



Waipaparoa is the early Māori name for the general area adjacent to our schools. Throughout history the local estuaries and waterways have been an abundant source of sustenance for the local people. Fish were plentiful, particularly flounder among other species. Seafood gathering played a large part of the health and growth of the area, fishing has always been the main focus for kai moana and is still very important in the lives of many local residents today.

The seven coloured triangles, one for each school in our community, represent the flounder fish traveling as one and depicts unity of purpose. Together they form the large W, which in turn symbolizes the strength of the stingray.

### **Our Vision**

Both as a collective and as individual schools, we are committed to preparing our students for success. Drawing on the strengths of our collaboration, in positive and respectful relationships, we will guide our students to realise their individual potential and social responsibility in our complex and rapidly changing world through enhancing their agency as lifelong learners, their critical thinking, and communicative literacy. We believe our students can be active contributors and leaders in their communities.

### **Our Values**

#### **We acknowledge and embrace**

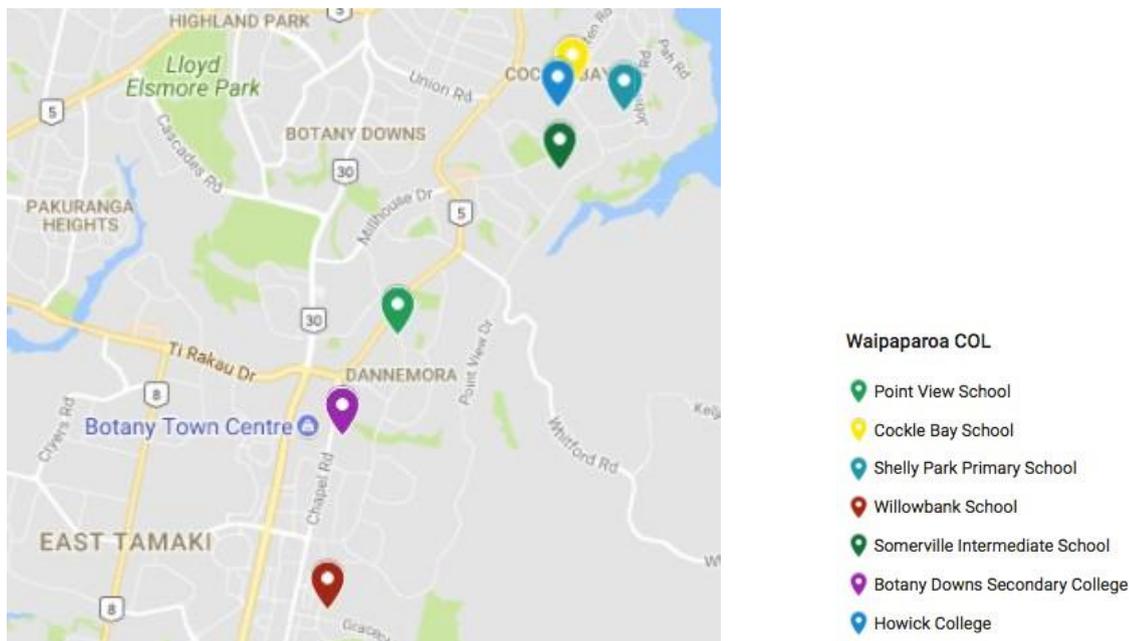
- the need to be future focused
- the different challenges faced and opportunities presented at different stages of the education pathway
- scaffolding pathways for our learners to improve their achievement
- student collaboration in the development and ongoing operation of the CoL
- understanding and responding to the needs and wishes of our communities
- the individual character and self-management of each school
- the diversity of experience and expertise that CoL members bring to the group
- being committed to working for our schools' collective benefit
- taking collective responsibility
- knowing and caring deeply about each other's schools and students
- building strong relationships that encourage and allow us to challenge and critique
- having an open, growth mindset and being solution focused
- developing ongoing cycles of inquiry and improvement
- building leadership capacity
- identifying and leveraging expertise
- maximising resources for our collective benefit.

## **Who we are and our current strengths**

The seven schools that form the Waipaparoa CoL are located within a 7km radius and their catchments cover mainly urban areas with some semi-rural geography. Although Howick is a well-established area with a strong heritage, a significant part of the Botany area encompassed by our schools is relatively recently developed over the past 20 years. This area has attracted immigrants from a wide range of countries particularly Asia and the Middle East and as a result schools have noticed the changing ethnic composition of their student bodies and a marked increase in the number of new learners of English language. Waipaparoa CoL serves an ethnically diverse community. About half of the students are Pākehā. Māori and Pacific students make up 12% and a third of the students have Asian heritage or are from other parts of the world, schools have developed a range of successful strategies to engage with their communities and this cultural responsiveness will continue to be a focus for development and sharing.

Overall the schools' communities are relatively affluent and all the schools have had high decile ratings. On the whole our students are well resourced, willing to attend school and are enthusiastic to learn. Parents and caregivers of our students generally hold high expectations for their achievement and for our schools to meet their children's personal, social and academic developmental needs.

## Location Map for Schools of Waipaparaoa Community of Learning



### Overview of our current strengths and some challenges

(excerpts from the late 2016 external evaluation by the Education Review Office)

*The seven schools in the Waipaparaoa Community of Learning (CoL), comprise two co-educational secondary schools, (Years 9 to 13), one intermediate and four contributing primary schools. These schools are very well placed to collectively make a substantial contribution to the quality of education for their approximately 7,500 students. There is ample experience and expertise within the CoL for schools to support each other and work collaboratively to improve student outcomes. Most of the schools have experienced principals and/or senior leaders and boards of trustees who have all managed change well.*

*National Standards data for 2015 show that achievement in all the primary schools is above the national means for reading and writing, and in all but one, is above the mean for mathematics. National Certificates of Educational Achievement (NCEA) data for 2013 to 2015 place the two secondary schools' results above national means for Levels 1 and 2 and similar to the national mean for level 3.*

*In 2015, in particular, and more often than not in the previous two years, girls have outperformed boys at each level of NCEA. A similar picture emerges for the primary and intermediate schools in relation to student achievement in National Standards reading and writing in 2015. Raising boys' achievement would be a worthwhile focus for schools as part of their strategies to lift outcomes in English literacy.*

*There are relatively small numbers of Māori and Pacific students in the CoL. This makes identifying patterns and trends in these groups of students' achievement and making comparisons with other cohorts difficult. Māori and Pacific student retention rates to age*

17 are well above those for their peers nationally. The data show that within the CoL some schools have been successful in improving the achievement of Māori and Pacific students and reducing the disparity between these students' achievement and that of their peers. This indicates that collaboration and sharing of strategies between the CoL schools would be useful.

Common strengths include:

- *using achievement information well to identify and respond to student learning needs by adapting teaching and learning programmes or pathways and course composition*
- *provision of rich, responsive and relevant curricula including many co- and extra-curricular opportunities*
- *alignment of school curricula with The New Zealand Curriculum*
- *effective leadership and governance*
- *effective use of targeted professional learning and development for trustees, leaders and teachers*
- *useful reporting of progress and achievement information to parents and boards of trustees*
- *positive responses to external evaluation and support*
- *some good use of self-review to support ongoing school improvement*

## **Building on our Strengths**

Through a series of discussions amongst the principals and with senior leadership teams, and input from student focus groups, we have identified three key aspects of the New Zealand Curriculum which we believe we can make progress on by working together. These key aspects are important for improving our students' current learning, progress through education, and ability to contribute in work and to their communities as adults, in an increasingly complex world where the New Zealand Curriculum's key competencies are as important as the learning areas. Research has shown that these skills and dispositions contribute to success in learning areas, and to success in literacy and mathematics.<sup>1</sup>

The three aspects we have chosen are also ones which will motivate our teachers in their inquiries, since these apply across all learning levels and learning areas.

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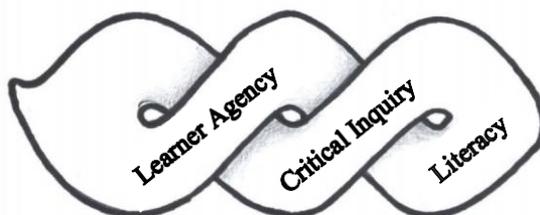
1 Wylie, C., & Hodgen, E. (2011). *Forming adulthood: Past, present and future in the experiences and views of the Competent Learners @ 20*. Wellington: Ministry of Education.

Wylie, C. Hodgen, E., & Ferral, H. (2010). *Patterns of cognitive and personality development: evidence from the longitudinal Competent Children, Competent Learners study*. In J. Low & P. Jose (Eds). *Lifespan development. New Zealand Perspectives*. Auckland: Pearson. pp. 103-113.

2 Crowhurst, P. (2018). *Supervisory Teaching and its Impact on Student Agency in Primary Classrooms*. An unpublished doctoral dissertation. P6

Our three achievement challenges are focused on: **learner agency, critical inquiry, and literacy**.

We see these three achievement challenges as inter-related, and our work will aim to focus on ways to weave these together, so that there is a compounding benefit for students and teachers alike. These are illustrated:



## **Achievement Challenge 1: Increase learner agency**

### **How we see learner agency and why it matters**

Simply stated; to have agency is to possess the ability to exercise influence over one's circumstances (Crowhurst 2018).

Learner agency means that students are able to take charge of their learning in ways that increase their motivation and continually improve their knowledge and skills. It's the capacity to set useful goals and next learning steps based on learning needs, plan and organise well, self-monitor, and evaluate how well goals have been met.

Strong learner agency is fundamental to students being successful lifelong learners, well-equipped with useful strategies for their learning. Students who are scaffolded to take charge of their learning can achieve more in their learning<sup>3</sup> and lives.

### **How we can increase learner agency**

Learners need to have the skills and appropriate opportunities to express their agency.

Deliberate teaching of metacognitive skills and self-regulation such as thinking aloud, self-questioning, help-seeking, dealing with distractors, setting appropriate goals, tracking progress towards them, appropriately adjusting learning strategies and accurately assessing outcomes develops learner agency. Scaffolding learner agency

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<sup>3</sup> Examples of gains in achievement through a focus on learner agency include St John Bosco school <http://nzcurriculum.tki.org.nz/Curriculum-stories/School-snapshots/St-John-Bosco-School> and East Taeri school <http://www.ero.govt.nz/publications/teaching-approaches-and-strategies-that-work/developing-student-agency-and-motivation-through-effective-teacher-practices-and-inquiry/>

supports students' engagement in learning, and deepens their internal motivation to learn and improve, and their resilience in learning. It is supported by trustful and respectful relationships. Feedback from students is used by teachers to improve their work with students, modelling learner agency themselves.

Opportunities are given that enable students to grow and experience agency and its uses and rewards, through enabling them to contribute to the wellbeing of the school and its community.<sup>4</sup>

### **Our goal:**

*We will increase students' opportunities to develop and exercise agency and their rating of their own exercise of agency in learning, as measured by growth in the proportion of students who give ratings of 'very often' and 'often', and in the proportion of teachers who say that they provide opportunities related to student agency and critical inquiry 'very well' and 'well'. Other measures will include qualitative accounts of growth in learner agency and critical thinking in the context of teachers' and leaders' inquiries to improve learning.*

To grow and develop learner agency, we also need to extend and deepen the scaffolding our teachers provide.

We will use two complementary research-based measures to provide information to

- inform our inquiry work to develop teacher capability to scaffold learner agency, and
- track our progress over time, which we can use at both the CoL and school levels.

These measures are:

- *Learner agency survey*, developed by NZCER in conjunction with Waipaparoa CoL, focusing on Years 3, 6, 8, 9 and 10. (This focus will give information about the transition between schooling levels also).
- The *Optimising students' opportunities to learn* domain from the Teaching and School Practices survey ([www.tsp.org.nz](http://www.tsp.org.nz)). This includes effective teaching practices related to both student agency and critical thinking.

We have trialled the Learner agency survey, with most schools taking part. Each school taking part got a report from NZCER about their students. This gave us a good sense of aspects that we could focus on. Information about the Learner Agency survey is attached as Appendix A.

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<sup>4</sup> Our thanks to Mark Osborne, Leading Learning, for the workshop with us in which he shared research on student agency and helped us deepen our understanding of learner agency and how to support it.

We analysed the Year 3 student responses in relation to whether English was spoken at home or not, and found that the responses were much the same, which is heartening. In future, we will analyse all responses by ethnicity (Māori, Pasifika, Pākehā, and Asian, and by whether English is the main language spoken at home, to check that our students' responses are similar across differences in ethnicity and home language. We will also analyse by gender, given the NCEA and literacy differences in achievement for girls and boys in our CoL.

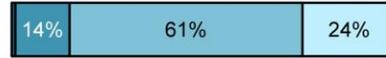
Each school also got its own report for the Teaching and School Practices survey, as well as the overall picture for the CoL, enabling us to identify particular school strengths that we can learn from across our schools. We will use this as baseline data to measure our progress in scaffolding learner agency and critical inquiry over time.

*Table: Opportunity to learn – Waipaparoa CoL 2017 information from the Teaching and School Practices Survey*

**Optimising students' opportunities to learn**

How well do you:

Engage students in specific and timely feedback and feedforward on their learning NR = 12



Use flexible groupings to meet the changing needs of individual students NR = 17



Engage in in-depth curriculum related discussions with individuals or groups NR = 19



Provide authentic learning experiences in which students apply their learning in a range of meaningful contexts NR = 32



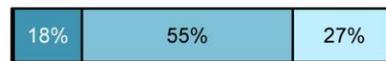
Ensure students direct their own learning pace, content, and goals NR = 15



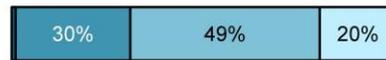
Ensure students think critically and talk about what and how they are learning NR = 13



Ensure students learn from taking risks, or experiments that did not succeed NR = 17



Ensure students interact with information to critique and create knowledge, and transform it NR = 24



**NR - No Response**

Our secondary schools will also monitor and measure the development of learner agency by the ongoing use of current practices generating progress report data i.e. Key Competencies at Botany Downs Secondary College and Ownership of Learning at Howick College.

Both Howick College and Botany Downs Secondary College are currently undertaking reviews so that their junior curriculum aligns with national curriculum changes mandated for 2020, with both learner agency and critical inquiry as foci. The junior curriculum will have a deliberate focus on both learner agency and critical inquiry.

The junior curriculum, Common Assessment Tasks (CATs) in the core subjects will be designed to enhance learner agency and critical inquiry. The monitoring and measuring of this will be through increased numbers of subject and course endorsements at an Excellence level in all levels of NCEA.

## **Achievement Challenge 2      Critical Inquiry**

### **How we see critical inquiry and why it matters**

Critical inquiry is an important type of capability for all students to develop. It demands both critical and creative thinking. It includes activities such as gathering and interpreting data; using evidence to support ideas; and critiquing evidence. Critical inquiry helps build students' awareness of how new knowledge claims are made and justified, enabling them to be well informed and contribute effectively as citizens as well as in the workplace and in family decisions. It will help them 'optimise the benefits and reduce the risks' of our digital world.<sup>2</sup>

The research literature suggests that critiquing evidence is the hardest aspect of critical inquiry to develop. With practice and support, students learn that they need to keep an open mind as they set aside their own ideas to consider other possible explanations. Being culturally responsive is an integral part of this process. Doing so requires both critical thinking and perspective-taking, which takes self-discipline and self-awareness (both aspects of managing self). In learning areas like health/PE and social studies critique could involve students in identifying their own assumptions and values, and then comparing them with those of others.

Perhaps the most common form of classroom-based inquiry is informational. Rather than directly learning about how knowledge is created in a discipline area, students use aspects of their inquiry capabilities to learn to be more discerning about knowledge sources. They gain practice in such challenges such as dealing with conflicting evidence (which is about both interpretation and critique). In this way the inquiry capabilities can also build towards "information literacy".

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<sup>5</sup> McNaughton, S. & Gluckman, P. (2018). *A Commentary on Digital Futures and Education*. Wellington: Office of the Prime Minister's Chief Science Advisor. p. 8. <http://www.pmcsc.org.nz/wp-content/uploads/18-04-06-Digital-Futures-and-Education.pdf>

The principals' leadership group had a workshop with Dr Rosemary Hipkins, NZCER to grow our understanding of critical inquiry, whose notes for us we have used above. We will use her framework of what critical inquiry looks like at different stages of students' schooling journey to support teachers' inquiry to improve our students' critical inquiry, and to develop measures from evidence of what our students do. This framework is attached as Appendix B. Her work enables us to undertake some innovative work which should also benefit other CoLs.

### **Our goal:**

*We will improve our students' critical inquiry capability, increasing the proportion of students who show good levels of critical inquiry appropriate to their schooling level.*

We will do this by building teachers' understanding of critical inquiry, and how to support it in their teaching, and what it looks like in different learning areas, and disciplines, and at different schooling stages. We will support school teams to build this understanding and bring school teams for different learning areas and disciplines together to discuss their frameworks and ideas for incorporating critical inquiry (more) into their teaching, and the evidence and tasks they would use to gauge student progress. We expect that a shared framework will evolve through iterations of inquiry and discussion of the results of inquiry over several years. The approach to this work will also strengthen student transitions.

We will check that we are supporting all our students to improve their critical inquiry by analysing our information about student progress in relation to ethnicity and whether English is the home language, and by gender.

The group recognises the current obstacles to assessing critical inquiry. NZCER tools that are presently available, such as, Teaching and School Practices survey and Science Thinking with Evidence survey are not suitable for our purposes as they don't provide clear measures of critical inquiry. Although schools do have measures of achievement in social science and science that relate to some aspects of critical inquiry, we do not consider these to be valid for our specific focus. As a result, we do not currently have appropriate baseline data on the topic. This will be addressed as a matter of priority.

The work we have begun with Dr. Rosemary Hipkins to develop our understanding of critical inquiry has provided us with direction and her recently released *indicators of progress in building critical inquiry capabilities* (Appendix B) will provide a framework for the development of an appropriate assessment tool to measure students' abilities in critical inquiry. This will be the task of across school and in-school leaders in their first year of appointment. The leaders will work with teachers to establish a shared understanding of critical inquiry and then, through collective professional development and staff personal inquiry, they will develop mechanisms and tools in order to establish baseline data in 2019.

The assessment practices will be annual and ongoing so that our kahui ako will be able to measure the effectiveness of this achievement challenge over time in relation to data gathered in 2019. Together with results from these assessment practices and the teacher inquiries that are conducted, we will also use shifts in NCEA achievements from

2019 onwards to evaluate our effectiveness. NCEA assessment tasks have increasingly included aspects of critical thinking and we believe pedagogy that emphasis this will, over the longer term, impact on students' success.

## **Achievement Challenge 3      Literacy**

### **Our focus in literacy, and why it matters**

Good literacy levels are key to so much learning, understanding, and ability to contribute in work, family and society. We particularly want to strengthen our students' communicative capability, in listening and discussing, and their writing for different audiences.

### **Our goal:**

*We will continually increase the proportion of students who show good levels of oral language skills and writing.*

We will do this by deliberately thinking about the opportunities to grow these capabilities in the work we are doing in agency and critical inquiry, so that we grow each at the same time, across different learning areas and disciplines.

Each school's teams working on critical inquiry and/or agency will also focus on deliberately providing opportunities for students to develop their English oral language and writing. Coming together to share our teaching inquiries about critical inquiry and agency will include the work done to improve oral language and writing.

In 2018 we will decide whether to use common measures across the CoL, or for each school to use their own. If the latter, then we will seek advice on ensuring that we understand how to equate different measures so that we can provide a CoL-wide picture to track our progress.

We will check that we are supporting all our students to improve their English oral language and writing by analysing our information about student progress in relation to ethnicity and whether English is the home language, and by gender.

*2017 EoY writing assessment data. Overall Teacher Judgements across 5 schools in relation to curriculum levels*

	Well below	Below	At	Above
Average across combined primary schools at Year 6	3.0%	10.0%	58.0%	29.0%
Intermediate School at Year 8	6.0%	14.0%	55.0%	25.0%

Our focus on literacy will be monitored and measured in both secondary schools through the asTTle data gathered in Year 9 and Year 10. This will help to inform teachers of each student's literacy level and the steps necessary to diminish the gaps in preparedness for accessing NCEA Level 1.

## **2018 to 2020: Our work plan**

### **2018 Go slow to go fast**

We want to ensure that our work has a solid foundation, and that we build the capacity and interest in change as we go. We are mindful of the importance of

- Developing a shared understanding among our schools' staff of student agency, critical thinking, and their relation to literacy so that we have a common language to talk about our different inquiries
- Supporting manageable inquiries that are specific and well-framed, so that teachers feel their time has been well-invested and can see gains for their students

Therefore, our plan of action for the rest of 2018 is to focus on developing shared understanding of the aims of our achievement challenges, what the information we have is currently showing us, and sharing our experiences with inquiry so that we support one another to develop meaningful and manageable inquiries that are likely to improve learning.

The principals will play a key role in leading the development of shared understanding and interest in their own schools, working with the CoL leader, and the across-school teachers and within-school teachers, once appointed. Two of the principals will work with the CoL leader to provide expertise in particular areas to support the work on the Achievement Challenges.

We want to ensure that we are working as a team towards the goal of having a good understanding of our achievement challenges and the work that will support progress on them to feed into individual school planning for 2019.

We will offer workshops for the CoL teachers on learner agency and critical thinking, and unpacking the information from the student agency survey and the Teaching and School Practices survey to ensure there is a shared understanding of what we will focus on, and so that teachers can contribute to that shared understanding, and help each other identify meaningful inquiry that they want to undertake. We will also offer workshops on inquiry, and discuss among the principals how best to support this so it becomes part of everyday practice, rather than an 'add on'.

Each school will choose several of the items from the Opportunities to Learn set and from student ratings of their own agency that seem most pertinent to the current strengths and interests of each school (supporting teacher agency as learners), to use in

whichever approach to inquiry the school is using or wants to use that will support them to identify likely teaching practices to improve learner agency and critical thinking, trial them, and evaluate their impact: what changes are evident for students?

All schools will use the student agency survey early in Term 4, to feed into our inquiries formation, and provide baseline data for us to measure our progress in lifting our students' learner agency capabilities.

## **2019 and 2020**

We will start our inquiry programme, as outlined under each Achievement Challenge. Each school will share their inquiries and learning towards the end of each term, seeking other CoL members' feedback as critical friends. In this way we can learn from each other as we go, and identify common practices that show effectiveness, and common issues that we can work through together.

We will monitor and report on our progress using the Learner Agency survey, Teaching and School Practices survey, and the Critical Inquiry progressions that we develop, along with narratives of change, showing improvements in student work.

Our annual report will include an account of what we tried, what improved learner agency and critical thinking and literacy, and why, and just as importantly, what we have learnt from what did not work.

# **Waipaparoa Community of Learning Memorandum of Agreement**

**Redacted**



## Appendix A



### Surveying student agency

#### Items

Below are three versions of a survey of student agency, for different year levels.

The items below are focused on student agency as **wanting to learn – seeing oneself as a learner and valuing it, take responsibility for one’s learning, and keep building on learning**

The items are in the same order in all 3 versions for ease of comparison, but the order would change for the years 4-8 and 9-13 versions.

#### Years 0-3 version

**Scale: visual – i.e. emoticons - for example:**



1. I enjoy learning
2. I want to tell other people about what I am learning
3. I like sharing my ideas and questions with teachers
4. I use what teachers say about my work to improve it
5. I learn from what doesn't work

## Years 4-8 version

**Scale: very often/often/sometimes/ hardly ever**

1. I enjoy learning
2. I want to tell other people about what I am learning
3. I like sharing my ideas and questions with teachers
4. I use what teachers say about my work to improve it
5. I learn from what doesn't work
6. I know how to get better in my learning
7. I like planning the next steps in my learning
8. I like to do my best work
9. I check my work before I finish it to make sure it is my best
10. When the teacher is busy I still get on with my work
11. I like to try to do things in my learning that are new to me
12. I work with classmates to help each other do our best work
13. I like asking questions so I can find out more
14. I meet the learning goals I set myself

## Years 9-13 version

**Scale: very often/ often/ sometimes/ hardly ever**

1. I enjoy learning
2. I want to tell other people about what I am learning
3. I like sharing my ideas and questions with teachers
4. I use what teachers say about my work to improve it
5. I learn from what doesn't work
6. I know how to get better in my learning
7. I like planning the next steps in my learning
8. I like to do my best work
9. I check my work before I finish it to make sure it is my best
10. When the teacher is busy I still get on with my work
11. I like to try to do things in my learning that are new to me
12. I work with classmates to help each other do our best work
13. I like asking questions so I can find out more
14. I meet the learning goals I set myself
15. I like to think about how I've learnt something new
16. I try to do all my work even when it's hard
17. I have surprised myself with what I can achieve
18. I enjoy working on real life projects
19. I like working out solutions to challenging issues or problems

## Rationale for these items

Student agency can be defined in different ways because it is a multifaceted construct. The three surveys above focus on how students think about themselves as learners and what they do in the specific context of classroom learning at school. Partly this is about how they see themselves and partly it is about how they make sense of the opportunities that are being offered to them. The following three broad categories have been designed to illuminate the intent of each specific item. Notice that an item might be classified in more than one of the categories – in that case it has been allocated to the main category focus.

The categories are:

### **Identity as learner – seeing learning as relevant and being comfortable as a learner** **How students respond to feedback and scaffold their learning**

#### **How invested students are in their learning success**

<b>Identity as learner – seeing learning as relevant and being comfortable as a learner</b>	
<b>Item</b>	<b>Brief explanation</b>
1.I enjoy learning	Enjoyment stands as a proxy here for all the positive emotions that can be triggered when students feel in control of their learning and that it is worthwhile for them
3. I like sharing my ideas and questions with teachers	Students are comfortable expressing themselves and asking questions
11.I like to try to do things in my learning that are new to me	Is the student secure enough in their learning identity that they are willing to take risks and voluntarily try new things – or to ask curious questions and pursue answers to these?
13.I like asking questions so I can find out more	
15.I like to think about how I've learnt something new	Students have experience of, and value, metacognitive reflection
16.I try to do all my work even when it's hard	This about the student's sense of being a learner who is willing to try hard and overcome obstacles

## How students respond to feedback and scaffold their learning

Item	Brief explanation
4. I use what teachers say about my work to improve it / I use the feedback I get on my work to improve it	Is feedback received in the spirit in which it was intended? If a student does not like making mistakes defensiveness might get in the way of hearing the possibilities for improvement.
5. I learn from what doesn't work	
6. I know how to get better in my learning	Most teachers work hard to provide learning goals and next steps. Does the student see their learning as something they can improve, and will enjoy improving, once they know how and why they need to do so?
7. I like planning the next steps in my learning	
10. When the teacher is busy I still get on with my work	This is an indication of self-reliance and of understanding what is required, but also indicates whether a student experiences their learning as purposeful and worthwhile (a minor focus on category 1 and 3)
12. I work with classmates to help each other do our best work	Do students understand peer-peer interactions as opportunities to strengthen their learning?
14. I meet the learning goals I set myself	Does the student gain a sense of satisfaction from setting and working towards personal learning goals?

<b>How invested students are in their learning success</b>	
<b>Item</b>	<b>Brief explanation</b>
2. I want to tell other people about what I am learning	This item has proved to be a powerful indicator of learning in past surveys. Volunteering ideas and experiences is more likely to happen when these have been personally memorable, enjoyable, intriguing etc.
8. I like to do my best work	Is the student prepared to put in the effort and do they have high expectations of themselves? These two items provide indications of whether students see the learning as worthwhile – both of effort and carefulness
9. I check my work before I finish it to make sure it is my best	
17. I have surprised myself with what I can achieve	This sense of exceeding their own expectations is often very motivating for students. In previous surveys it has been associated with a strong lift in achievement for some under-achieving students
18. I enjoy working on real life projects	These items have been used in past surveys and are associated with a strong sense of purposefulness in learning. It is more difficult for students to remain “untouched” by authentic learning than by more routine work.
19. I like working out solutions to challenging issues or problems	

Students would also be asked about their gender and ethnicity

Survey results redacted

## Appendix B



### The scope of critical inquiry: Notes to inform the COL conversation

Rosemary Hipkins, NZCER  
July 2017

Critical inquiry is an important type of capability for all students to develop. When we think about inquiry generically, lots of different aspects can be identified. When it is considered from the perspective of different discipline areas (science inquiry, social inquiry, literary inquiry, statistical inquiry, historical inquiry etc. ) important differences can also be found. There is much for teachers to debate and share across different strengths and areas of expertise.

Critical inquiry demands both critical and creative thinking. It includes activities such as gathering and interpreting data; using evidence to support ideas; and critiquing evidence. Critical inquiry helps build students' awareness of how new knowledge claims are made and justified. Different discipline areas have their own specific inquiry practices so it is important that students experience critical inquiry in a range of learning areas.

The research literature suggests that critiquing evidence is the hardest aspect of critical inquiry to develop. With practice and support, students learn need to keep an open mind as they set aside their own ideas to consider other possible explanations. Doing so requires both critical thinking and perspective-taking, which takes self-discipline and self-awareness (both aspects of managing self). In learning areas like health/PE and social studies critique could involve students in identifying their own assumptions and values, and then comparing them with those of others.

Perhaps the most common form of classroom-based inquiry is informational. Rather than directly learning about how knowledge is created in a discipline area, students use aspects of their inquiry capabilities to learn to be more discerning about knowledge sources. They gain practice in such challenges such as dealing with conflicting evidence (which is about both interpretation and critique). In this way the inquiry capabilities can also build towards "information literacy".

## Making progress in aspects of critical inquiry

The table on the next page synthesises ideas from four different sources (see box below) to create four broad sets of indicators of progress. There are two important caveats to this work:

- Each band on the table has a coarse grain size. These are indications that *illustrate* what aspects of capability might look like. They are not detailed progressions, but they could be used as a framework when building specific progressions from evidence of what students can actually do.
- The demands of a task will influence students' ability to demonstrate their capabilities. This table is really just one face of the coin. It is also important to gather information about the learning context and/or assessment task(s) used to generate achievement data.

### Sources used for this synthesis

Recent international research on making progress in argumentation.<sup>3</sup>

Recent national research on making progress in developing science capabilities.<sup>4</sup>

'Progress maps' from resource materials that support the national curriculum in Northern Ireland (which is not dissimilar to NZC).<sup>5</sup>

A NEMP probe study that included a literature review of how children's investigative skills in science develop.<sup>6</sup>

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<sup>3</sup> <http://scientificargumentation.stanford.edu/project/>

<sup>4</sup> [http://www.nzcer.org.nz/research/publications/capabilities-living-and-lifelong-learning-whats-science-got-to-do-](http://www.nzcer.org.nz/research/publications/capabilities-living-and-lifelong-learning-whats-science-got-to-do-it)

[it](http://www.nicurriculum.org.uk/curriculum_microsite/TSPC/what_are_tspc/progress_maps/index.asp)  
<sup>5</sup> [http://www.nicurriculum.org.uk/curriculum\\_microsite/TSPC/what\\_are\\_tspc/progress\\_maps/index.asp](http://www.nicurriculum.org.uk/curriculum_microsite/TSPC/what_are_tspc/progress_maps/index.asp)

<sup>6</sup> <http://www.nzcer.org.nz/research/publications/using-nemp-inform-teaching-science-skills>

## Broad indicators of progress in building critical inquiry capabilities

Indicative NZC level	Some indicative critical inquiry behaviours
Level 1 (Year 1-2)	<p><b>“Look and know”</b></p> <p>Students are just beginning to realise that what they think is different from why they think it. They can give their opinions and reasons</p> <p>They can describe what they observe (parts/whole; same/different/ groups)</p> <p>They make simple predictions, ask different types of questions and actively search for answers</p>
Level 2 Year 3-4	<p><b>“Thinking and explaining”</b></p> <p>Students look for evidence to test simple predictions. They can devise and explain simple inquiry methods and marshal evidence to support a case.</p> <p>They can sequence, order and rank on different dimensions, identify similarities and differences and make simple comparisons</p> <p>They can suggest more than one cause for an event and/or possible solutions to problems</p> <p>They can shape their opinions, and give their reasons for choices and actions.</p>
Level 3/4 Year 5-7	<p><b>“Knowledge testing”</b></p> <p>Students can use different types of questions systematically and with purpose. They identify and order patterns and relationships in a range of ways.</p> <p>They recognise that more than one explanation could be plausible, which means that alternatives have to be tested against the available evidence.</p> <p>They are willing to try alternative problem-solving solutions and approaches</p> <p>They think more critically about their own ideas and understand there might be more than one point of view. They examine options and weigh up pros and cons</p> <p>Discriminate between fact and opinion and question the reliability of evidence.</p>
Level 5 Year 8-10	<p><b>“Open-minded reasoning”</b></p> <p>One key development is that students now recognise and address <i>disconfirming</i> evidence. They consider and eliminate alternative explanations more systematically, and they are beginning to identify bias and errors in arguments.</p> <p>They engage with a range of problem-solving methods and evaluate solutions. They are beginning to understand that interactions between variables can make deciding and/or explaining more complex.</p> <p>They examine pros and cons of a decision, predict likely consequences and evaluate outcomes from a range of perspectives</p>

## **Aspects of critical inquiry related to *gathering and interpreting data***

### **Seeking information/asking questions**

Students might be using their knowledge and skills to:

- shape critical questions pertinent to an issue or puzzle
- find information and justify the selection of the source
- identify information that is relevant to the question or argument (and recognise instances when information is deliberately distracting or biased)
- compare similarities and differences in ideas
- understand information and convey that understanding to others in their own words
- look beyond the face value of a situation or argument to ask critical questions about the stated argument or position being taken
- ask questions to check the accuracy of claims.

### **Making and justifying inferences**

Knowledge and skills from the various learning areas are integral to making and justifying inferences. Students show they can make and justify inferences when they:

- distinguish between an observation and an inference (what they observe and what they think these observations mean)
- combine previous experience and new observations to explain inferences
- connect different representations to arrive at the key idea being conveyed
- describe how existing ideas influence new observations and inferences
- outline how inferences can be tested via ongoing inquiries.

## **Aspects of critical inquiry related to *using evidence to support ideas***

### **Evidence-based reasoning**

Learning to justify arguments with recourse to evidence has now become a common focus for learning in a range of learning areas. Critical thinking frameworks that emphasise disciplinary processes for knowledge building, or those that address 'citizenship' skills (such as those needed for thinking through controversial issues for example) tended to emphasise the aspects summarised here:

- describe the evidence that supports a case
- look for counter-evidence with an open mind
- identify when evidence is missing, incomplete, or inconclusive
- distinguish between evidence and conclusions
- weigh conflicting evidence to justify a conclusion
- change views when evidence points to the need to do so (again being open-minded).

### **Being logical**

Working with evidence demands logical reasoning, which was variously described as encompassing being able to:

- break an argument into parts
- draw logical conclusions from those parts
- recognise fallacious reasoning (the argument is not logically developed, the person putting the argument has jumped to a conclusion based on too small a sample, etc.)
- identify 'gaps' where part of an argument has been left out
- avoid tautologies (circular arguments)
- recognise logical inconsistencies (e.g. when reasoning points in different directions)

## **Aspects of critical inquiry related to *critique of evidence***

In addition to the need for critique implied in some of the above aspects, there is a distinct set of aspects with metacognitive characteristics (i.e. they demand critical thinking about thinking).

### **Identifying assumptions**

Students who can name and explain assumptions might show they are able to do one or more of the following:

- detect vagueness or ambiguity in an argument
- recognise instances when bias or personal prejudice (own or others) influence thinking
- be aware of the thinking they are doing (including their own assumptions)
- evaluate strengths and shortcomings of their own thinking
- clarify the values that underpin different positions.

## Appendix C

# Working with the Student Agency survey results

**These notes support conversations about the meaning of the survey results. The ideas below are things to watch out for in your own thinking, and in the thinking of your colleagues, as you decide what the survey results might mean for practice in your school.**

Student agency can be defined in different ways because it is a multifaceted construct. The survey focuses on how students think about themselves as learners and what they do in the specific context of classroom learning at school. Partly this is about how they see themselves and partly it is about how they make sense of the opportunities that are being offered to them. The way you define agency will affect the meaning you take from the results.

### Agency is of the moment

**Do you sometimes think about agency as if it was a personality trait or 'possession'?**

Agency is not something any of us has for once and for all. Agency is something that we perform, in a specific context, at a specific time. If the survey uncovers areas where students do not seem to think they have agency, or where they seem to be unwilling to use the agency that you think is available to them, it could be worth exploring why they are thinking and acting as if they did not have the choices that you perceive. Helping them to recognise opportunities to take agency in their learning is an important metacognitive dimension of learning-to-learn.

### Agency is demonstrated in context

**Do you sometimes notice students taking agency in other contexts but not so much in their own learning?**

All of us are more agentic in some contexts than in others. The survey items have been designed with a focus on demonstrating learning agency in the classroom but of course there will be many other places—both in and out of school—where students will have opportunities to be agentic. When you do notice differences in students' demonstrations of agency in different contexts, support them to clarify the differences and to

draw strategies from those contexts that they could transfer to taking agency in classroom learning contexts. Again, this will help them build important metacognitive dimensions of learning-to-learn.

### Agency has social dimensions

**Is the learning environment in the classroom a safe place for students to take agency?**

The classroom environment can support or hinder demonstrations of agency. Some students might feel it is safer to keep their head down and not take risks in front of their peers. Some might not trust that you really do mean them to choose or act for themselves, instead trying to second-guess what you "really want". Different students will experience and interpret the same context in different ways, so you might need to do some detective work to find out what differences in responses really mean. This idea also implies that it will be important to audit your own pedagogical practices to ensure it really is safe for every student to take agency in their learning, and that you are providing enough explicit supports for them to know how to do so. Aspects of the key competency of relating to others may be strengthened as students think about how their actions support or hinder the learning of others.