: I am Self Aware and Assessment Capable - I know where I am and what my next steps are, and I use this knowledge to further my learning. (Self Aware)
(Assessment Capable)

Big Understandings:

- I understand that SchoolTalk progressions show the order in which my learning is most likely to happen. I know that I can use this information to work out where I am in my learning and what the next steps are.
- I understand that the progressions show the order in which learning is most likely to happen and that if I know this, I know that I can use this information to work out where I am in my learning and what the next steps are,) and how I'm going to get there.
- It is important to purposefully seek out, access, and use appropriate information and assessments to use the progressions and further my learning.

#Giving and receiving constructive feedback

Outcome: I give and receive constructive feedback. (Collaboration) (Resilience)
(Assessment Capable)

Big Understandings:

- I understand that the purpose of feedback is to improve learning.
- I understand that feedback needs to be purposeful. I understand that the context and timing of feedback can have different outcomes.
- I understand that it is important to seek out diverse feedback. I recognise that when giving feedback, I could act as an instructor, mentor, or coach.

7.4.1.2 Collaborating

Essence statement: Collaborating is about knowing and using social skills and values to contribute in a range of collaborative activities and build positive relationships. To collaborate, we need to know when and how to seek other people's ideas and skills. We need the ability to empathise and consider different perspectives in order to achieve a greater outcome.

#Using social skills

Outcome: I use a range of social skills to be an effective collaborator, including turn taking, active listening, compromising, and resolving conflict. (Collaboration)
(Resilience)

Big Understandings:

- I know that developing social skills like taking turns and active listening helps me to collaborate in positive ways.
- I know that social skills are essential for effective collaboration and that different skills are required in different contexts and situations.
- I know that I need to apply appropriate social skills in different social contexts and collaborative situations to help achieve a desired outcome.

#Engaging with diverse ideas and perspectives

Outcome: I seek out and engage and empathise with other people's ideas and a diverse range of perspectives. (Collaboration)

Big understandings:

- I have ideas and other people have ideas, too. Some of our ideas are the same, and some are different.
- I recognise that other people's ideas may have an impact on me.
- I seek out other people's ideas and perspectives to further grow my own thinking.

#Developing relationships and friendships

Outcome: I relate well with others and I am a good friend. (Collaboration)

Big understandings:

- What I say and do has an impact on others.
- It is important to include other people, to be aware and respectful of who they are and be mindful of their hauora.
- It is important to be inclusive, empathic, value diversity and respect others' hauora.

7.4.1.3 Make Meaning

Essence statement: Making meaning involves using the Learning Process flexibly to think deeply about the world in which we live. The Learning Process is used across all learning to make decisions, engage in design thinking, and solve complex problems. Through these activities, understandings are deepened, connections are made, and the transfer of learning is enabled.

#Using the Learning Process and thinking skills

Outcome: I know and use the Learning Process phases and flexibly use a range of thinking skills for a given purpose (such as investigating, problem solving, design thinking, decision making, and evaluating impact). (Using Tools & Strategies) (Take Action)

Big understandings:

- The phases of the Learning Process (Building Knowledge, Making Meaning, and Apply Understanding) give me an order for exploring my learning.
- The phases of the Learning Process support me to investigate, critique, evaluate, make decisions, think, and problem solve in my learning.
- I can use the Learning Process I have learned at school as an innate part of how I approach real world challenges and new learning in all parts of my life.

#Thinking deeply, critically, and creatively

Outcome: I think deeply, critically, and creatively about increasingly complex ideas and consider multiple perspectives. (Using Tools and Strategies)

Big understandings:

- Using Tools and Strategies (such as asking questions and making connections to my life) allows me to understand new ideas and make sense of the world around me.

- Using Tools and Strategies (such as asking questions and making connections between texts) allows me to make inferences, judge the validity of information, and access ideas and concepts.
- Using Tools and Strategies (such as identifying the context or the perspective of a writer or speaker) allows me to be metacognitive, make justifiable decisions, ask philosophical questions, access abstract concepts, and identify relationships between ideas.

#Making personal connections

Outcome: I make connections and make sense of the world through my unique worldview, identity, and/ or hauora. (Self Aware)

Big understandings:

- The ways I connect with the world are shaped by who I am. This affects what I do, say, think, feel, and believe and the ways I relate to others.
- My view of the world is shaped by my unique worldview, identity and/ or hauora. This influences the connections I make and how I self-manage.
- My view on the world is my unique way of thinking, feeling, and doing. Having a strong sense of personal identity and a strong sense of connection to the world around me gives me the ability to adapt and a strong moral compass.

7.4.1.4 Breaking Through

Essence statement: ‘Breaking through’ is about what happens when learners use their power and personal capabilities to take positive action in their own lives, in the communities they belong to, and in the world beyond. It involves taking the time to explore, discover, and pursue personal and group interests, passions, and strengths. When we break through, we are being agentic as learners and as citizens.

#Leading, managing, and stretching the learning

Outcome: I lead, manage, and stretch my learning to realise my potential. (Assessment Capable) (Using Tools and Strategies) (Collaboration) (Resilience) (Take Action)

Big understandings:

- To reach my potential, I need to learn ways of thinking, acting and interacting with others that help me to take action, drive my own learning, and get out of the pit.

- There are specific tools and strategies I can use to lead, manage, and stretch my learning, to take initiative, take action, and to get out of the pit.
- I understand the value of engaging with increasingly complex frameworks and tasks that require me to lead, manage, and stretch my learning, to take initiative, to take action and to try a variety of ways to get out of the pit.

#Using passions and strength

Outcome: I recognise and use my passions and strengths. (Take Action) (Self Aware)

Big understandings:

- Playing and being curious helps me find my strengths, interests, and passions.
- I can use my strengths, interests, and passions to take positive action.
- Using my own strengths, interests, and passions and those of people around me helps me to imagine greater possibilities in my own life, community, and the world beyond.

#Showing positive impact

Outcome: I can demonstrate the positive impact I have made or to which I have contributed. (Take Action) (Self Aware)

Big understandings:

- I make a difference by contributing to my world.
- I make a lasting difference by contributing to our world.
- I make a lasting difference by contributing to the world.

7.4.2 Other Schools

Other schools have been involved in trialling the use of the Agency Self-perception Tool. The data that has been gathered and captured has been able to be used at various levels throughout schools. Leaders have used the information to help shape their strategic direction, teachers have been able to use the information to inform their learning design and learners have been able to use it to better understand their level of Agency. As with any data, the intended use and successful use of the information has varied.

Schools will be able to access what the Stonefields School process has looked like and learn from areas that have worked well and those that haven't as documented

in this study. Schools also have the opportunity to experience, explore, and engage in learning about the school through The Stonefields Collaborative (The Stonefields Collaborative, n.d.). Schools will be able to implement and use the Agency Self-perception Tool, several other schools are already inquiring into the tool, however anticipated use is yet unknown. What is known is that intended use of the tool needs to be carefully considered, managed, and monitored to avoid frustration. The right support, structures, PLD opportunities, and incentives will need to be taken into consideration so that the ASpT is a valued form of assessment and not additional to a cluttered assessment schedule.

Further development of the interface of the Agency Self-perception Tool as an app will enable more teachers and learners to readily engage with the data and information. Development considerations are user friendliness and functionality, proposed alignment with various other platforms and interoperability with other school systems which would further enable other schools to engage with the tool. Currently, possible funding options are being explored.

7.4.3 *Class/ Hub*

In this research, administration of the survey was easy, this enabled all learners to participate regardless of their teacher's prior knowledge of Learner Agency or use of ICT. Some schools arranged for a lead person to push out notifications and links to the ASpT schoolwide. This ensures that teacher knowledge or use are not a barrier to gathering schoolwide data. Teacher understanding of the tool and/ or the potential impact the ASpT could have for their teaching and their learners was addressed and taken into consideration when administering the survey. Ethics for the study deemed this to be of low risk to participants.

Arguably some classes and learners were not exposed to the richness of the information that could be provided. It is hoped that participants are provided opportunities to engage with and use their data to inform learning. Equally, information that has been gathered and presented in this study has an impact on classroom practice in years to come. As understandings are deepened and the tool is better understood it can be used to better inform both teachers and learners of agentic practices, provide information to inform the learning design, for rich learning opportunities, conversation, and rich records of learning.

7.4.4 *Ministry*

This research has proven that the Agency Self-perception Tool is valid and reliable for the use of upper primary students (Years 4-8) in New Zealand Schools. There are already learning environment instruments that are available for use in primary schools such as the Questionnaire on Teacher Interaction (QTI) (Fraser, 2012), My Class Inventory (MCI) (Fraser, 2012), and the Technology Rich Outcomes Focused Learning Environment Inventory (TROFLEI) (Benson 2012). This tool compliments that selection.

The Ministry of Education released a set of new Professional Learning Development priorities in the latter half of 2020. These included cultural capability, local curriculum design, and assessment for learning for English medium settings (Ministry of Education, 2021b). Both Local Curriculum and Assessment for Learning have been referenced through this study as enablers of Learner Agency.

7.4.5 *Māori*

The cultural capability priority identified in section 7.4.4 provides schools with the opportunity to interrogate the ASpT and what it means for different cultural groups or ethnic backgrounds. Disparity for Māori learners was evident in this study; their self-perception of agency was lower than any other ethnicity across all six capabilities as reported in section 4.3.2.2 and discussed in section 6.2.3 and 6.3.8. It is important that equity is discussed so that educators can find ways to address the disparity that currently resides in perceptions of learners' agency according to their ethnic background.

Here lies opportunities to engage in conversations around teacher expectations of Māori and relationships with Māori, this study has addressed that these impact achievement and achievement impacts self-perception of Learner Agency. This poses opportunities for alternative trajectories towards Māori achievement; noting here that achievement is more than gaining academic results. Equity and achievement in kura kaupapa Māori incorporates having a strong Māori identity, including fluency in te reo Māori (Meaney et al., 2013). Achieving equity requires working with the school community to incorporate schooling aspirations; one size does not fit all (Meaney et al., 2013).

- Fitchett (2010) notes the strategic intent of Māori enjoying education success as Māori and suggests some focus areas to ensure it becomes a reality in our schools. These are:
- Positive connections with Māori students
- Effective teaching strategies
- High expectations of Māori students
- Valuing and using student voice
- Working with parents, family and whānau
- Commitment to te reo Māori
- Teacher professional learning
- Professional leadership

All of these have been discussed in one way, shape, or form throughout this study.

7.4.6 *Networks*

The methodology for this study was a ‘Narrative Case Study through Critical Participatory Action Research’; section 1.4.1.2 introduced that the school was a part of a Teacher Led Innovation Fund which was a collaborative inquiry. The unanticipated outcome of this study was the value of the collaborative inquiry operating alongside this work. The four schools that participated in this study also collaborated and engaged in conversations about the ASpT data.

Hood and Mayo (2018) argue that “accelerating the field’s capacity to learn and improve, recognising that building the capacity of practitioners and creating a culture and process for change are essential to the long-term, sustained success of any new initiative” (p. 18). Through the collaborative inquiry this was the case along with buy-in and ownership of the journey. The role of the network of schools who involved themselves in the ASpT and in this study enabled a distributed approach to problem solving and learning that accelerated the breadth and depth of learning that could be achieved; therefore the capacity and rate of the innovation and improvement was enhanced (Hood & Mayo, 2018). The diverse range of knowledge and expertise of a network contribute to the creation of new ideas, as well as facilitating the more fluid exchange of the innovation and the insights that emerge (Hood & Mayo, 2018). The network of schools and the collaborative inquiry were instrumental to achieving scale and also systemic for innovation and improvement.

7.5 LIMITATIONS OF THE STUDY

7.5.1 *Sample*

Teachers and learners participated in this study through focus group discussions. Learners also completed the Agency Self-perception Tool. The number of respondents had to be considered as a representation of a greater group of people as with any sample and therefore could be perceived as a limitation.

The responses of 1089 learners were collected for the ASpT. These were collected and analysed for validation purposes. The sample of students were Year 4 - 8 learners at Stonefields School and from three other Primary Schools. Due to privacy and keeping the other schools unidentified further information regarding their contexts has not been published. The four schools would be considered representative of New Zealand's schooling sector.

There were six learner focus groups and one teacher focus group all from Stonefields School. Each focus group had six participants. The six learner focus groups consisted of mixed year levels Year 4 - 8, gender, academic ability, and ethnicity. It was intended for these learners to be representing fellow learners of a much larger category. The teacher focus group had a mix of teaching experience, gender, and duration teaching at Stonefields School, likewise these teachers were a representation of a larger cohort of teachers. While the study ensured there was a mix of participants in the focus groups, participants were considered to be a sample of convenience due to accommodating their needs and their availability. All focus groups were anonymous to ensure and encourage a true reflection of their thoughts and discussion.

7.5.2 *The Process*

The ASpT was developed by Stonefields School and Learner Agency featured in the school's strategic planning over many years. This study ensured that the ASpT was reliable and validated it for use for New Zealand primary learners who are in Years 4 - 8. It also used focus groups to identify what teaching and learning practices enable Learner Agency, what current practices exist, how capabilities of Learner Agency can be identified, and how evidence of the capabilities can be used to inform learning design. The TLIF collaborative inquiry inquired into what Learner Agency

is and why it is important in order to develop Learner Agency into innovative learning design. All of these processes complemented each other. At times it was hard to differentiate the work of each different project, group, inquiry, and study; however, the overlap ensured the work was cohesive and aligned, the risk otherwise may have been that each of the areas had competing priorities. Sagor (2000, as cited in Kyriazis, 2021) defined building a reflective practitioner, progressing school-wide priorities, and building a professional culture as three reasons for action research in schools. These reasons resonate and have a strong affiliation to this study. Equally in Section 4.1 it was acknowledged that quantitative data and validation was a skeleton approach to ensuring validity of the ASpT. Many other approaches could have been applied, however fell outside the scope due to the qualitative nature of the thesis, and could therefore be a limitation.

Changes and new initiatives are often met with resistance by some stakeholders. In the instance of implementing the ASpT some teaching staff had been a part of the thinking, professional development, and involved in the collaborative inquiry which did a lot of ground work to explore Learner Agency and develop the ASpT. Some staff who were not as involved were reluctant to fully immerse themselves in the new thinking that was emerging. Teachers were permitted to withdraw from any involvement in the study, what blurred this at times was the research being so closely aligned to the school strategy, this took careful consideration as the researcher to position research and practitioner stances.

Time and consideration was needed to ensure that all teachers had buy in to the school traction areas, initiatives, and inquiry. Opt in thinking sessions and professional development ensured that people who were present wanted to be there. At other times professional learning was compulsory for all teaching staff. Working alongside peers was a way to ensure they felt supported and could talk to someone about their concerns, questions, or hesitation. A big support was the use of release time from the learning hub to ensure that teachers were not overloaded with extra workload, this was often used for coaching or development work such as the ASpT or Learning Map. Key leads and teachers are remunerated through leadership unit/s to lead aspects of the school strategy, these roles had specific measures documented. They conveniently aligned with this research. This was one of the biggest strategies that created buy-in and was useful to ensure progress and create alignment, so tension

did not arise from separate initiatives. The alignment to the strategy equally created buy-in at all levels of the organisation in that the BoT have oversight of the strategy. Reporting to the leadership team, BoT, and the Ministry ensured there was a certain level of accountability. Accountability was never the driver, yet it did provide some urgency for work when there were procrastinations and dwindling energy.

These different levels of immersion in the thinking of the groups resulted in varied understandings for the learners across different hubs as they experienced different Agency practices, this can be expected in relation to any teaching practise. Regarding the administration of the ASpT, most learners were experienced at using digital devices. In some schools learners had their own devices while other schools had a pool of devices that learners shared which were used to complete the surveys on a rotation of availability. Only surveys that were completed in full were used for this study, however the variation in administration of the ASpT could be considered as a limitation.

Some might say that different levels of pedagogical understanding, knowledge and ability in relation to Agency, across the schools could be a possible limitation. This was taken into consideration throughout the study and was somewhat expected. I knew of theories regarding the early adopters and their role as change agents who eagerly embrace innovations, the laggards who vainly resist the inevitable and who have potential to become pawns in the change process. In order to understand the barriers to change and diagnose solutions the Lippitt-Knoster Model (Lippitt, 1987; Knoster, 1991) for managing complex change was used (as cited in Kyriazis, 2021). I was mindful of embracing this variance and learning from it, rather than viewing it as a limitation. In particular seeking to better understand where the resistance may be stemming from and what was underpinning the cause for concern.

7.5.3 *Data Collection*

This study provided insights into the perceptions of learners' Agency through the use of the ASpT. This data was gathered across four different primary schools. Stonefields School was used to gather information about existing practices, focus groups of learners and teachers were conducted. Some may consider focus groups within one school to be a narrow focus, however, as it was

a case study in a particular school the methodology was appropriate for this study. Collection of qualitative data across a range of schools lends itself as a suggestion for further research in the next section. The impact would mean that a wider range of voice is gathered, taken into consideration, and a variety of practices would be explored.

Achievement data was problematic across the four schools. There was no consistent measure or assessment that all four schools had in common. This raises pertinent questions regarding assessment measures and the places for such assessment. To overcome this, a decision was made to use OTJ's (explained in section 2.4.9). OTJ's also pose possible limitations in that an OTJ is largely dependent on the 'teacher judgement'. While measures are in place to ensure moderation practices take place; there is a need to highlight moderation as a possible limitation. Outweighing the limitation is the idea that OTJ's should take into account triangulated evidence rather than a stand alone standardised test. Moderation was briefly discussed as a part of section 2.4.9.

7.5.4 *Researcher Identity*

While researcher identity can influence practice and findings for better or worse, writings which offer narratives, as this study seeks to do; often present views which are singular, fixed, or stable when intending to instruct others in ways in which the positioning and reflexivity of the researcher operates for better or worse (Thomson and Gunter, 2011).

A perceived limitation of the study could be that I am an employee of the school where the research was conducted. It is important that this is noted as a perceived limitation. It is not an actual limitation as it is the research design. It would not be possible to undertake Participatory Action Research without this positioning. Interactions with stakeholders are a strength of the research, however, considerations of power are important when taking up such methodology.

In section 3.8 I classified data collection methods as either 'outsider' or 'insider' methods to differentiate between the methods that were conducted in my role as a teacher or researcher. It is important to note and acknowledge that both methods were binary, supported writing this narrative, and I didn't let biases influence the work in

any way. To ensure this positionality was important to identify and continuously reflect on, especially when I was an insider and researcher collaborating with insiders (Herr & Anderson, 2015, as cited in Kyriazis, 2021). For this reason, reference is made to all data collection methods in section 3.8 although insider methods are not reported on within this study.

Outsiders have criticality by virtue of being 'fresh eyes' but can also miss important phenomena and thus seriously misinterpret local meanings and practices (Clifford and Marcus 1986; Geertz 1973; Rosaldo 1989). Insiders on the other hand, while familiar with local micro-politics in ways that outsiders could never be, can often suffer from a lack of distance and perspective on everyday taken-for granted events, mores and teleologies (Delamont, 2002) (Thomson and Gunter, 2011, p. 18).

This criticality is important when you consider the primary role of the researcher as an employee of the school. It is easy to become encompassed by your day to day job. An outsider has fresh perspectives and does not necessarily have the same interactions or relationships with the stakeholders. It is important to consider that “in any action research, stakeholders become an integral part of the process, they work collaboratively through inquiry and have a voice in identifying the challenges, and are ultimate agents for change” (Stringer, 2014, as cited in Kyriazis, 2021 p. 16). This has been of most importance to me, ensuring that the work of the Stonefields Team has been adequately acknowledged and appreciated. Likewise, the conditions of the school have served an incredible foundation for this study to take place. Many incidents, practices, values, and ways of being can be taken for granted; they can become a part of the culture and ‘the way things are done’ that you forget it is a special attribute of the school community or environment.

In recent years the inside/ outside binary has been challenged, suggesting that we are all outsiders to each other (Denzin 2003; Stronach & MacLure 1997, as cited in Thomson and Gunter, 2010). Often insiders have outsider perspectives, this is essential in undertaking doctoral research (Behar 1996; Peel 2003). The insider, outsider debate will no doubt pose questions for some. Addressing them here as a possible limitation seeks to mitigate the concerns and illustrate that the dual roles are demonstrable for this research.

7.6 SUGGESTIONS FOR FURTHER RESEARCH

This study was designed to build knowledge, make meaning, and apply understanding of Learner Agency at a New Zealand primary school. Validation of the ASpT was a part of this study to enable this process. To validate the tool and make it reliable in other contexts, other schools were sought and used to ensure there were sufficient responses. Through these processes there were suggested ideas that could be used for further research that fell outside the scope of this study. These are presented under the heading ‘Extension’ and ‘Variation’ below.

7.6.1 *Extension*

This study could be replicated in and across other schools, groups of schools, or communities of learning. While methods may be modified where necessary, it is recommended that the use of the ASpT is administered to any cohorts, groups, or individual learners who are in Years 4 - 8 of schooling. Unpacking the data through conversations is important and should be taken into consideration. In this study this was through the use of focus group discussions. However, teachers may opt for a less formal conversation through classroom teaching practices. Increasing the sample size and pooling the collected data of the ASpT could enhance the reliability of this research and provide significant insights, special considerations would need to be made regarding the privacy and ethics of the data that would be gathered, stored, and used in this instance.

Documenting the ASpT and potential impact it has on changes in either teaching practice and/ or learning design is another possible way to extend this research further. Impact stories and insight stories could be shared illustrating what teachers notice, recognise and how they respond.

7.6.2 *Variation*

This study identified certain correlations to things such as achievement, ethnicity, gender, year level, and language spoken at home. Many more correlations could be made to statistically prove what has an impact on Agency - ideas were put forward by teachers and learners in section 5.4.4 and could be further explored. Further correlations with different forms of assessment could enhance validity and findings to provide information about specific learning areas and achievement outcomes.

The ASpT specifically measures the learners' perception of their Agency. Variations could be considered to measure Learner Agency as perceived by the learners' peers, teachers, or parents. These perceptions were outside the scope of this study; however they would provide useful insights and opportunities for further research. This data could be triangulated and provide information to provoke discussions, especially for priority learners or learners with various learning needs.

As this study focussed particularly on Stonefields, the degree of representation of these findings and how closely they reflect other New Zealand schools should be considered. Replicating this research in various education settings may provide further insights. Extending the research to include schools with different locations, decile ratings and size would allow for comparisons to be made in and across schools using a certain variable.

The Stonefields Collaborative Trust in partnership with Stonefields School is passionate about designing tools to measure and understand the learning needs of the 'whole child' utilising a variety of traditional and original approaches to assessment. Tools are in various stages of development and implementation. Stonefields School has used the ASpT model to develop a Hauora/ Wellbeing Tool named Te Whare Tapa Whā. Sir Mason Durie (Durie, 2004), a leading Māori health advocate developed the model which describes health and wellbeing as a wharenuī/meeting house with four walls. This model is used in the tool which measures taha wairua/ spiritual wellbeing, taha hinengaro/ mental and emotional wellbeing, taha tinana/ physical wellbeing, taha whānau/ family and social wellbeing, and taha whenua/ connection to the land (soils, plants, animals and people), a place of belonging. While the tool is in early stages of development and has been proven in a basic way to be reliable and usable, there is an opportunity to further validate this tool in future research. Engagement Sliders have also been developed, prototyped and trialed by the Stonefields Collaborative Trust, this too provides an opportunity for teachers/ researchers to gather more rigorous voice and data around the tool and its use.

Variation could also extend where this research could be used to introduce a practice model that other schools consider when developing their own tools to investigate other constructs of interest. Processes, practices and scaffolds may be applicable or may need to be varied to better suit the needs across different contexts.

7.7 FINAL COMMENTS

Agency is a contemporary topic, especially for learners and education in recent years, as we seek to find better ways of serving our learners and meeting the increasing demands they have on them for the future. Richardson (2017) believes that Agency is the only real measure of whether a school is truly about learning... or not. It is also thought to be an individual outcome that is both under-developed and critical to achieve and thrive in a transforming world (Hannon & Peterson, 2021). This study in particular has sought to build knowledge, make meaning, and apply understanding of Learner Agency in a NZ primary school. A key part of this process led to developing and validating a tool to assess Learner Agency and understand existing practice at Stonefields School. Over 1000 learner responses from across four primary schools were gathered and used to validate the Agency Self-perception Tool which was used as quantitative data. To understand existing practice, learners and teachers formed focus groups at Stonefields School to provide qualitative data. The school invested time and resources into supporting the inquiry and shared aspects of the journey through a YouTube Video, 'Learner Agency @ Stonefields School' (Appendix M) (Stonefields School, 2019).

The results have been heartening and at times revealed cause for concern, particularly for our Māori learners. The quantitative data inextricably illustrated that learners who have a higher sense of Agency have correlating achievement. It raised questions around equity, disparity, and meeting learner needs who are underachieving; posing that a flipped focus on learners' perceived sense of Agency could consequently impact achievement outcomes. The qualitative data was rich and enlightening, confirming what had often previously been surmised. Student voice through focus group conversations was instrumental as student voice is about Agency and is a key aspect of Agency (Toshalis & Nakkula, 2012; Charteris & Smardon, 2019). The study would not have had merit without it.

Opportunities have been created through this study to share in robust conversations about practices which not only have impact but provide learners with increasing opportunities to have Agency in and over their learning. The essence of this study has enabled great things and in the words of a fellow teacher and friend through listening to the learners talk about the project and in particular Agency (Appendix M)

I feel really proud when I listened to the learners this morning, because they're doing it, they're talking about it, they are excited to talk about it, they feel that they have the capacity to actually do something about it, they are not passive passengers in their own future they are actively driving their own learning (Stonefields School, 2019, 6:08).

In writing this study there has been angst about the potential for misinterpretation or further confusion about Learner Agency. 'Future learning environments will focus on developing learner agency, and will redefine the roles of teachers and educators' (OECD, 2021, p. 18). The role of the teacher is still paramount and practices which are standing the test of time need to be further embedded such as Assessment for Learning; therefore it is not a case of out with the old and in with the new; the transformations that have occurred are how we have adapted and applied lessons of the past to trends of the future to ensure that powerful learning experiences for all are created. (Apex Learning & Getting Smart, 2016). Morris advocates for the role of adults within the class.

In other words, Agency doesn't so much exert itself upon others as it does float within the intersection of freedom and authority. Enacting one's Agency is always a balancing act between doing what is within your understanding of your own power and working with the boundaries of others' understanding of theirs. It is a cooperative, chemical interaction. Freedom delimited by others' freedoms delimited by yours. In a classroom, this means that authority remains present. Sometimes, the authority of the teacher; but in the best situation, the shared authority of the group of learners (and the teacher) (Morris, 2017, para.14).

This notion of a floating intersection is the art of teaching and the key to enabling Agency. So, unless you really mean it, do not use the word 'Agency'. Unless you truly intend to float an intersection and create a classroom where kids 'have mastery over themselves' and the freedom to employ that mastery with other learners; as this is the right of Agency, and an education that does not encourage or facilitate this Agency is not an education (Morris, 2017; Richardson, 2017).

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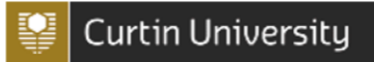
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Every reasonable effort has been made to acknowledge the owners of copyright material. I would be pleased to hear from any copyright owner who has been omitted or incorrectly acknowledged.

APPENDICES

Appendix A

Informed Consent Form - Learner



Science and Mathematics Education Centre

**Developing and validating a tool to assess Learner Agency and
understanding existing practice in a NZ Primary School.**

Informed Consent Form - Children

- I know that I don't have to help with the project, but I would like to.
- I know that I will be answering some questions and may be invited to join a group of children my age as part of the project.
- I know I can stop whenever I want to.
- I understand that the researchers have to contact my parents and school principal if I report or my questionnaire responses indicate that I am feeling very sad or have been hurt.
- I know that I need to write my name in the space below, before I can help with the project.

Child's Name: _____ Date: _____

Appendix B

Informed Consent Form – Teachers



Curtin University

Science and Mathematics Education Centre

Developing and validating a tool to assess Learner Agency and understanding existing practice in a NZ Primary School.

Informed Consent Form - Teachers

- I understand the purpose, procedures, and risks of this project, as described within it.
- I have discussed this project with my child.
- I am willing for my child to become involved in the project, as described.
- I understand that both my child and I are free to withdraw participation at any time.
- I understand that no personal identifying information, like names or addresses, will be published in the researcher's thesis and journal articles.
- I understand that if my child is required to participate in an interview, questionnaire or survey, my child's responses and details will be stored separately and securely at the School of Psychology in Curtin University of Technology for a minimum period of 7 years, after which it will be destroyed confidentially.
- I understand that the school principal and I will be contacted if my child questionnaire indicates that he/ she is distressed/ in danger or my child reports any distress/ danger during the group sessions.

Please feel free to approach me or contact me if you need any further information or have any questions.

Name: _____ Signature: _____ Date: _____

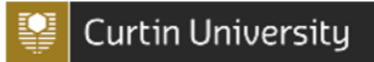
School: _____ Year & Class _____

Home Address: _____

Home Phone: _____

Appendix C

Participant Information Sheet



Science and Mathematics Education Centre

Developing and validating a tool to assess Learner Agency and understanding existing practice in a NZ Primary School.

Student Information Sheet

My name is Jana Benson I am currently completing a piece of research for *my* Doctorate of Philosophy at Curtin University.

Purpose of Research

I am interested in developing and validating a tool to assess Learner Agency and understanding existing practice in NZ Primary Schools. To help me understand practice in *your* school, *you may* be asked to participate in group conversations or talk about examples of *your* work with *your* peers or myself, these *may* be recorded. This will be a part of *your* normal classroom routine and programme, they are similar to a student led conference, where *you* will talk about your learning and resources that *may* have helped *you*.

Consent to Participate

Your involvement in the research is entirely voluntary. You have the right to withdraw at *any* stage without it affecting your rights or *my* responsibilities. When *you* have signed the consent form I will assume that *you* have agreed to participate and allow me to use your data in this research.

Confidentiality

The information *you* provide will be kept separate from your personal details, and I will only have access to this. The conversations will not have your name or *any* other identifying information on it. The university requires that the information will be kept in a locked cabinet for at least seven years, before a decision is made as to whether it should be destroyed. In addition *my* supervisor will have access to the data which she will store on a password protected Curtin University computer.

Further Information

If you would like further information about the study, please feel free to talk to me at school or you can email: jana.benson@postgrad.curtin.edu.au. Alternatively, you can contact my supervisor, Doctor Rekha Koul: R.Koul@curtin.edu.au.

Thank you very much for your involvement in this research, your participation is greatly appreciated.

Curtin University Human Research Ethics Committee (HREC) has approved this study (HREC number HRE2016-0311-05). Should you wish to discuss the study with someone not directly involved, in particular, any matters concerning the conduct of the study or your rights as a participant, or you wish to make a confidential complaint, you may contact the Ethics Officer on (08) 9266 9223 or the Manager, Research Integrity on (08) 9266 7093 or email hrec@curtin.edu.au.

Jana Benson

Appendix D

Parent Information Sheet



Science and Mathematics Education Centre

Developing and validating a tool to assess Learner Agency and understanding existing practice in a NZ Primary School.

Parent Information Sheet

My name is Jana Benson and I am a teacher here at Stonefields School. I am currently completing a piece of research for *my* Doctorate of Philosophy at Curtin University. This information sheet and consent form is a part of research and ethic protocols

Purpose of Research

I am interested in developing and validating a tool to assess Learner Agency and understanding existing practice in NZ Primary Schools. To help me understand practice here at Stonefields School, *your* child has been invited to participate in group conversations to talk about what helps them as a learner. This will be a part of the children's normal classroom routine and programme, they will reflect on their learning similar to a student led conference.

Consent to Participate

Your child's involvement in the research is entirely voluntary. They have the right to withdraw at *any* stage without it affecting their rights or *my* responsibilities. When *you* have signed the consent form I will assume that *you* have agreed for *your* child to participate and allow me to use the data in this research.

Confidentiality

The information they provide will be kept separate from *your* personal details, and only I will have access to this. The conversations will not have their name or any other identifying information on it. Therefore anonymity is assured and name changes will be used if necessary. The university requires that the information will be kept in a locked cabinet for at least seven years, before a decision is made as to whether it should be destroyed. In addition *my* supervisor will have access to the data which she will store on a password protected Curtin University computer.

Further Information

If you would like further information about the study, please feel free to talk to me at school or you can email: jana.benson@stonefields.school.nz or Sarah Martin our School Principal: principal@stonefields.school.nz. Alternatively, you can contact my supervisor, Doctor Rekha Koul: R.Koul@curtin.edu.au.

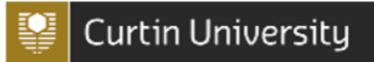
Thank you very much for your involvement in this research, your participation is greatly appreciated.

Curtin University Human Research Ethics Committee (HREC) has approved this study (HREC number HRE2016-0311-05). Should you wish to discuss the study with someone not directly involved, in particular, any matters concerning the conduct of the study or your rights as a participant, or you wish to make a confidential complaint, you may contact the Ethics Officer on (08) 9266 9223 or the Manager, Research Integrity on (08) 9266 7093 or email hrec@curtin.edu.au.

Jana Benson

Appendix E

School/ BoT Information Sheet



Science and Mathematics Education Centre

Developing and validating a tool to assess Learner Agency and understanding existing practice in a NZ Primary School.

School/ BoT Information Sheet

My name is Jana Benson I am currently completing a piece of research for my Doctorate of Philosophy at Curtin University.

Purpose of Research

I am interested in developing and validating a tool to assess Learner Agency and understanding existing practice in NZ Primary Schools. The study will have two main sets of data collection. Initially quantitative data will be used, then explored further with qualitative data. The qualitative data will be structured as smaller focus groups of children and their teachers participating in conversations. The conversations will be a part of the children's normal classroom routine and programme, they will reflect on their learning similar to a student led conference.

Consent to Participate

The quantitative data that is required is pre-gathered data sets that the school has administered/ collected. In particular the Agency Surveys that have been administered as a part of the Agency Teams initiative. Other data that may be required is stored on eTap, this would be used to correlate findings in relation to Standardised tests such as e-asTTle or PARs through consultation with the school Principal. All data will be anonymised to ensure confidentiality. The BoT's consent form would indicate permission for this data to be accessed.

Children, their parents and teachers who participate in the qualitative data will be asked individually to sign consent forms. The school and child's involvement in the research is entirely voluntary. They have the right to withdraw at any stage without it affecting their rights or my responsibilities. When the consent forms are signed by children, their parents and teachers this would give indication that they are happy to participate in focus group conversations for the purpose of this research.

Confidentiality

The information that is provided will be kept separate from personal details, and only I will have access to this. The conversations will not have their name or any other identifying information on it. Therefore anonymity is assured and name changes will be used if necessary in the final thesis. The university requires that the information will be kept in a locked cabinet for at least seven years, before a decision is made as to whether it should be destroyed. In addition my supervisor will have access to the data which she will store on a password protected Curtin University computer.

Further Information

If you would like further information about the study, please feel free to talk to me at school or you can email: jana.benson@postgrad.curtin.edu.au. Alternatively, you can contact my supervisor, Doctor Rekha Koul: R.Koul@curtin.edu.au.

Thank you very much for your involvement in this research, your participation is greatly appreciated.

Curtin University Human Research Ethics Committee (HREC) has approved this study (HREC number HRE2016-0311-05). Should you wish to discuss the study with someone not directly involved, in particular, any matters concerning the conduct of the study or your rights as a participant, or you wish to make a confidential complaint, you may contact the Ethics Officer on (08) 9266 9223 or the Manager, Research Integrity on (08) 9266 7093 or email hrec@curtin.edu.au.

Jana Benson

Appendix F

Informed Consent Form – BoT



Science and Mathematics Education Centre

Developing and validating a tool to assess Learner Agency and understanding existing practice in a NZ Primary School.

Informed Consent Form - Board of Trustees

- Our BoT gives approval for pre-gathered data sets that the school has administered/ collected to be used for this research
- Our BoT knows that the information and data will be treated sensitively and that anonymity is assured by the researcher.
- We know that we can contact the Ethics Officer, Research Integrity Manager or the Supervisor at any time if we have any concerns or questions about the research.
- We know that signing this form gives the researcher the approval to undertake research as stated in the information sheet (Appendix E).

ChairBoT: _____ Date: _____

School Principal: _____ Date: _____

Appendix G

Parent Information Sheet (Pre gathered data set)

SAMPLE - Distributed as schools' saw fit eg. email, newsletter etc.

Dear Parents of our Year 4- 8 learners,

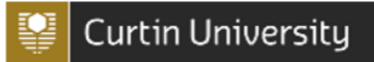
Our school has been involved in some ongoing professional learning around Leamer Agency. The school has administered a learning survey to all Year 4 - 8 learners. It has been used by teachers to better inform their learning design. It is considered as a pre gathered data set for the school.

This note is to inform you that the BoT have given written permission/ consent for this data set to be used by Jana Benson who is undertaking her Doctorate Studies through Curtin University. Jana is a staff member at Stonefields School. The data set consists of over 1000+ entries from across four different primary schools. Anonymity is assured and no identifiable information will be included in the study. Jana will be working closely with her supervisor to ensure the validity and reliability of the survey so that the tool can be shared and used widely for other contexts and schools.

If you have any questions please contact either the school principal (name and email address inserted), Jana Benson jana.benson@stonefields.school.nz. Alternatively, you can contact Jana's supervisor Doctor Rekha Kou! R.Koul@curtin.edu.au.

Appendix H

Informed Consent Form – Primary Carers



Science and Mathematics Education Centre

Developing and validating a tool to assess Learner Agency and understanding existing practice in a NZ Primary School.

Informed Consent Form – Primary Carers

- I understand the purpose, procedures, and risks of this project, as described within it.
- I have discussed this project with my child.
- I am willing for my child to become involved in the project, as described.
- I understand that both my child and I are free to withdraw participation at any time.
- I understand that no personal identifying information, like names or addresses, will be published in the researcher's thesis and journal articles.
- I understand that if my child is required to participate in an interview, questionnaire or survey, my child's responses and details will be stored separately and securely at the School of Psychology in Curtin University of Technology for a minimum period of 7 years, after which it will be destroyed confidentially.
- I understand that the school principal and I will be contacted if my child questionnaire indicates that he/ she is distressed/ in danger or my child reports any distress/ danger during the group sessions.

Please feel free to approach me or contact me if you need any further information or have any questions.

Parents Name: _____ Signature: _____ Date: _____

Child's Name: _____ My child is a (please circle): Boy/ Girl

School: _____ Year & Class _____

Home Address: _____

Home Phone: _____

If you AGREE to participate, please provide the contact detail of two relatives or friends in NZ whom we could contact in case you move.

Appendix I

Example of Learner Artefact - Individual shifts, strengths and next steps associated with the ASpT



Appendix J

ASpT Capabilities and Items

Self Aware

- I know where I learn best.
- I know who I learn best with
- I know what my weaknesses are
- I know what my strengths are
- The way I feel makes a difference to my learning
- I know what my passions are

Assessment Capable

- I use information from assessments to help me learn
- I know what my learning gaps are
- I check my own learning.
- I use feedback to help me learn.
- I know how my learning connects to my progressions.
- I know when I haven't done my best work

Collaboration

- I am a good collaborator
- I value hearing perspectives different to my own
- It helps me when other people share their ideas
- I like it when people suggest ways I can improve my work
- It can be helpful when people disagree with me
- I try to work with people who are different to me

Resilience

- I learn from what doesn't work
- If I am upset, I usually get over it quickly
- I take risks in my learning
- Being challenged is helpful to my learning.
- I reflect on why things have gone wrong
- I don't give up when things are hard

Using Tools and Strategies

- When I am stuck, I know what to do
- I use the Learning Process to help me learn
- I know when collaboration might help me
- I use the Learner Qualities to help me learn
- I make good choices to help me learn.
- I am comfortable learning without a teacher

Take Action

- I manage my learning time well
- I take action when there is a gap in my learning.
- I fix and improve my learning
- I produce enough learning.
- I like to make a difference to the world around me.
- I meet the learning goals I set myself

Appendix K

Research Questions Aligned with the Student Focus Group Questions

Research Question 1:	What teaching and learning practices enable Learner Agency?
Student Focus Group Questions/ Discussion	What is Learner Agency? What helps you as a learner to be ‘agentic’? What does/ can the teacher do to help you to be a better learner or more agentic?
Research Question 2:	What current practices exist and how might capabilities of Learner Agency be identified?
Student Focus Group Questions/ Discussion	These are some things that teachers have said an Agentic Learner would need to be capable of or be: <i>Self Aware, Assessment Capable, Resilient, Collaboration, Using Tools & Strategies, Take Action</i> <ul style="list-style-type: none">• What do you think of these? Do they help you to learn? Why/ Why aren’t they important?
Research Question 3:	How can evidence of the capabilities be used to inform learning design?
Student Focus Group Questions/ Discussion	You have completed a survey....; Your results show.... What do you think this means for you in your learning? How might you use this information to support your learning? How would you like your teacher to use this in the learning hub? Show students Appendix N, Gender/ Boy vs. Girls. What other things might impact on Learner Agency?

Appendix L

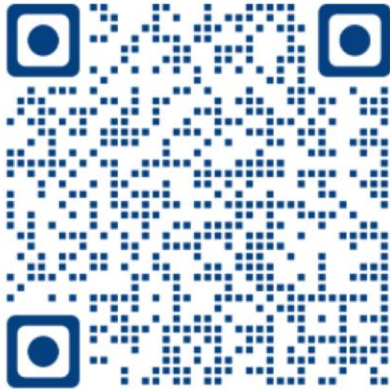
Research Questions Aligned with the Teacher Focus Group Questions

Research Question 1:	What teaching and learning practices enable Learner Agency?
Teacher Focus Group Questions/ Discussion	What is Learner Agency? What do you think helps your learners to be ‘agentic’? What do you do or what can teachers do to help learners to be more agentic?
Research Question 2:	What current practices exist and how might capabilities of Learner Agency be identified?
Teacher Focus Group Questions/ Discussion	What Language supports your teaching and learning here at Stonefields School? These are some identified capabilities of an Agentic Learner: <i>Self Aware, Assessment Capable, Resilient, Collaboration, Using Tools & Strategies, Take Action</i> <ul style="list-style-type: none">• What do you think of these? Do they help you to teach and your learners to learn? Why/ Why aren’t they important?
Research Question 3:	How can evidence of the capabilities be used to inform learning design?
Teacher Focus Group Questions/ Discussion	Your learners have completed the Surveys.... What do you think this means for you in your teaching? How might/ do you use this information to support your teaching? How would you like to see this information used across the school or for other NZ teachers?

Appendix M

Learner Agency @ Stonefields School Video Transcript

Available: [https:// www.youtube.com/ watch?v=sLMVb980GGE](https://www.youtube.com/watch?v=sLMVb980GGE)



L: It's what we need the most in life

T: One of the ways you might think about it would be why wouldn't you teach Learner Agency, why wouldn't you support learners to be agentic and I think looking back at the past when learners might have been taught in a very structured "I'm going to give you all of my knowledge and you are just going to learn what I have to know" then those learners are

limited by whatever the teacher is able to give them, what we are trying to do is give them the potential to be unlimited.

L: Learner Agency is being able to guide your own learning and finding the balance between all the aspects and skills you need.

L: Because it is one of the steps that I feel we need to take to be able to better benefit us in our later lives.

L: I also think that we are learning about Learner Agency so that we can be comfortable taking risks in our learning.

T: It's really to equip our learners for a changing future, and the idea that the world that we grew up in is changing so fast and we don't really know what we are equipping our learners for and what jobs that they will be moving into.

T: SO I don't want the learners that I teach to be limited by what I know I want my learners to be limited by what they want to know.

L: also definitely being able to balance all the elements of being an agentic learner which is for example determination, Resilience, Collaboration and things like that.

T; And that's the whole point around starting with something like Self Aware.

T: Self Aware is largely around the students knowing themselves and their identity as a learner.

L: I find that giving me more responsibility just makes me naturally want to self discipline and mature.

L: It's also really good learning how to be comfortable in very uncomfortable situations and learning how to improve your weaknesses and taking advantages of your strengths.

1.57

T: By them understanding themselves, them understanding what they want to learn, what they want to change, and then we give them the capacity to actually make those changes we give them the tools and the opportunities to actually affect the changes that they are after in the world.

L: Basically you need a plan laid out from where you are right now.

T: Using progressions to inform their learning direction and really knowing Where they are at? Where they are going? And how they are going to get there? And those three key questions are important for any of us in any of our learning journeys that we are on.

L: I think being assessment capable is knowing your qualities and the skills that you already possess as a learner.

T: Through the work of the Agency Team over the last 18 months or so we have developed a tool called the Agency Self-perception Tool or ASpT for short; and it is used to unpack the six elements of an agentic learner.

L: I think determination and Resilience is really important because of course in the future you are going to be let down and you are going to go through some rough patches but it's the qualities that are going to make you get through it.

T: In particular we were really interested in getting the children to understand the importance of diverse perspectives.

L: You can learn a lot from other people

L: ALso in the team work you would aim to have team members with strengths in your own weakness and that is how you build the team up to be stronger.

L; If I am stuck in my learning I go to a buddy

L: When I am in a position when I don't really know what to do I will normally go back into SchoolTalk and look at the modelling book that a teacher has normally made for us.

The Learning Process basically kind of marks your starting point and your end point and the Learning Qualities what you need to kind of have throughout the entire plan and knowing where your goals are and your next steps.

L: First I'm building Knowledge which I'm basically listening to my teacher because she is explains what the strategy is in maths, and then I go to making meaning which means I need to try it myself and if I need any help I ask my teacher and when I do apply understanding I go and I try it by myself because I think I know everything but if I make a mistake it's fine.

T: The other idea is around Taking Action, so Taking Action in being able to inform change and make change in our community.

L: It's kind of made me the person who I am today

T; Some of the results that we've discovered is that there isn't a one size fits all when it comes to Agency, it's not as though we can say that everybody will learn in the same way, and everybody needs the same amount of Collaboration, or Resilience or Using Tools and Strategies at the same time, and that absolutely makes complete sense, we have known that for years when it comes to things like literacy and numeracy, so why it should be any different when it comes to developing things like capabilities, of course not.

It becomes a part of the design for all curriculum areas whether it's Maths, Reading, Writing, or concept, breakthrough.

How can we direct the right kind of learning at the right time to really maximise the potential for these learners?

The hubs are designed and we are really intentional about where is the quiet room going to be and what resources are available, and how are the walls going to talk as opposed to a collaborative space, having a big round table.

I design my learning so there are elements of Self Awareness in there, there are elements of how we are going to collaborate, how we are going to take action.

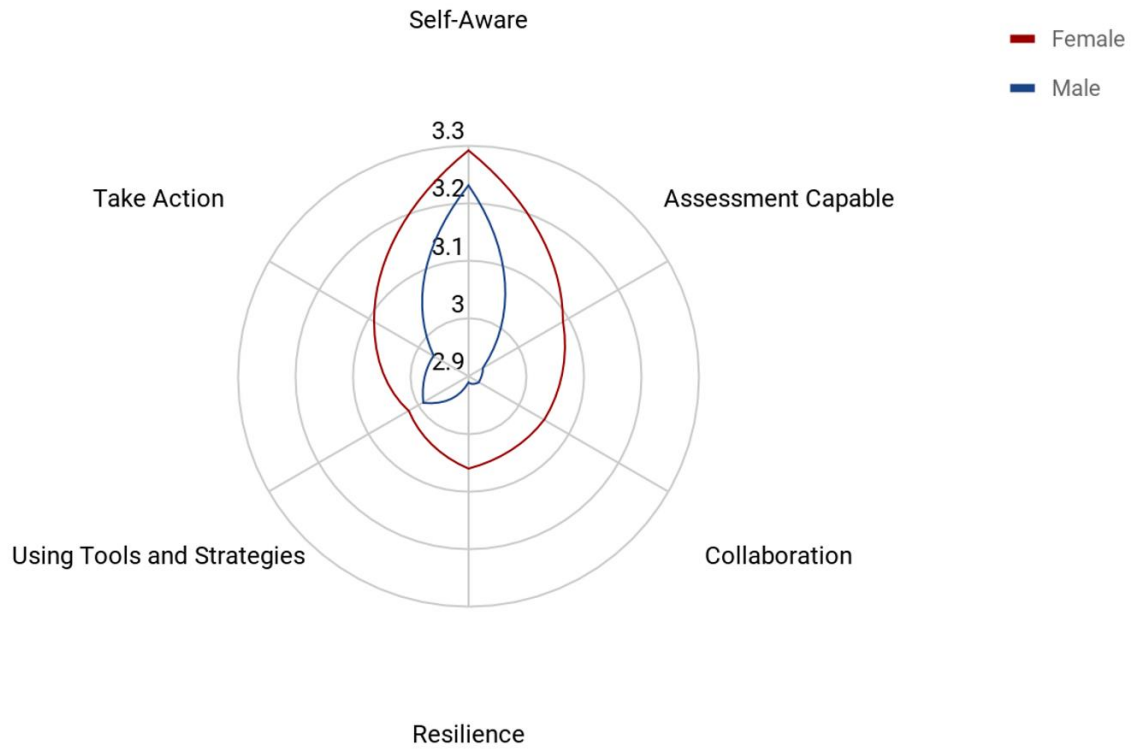
It becomes this really nice relationship between them driving it and I'm supporting and they can start to build their own next steps.

And as much as possible I want to say as little as possible, I want to just prompt them in the right way so that they're then doing the talking and doing the figuring out.

I feel really proud when I listen to the learners this morning, because they're doing it, they're talking about it, they are excited to talk about it, they feel that they have the capacity to actually do something about it, they are not passive passengers in their own future they are actively driving their own learning.

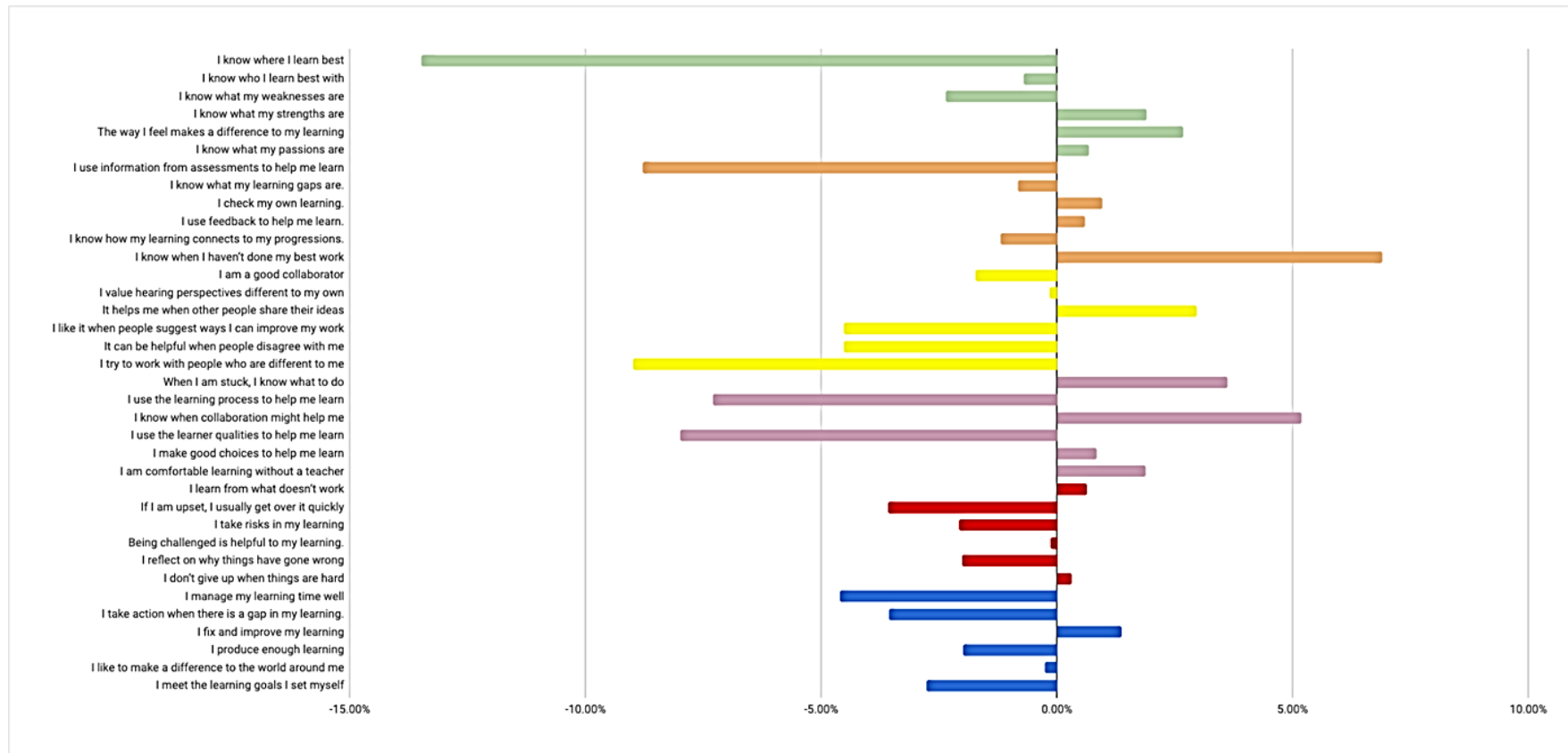
Appendix N

Female vs Male Agency Self-perception results shared with learners to prompt discussion during focus groups




Appendix O

Indicators as Strengths filtered through to possible Next Steps



Appendix P


Permission to use Figure 2.3: Graph of Student Engagement (Hoerr, 2016, p. 144)

 **Permissions** <permissions@ascd.org> 11 Oct 2021, 12:54 (7 days ago) ☆ ↶ ⋮
to me ▾

Hi Jana.


Your email was forwarded to me for handling. We have not objection to your using content from our publication in your thesis on condition that you include a source line or full citation in the reference section. Let me know if you need anything else and best of luck with your studies.

Kind regards,




Katy Wogec
(She/Her/Hers)
Permissions Consultant

240-478-4788
Kwogec.cons@ascd.org
www.ascd.org



Appendix Q

Permission to use Figure 2.2: Developmental Shifting of Control of Instructional Time Source: CCR (Fadel, Bialik, & Trilling, 2015, p. 30)



charles.fadel@curriculumredesign.org Thu, 7 Oct, 04:03 (11 days ago) ☆ ↩ ⋮
to me ▾

Hello Jana,

Of course you can use it. You should not even be asking, given the Fair Use doctrine of copyrighted materials in Education :-)

Best of success,
Charles

Appendix R

Permission - Stonefields School Material



phone: 09 527 7721
address: 81 Tihi Street,
Stonefields 1072, Auckland
email: office@stonefields.school.nz
www.stonefields.school.nz

PERMISSION TO USE STONEFIELDS SCHOOL MATERIAL AS SPECIFIED BELOW:

I give permission for Jana Benson to include Stonefields School material in her higher degree thesis for Curtin University, and to communicate this material via the espace institutional repository. This permission is granted on a non-exclusive basis and for an indefinite period.

I confirm that as Presiding Member of the School Board I am happy that Jana uses the specified © Stonefields School material .

Name: Matt Evans

Position: Presiding Member, Stonefields School Board

Date: 3 December 2021