

# Collaborative Kete: Building Digital Technologies Agency

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## Background

### What emerging challenges in your education practice?

Digital technologies education currently rests in a unique position within the Aotearoa New Zealand Curriculum. It exists as a relatively unexplored area of study in primary and secondary schools: diversity of available tools and contexts; lack of standardisation in learning outcomes across schools leading to equitable access to quality education; international lack of available resources suitable for traditional secondary school use (Bell, 2014).

Revisions to the New Zealand curriculum have emphasised the importance of digital technologies in supporting our tamariki to become confident, connected, actively-involved and lifelong learners (“The New Zealand Curriculum”, 2007). These revisions require students in all schools in Aotearoa from year one to year ten to meet digital technologies progress outcomes throughout their studies (Ministry of Education, 2018; “Digital Technologies and the national curriculum”). These progress outcomes are in the areas of computational thinking, and designing and developing digital outcomes. As Papatoetoe High School does not offer Digital Technologies as a compulsory subject at a junior level, in order to meet the new requirements set by the Ministry of Education, we will need to integrate digital technologies concepts into other subject areas.

The combination of revisions to the New Zealand curriculum in the area of digital technologies along with inequitable access to quality education in the area of digital technologies means that more support is necessary to better allow our communities to provide the best digital technologies education possible.

### What are you passionate about? What matters? Social Justice Implication

I am passionate about accessibility to equitable outcomes within and between communities, organisation and curriculum design, and inspiring young people to think critically about the world around them (Petersen, 2019).

I believe that students in New Zealand should have equitable access to quality digital technologies education. Based on my observations, the shortage of digital technologies expertise across schools in New Zealand has negatively impacted the quality of delivery and content delivery throughout the country. In addition to this, the heavy workload of teachers in

regards to planning, assessment, and suitable curriculum information means that the standard of content, delivery, and outcomes, especially in the area of information technology, differ between schools (Clear & Bidois, 2005). As a result of this, it is my understanding that schools will adjust to the changes to the New Zealand curriculum in the same way: differently. This means that students may have access to different content, and content of varying quality. As such, schools that have a wealth of knowledge around digital technologies concepts may have better access to high quality digital technologies education than those who do not. While learners across the country may have access to the necessary technological tools within their school, having access to the tool itself does not necessarily mean that access to education around using the tool effectively is equitably available (Cullen, 2001). All of our tamariki need to learn to navigate our rapidly changing digital landscape, and high quality digital technologies education is a key part of succeeding in that journey.

## What has been tried before? How have we learned from that?

Equity of access to computers has been a concern since the 1960s. As identified previously, this access does not only refer to physical access to devices, but to learning in this area as well, as technology is now seen as an increasingly vital component of both work and personal life (Jones & Bridges, 2016).

A research article by Gwen Solomon states that only 20 percent of teachers feel confident with their abilities to successfully implement educational technologies into their classroom practice, and additionally, that many lack the skills they need to do so. Some of this may be attributed to the lower spending of school resources on training and support in this area in lower-income schools, and research has shown that successful integration has been achieved in places where this funding has been made a priority (2002).

Jones and Bridges stress the importance of coaching in the use of digital technologies tools in order to best promote learning that is well-supported by these tools. They also recognise that professional development needs to focus on individualised implementation, and peer-led initiatives in order to better promote peer-driven equity, access, and standards (2016).

Open Educational Resources have provided a positive impact on learning around technology internationally. These OERs are defined as “educational materials created by individuals and groups that are then freely shared online for others to use” with the caveat, that they must also include some form of license (Jones & Bridges, 2016). As such, Massive Open Online Courses such as those provided by Udemy, or edX fall under this category, as do Khan Academy.

A number of papers have been written around challenging this “digital divide” and strategies that have been employed to address it, but the focus of these papers is often in relation to physical access to devices, and only sometimes knowledge around using them. While this is a very real problem, there is also very little in the way of addressing access to knowledge around digital technologies concepts.

It is with this project, that I will test my assumption that the same principles applied to increasing confidence around successfully integrating digital tools in classroom practice, will have a similar effect when applied to integrating digital technologies concepts in classroom practice.

## Why is it important in the context of your practice?

Broadening my contexts and ensuring that my lessons are as responsive to my learner's needs and passions as possible is a priority of mine. Digital technologies is so broad that it's applicable to almost any context, and in order to improve my practice, I should take advantage of the opportunities that this brings.

It's also important that I, as a practitioner, widen my own understanding of digital technologies in the context of other curriculum areas. This will allow me to reach out and draw from the knowledge that my learners may already be familiar with, and adapt my lessons to build connections between ideas.

My focus, however, is on improving digital-technologies concept understanding for other teachers in the context of their subject area. It is important for teachers of all subject areas at Papatoetoe High School to have an understanding of the new digital progress outcomes as they will be required to deliver them at a year nine and ten level. Improvement of teaching practice in this area is essential to ensure that our students receive equitable access to quality digital technologies education as students at any other school in Aotearoa.

## Project Idea

### How might you address what is described above?

The challenges above stem from the concern that teachers have varying levels of knowledge around digital technologies concepts, and that implementing these ideas in the classroom maynot be done to the same high standard across schools throughout the country. I believe that by supporting teachers in my school to develop their own skills and agency in the area of digital technologies concepts, they will be capable of delivering that content to a higher standard than they would if they hadn't had that support.

In order to address these challenges, I intend to collaborate with teachers who specialise in other learning areas (particularly those who teach the core subjects of English, Mathematics, Science, Social Studies, PE, Technology) to develop lessons in a context that they are familiar with, with a focus on computational thinking. These lessons would then be delivered to junior students and feedback would be provided to myself and the other teachers involved in the project. Ideally the lessons would be taught by the specialist teacher of each area, and I would observe, but this would depend on the interest of each teacher and the needs of the school. In cases where the teacher feels that they need more support, co-teaching would be an option. Feedback provided by the students would then inform the development of a second digital-technologies aligned lesson for each learning area. After this, another iteration of delivery and then feedback would take place. There would be two iterations in total.

# Context of Project

## You and your practice

What is your unique position / your in-depth knowledge of a complex situation?

I am privileged to be in a position where I already have some knowledge around computational thinking and its applications in different areas. Computational thinking and digital technologies can be used to enrich learning in all subject areas and help students to develop critical thinking and problem solving skills (Bell, 2014). Many teachers are already teaching some of these concepts in their classes without realising it. For example, in food technology, science, and physical education, students are learning about processes. Whether it be processes on how to cook a food or complete an experiment, or processes on how to play a game according to the rules, students are learning about *algorithms*. In social studies, students are learning about events and actions that led up to big outcomes. These steps can help us to *deconstruct* and *debug* a series of events to figure out what actions caused a significant change. These are just some of the ways that computational thinking concepts can help to build connections between different curriculum areas, and in-turn, support each other.

Papatoetoe High School is privileged to have its own ePedagogy team, as well as a growing bring-your-own-device programme, and fairly large digital technologies teaching team. The ePedagogy team is made up of four teachers, including myself, and is supported by the senior leadership team and connected to external agencies, like Microsoft, that support teaching practice in a digital world. As all teachers in the school take part in compulsory ePedagogy professional learning development sessions already, we are in a great position for a project like this to achieve great success within the school. Support from senior leadership in the areas of ePedagogy and encouraging our students to become effective digital citizens allows us to more quickly and effectively enact changes that may be challenging in other schools. Through our commitment to digital programmes demonstrated by our bring-your-own-device programme and well-established digital technologies department, the school is well-placed to lead an initiative like the project I propose.

As a practitioner -can you enact change?

I am able to enact change through the pedagogical practices that I embed in my lessons, particularly from gaining insight into contextualisation from other practitioners within (and outside of) the school. Through the knowledge I gain by collaboration, I will be able to critically reflect on my own practice and adapt it to better fit the needs and interests of my learners.

What do you need to learn? To develop professionally? What are your gaps?

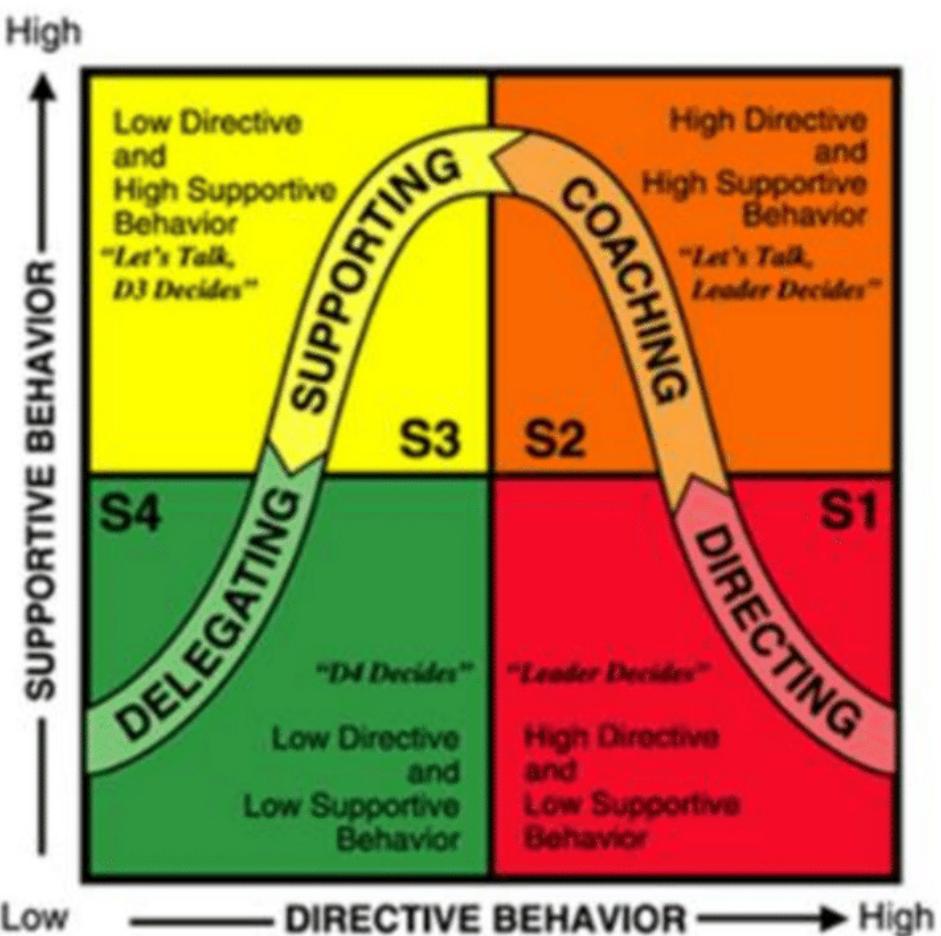
A significant gap in my own practice is my own lack of knowledge around other learning areas. I have very little insight into what happens in classes other than my own on a day-to-day basis, and additionally, I have no idea about what themes, skills, and concepts

are covered in other learning areas. In this way, it would not be appropriate for me to develop any cross-curricular lessons using only my own knowledge as the teachers and students who are part of that journey will have a far better understanding of learner needs in those areas than I have. I will need to ensure that collaboration takes place between myself and others in order to successfully implement this.

Another area that I will need to professionally develop in to make this project a success includes my own leadership skills. I have some experience in leadership at this point in time through Guides Aotearoa, Peer-Assisted Study Sessions, and Education already, but these experiences may not be totally applicable or relevant to this new undertaking. I also recognise that I have relatively little leadership experience when compared to some others within the school and this means that I may not be the person in the collective who is most suited to taking a leadership role (in terms of prior experience). In order to reduce the impact of this challenge, it is important that I continue my studies around leadership theories and strategies, and continue to implement them whenever I have opportunity to do so.

My perception of myself as a leader will also be a challenge that I need to work on in order to develop as a professional. In the past I have been hesitant about fully participating when working with those who I perceive to be hierarchically higher than myself. This includes working with members of the Senior Leadership Team, Heads of Learning Areas, and even teachers who have significantly more experience than myself. I believe that this challenge comes from something within myself that makes it difficult for me to see my own potential and worth. In my MTEL 8006 studies, I identified that an idea that makes it significantly easier for me to work with others who I perceive to be higher than me is to identify a higher purpose for my work and ideas. This is an example of me acting as a servant leader. In this way, I am able to act as an advocate for the cause that I am passionate about instead of acting as myself. I find it much easier to engage without fear of judgement when I feel that I am representing a cause rather than focusing on self-serving goals (Petersen, 2018). In order to combat the personal hesitations that I have working with others, I will need to ensure that I have a clear understanding of my purpose, as well as challenge myself to be courageous in my actions.

Another challenge for myself as a leader is that I tend to take on as much responsibility as possible for projects as I want to ensure that work is completed to my own standards. This means that I sometimes have difficulty relinquishing complete control over a project to others, and as a result of this, outcomes are often heavily biased toward my own input over the input of others. In the context of this project, it is incredibly important that I learn to relinquish some control in order to ensure that my own point-of-view does not become overbearing in the entirety of the project. I will be working with professionals who have vastly more experience in teaching as well as experience in their learning area than myself, and it is essential that this knowledge is utilised throughout the project in order to gain the best possible results. Not only will this diversity of experience and thought be useful in creating effective content, but diversity of culture, preferred learning-style, and priorities in the classroom will help us to develop lessons that are equitably accessible to all students. In order to ensure that I achieve this, I intend to utilise situational leadership to collaborate with and lead other teachers who choose to be involved with the project.



Above: Situational Leadership Model (Zigarmi, Blanchard & Nelson 1993)

In this scenario, I will use “competence” to act as a measure of confidence in applying digital technologies concepts into lessons. Commitment will remain to be how much input that teachers would like to commit to developing lessons that apply digital technologies concepts. I intend to follow the model so that my directive and supportive behaviour depends on the situation of each individual teacher.

Through situational leadership, I will be working with participating teachers to develop their agency. This development will take place through the process of co-construction, practice and reflection throughout the project.

How will you demonstrate leadership and collaboration through the project?

I will demonstrate collaboration through my development of the outcome utilising the talents and passions of other teachers. The project is intended to be implemented with somewhat of a focus on situational leadership, in the sense that the role that I take will differ between group members based on their needs. In this way, the project will be built best utilising the talents of those involved. The lessons are intended to be co-constructed between myself, the teacher, and other participants and this directly supports collaboration.

I intend to work with diffusion of innovation theory to help guide my research process. Roger (1962) tells us that adoption of new ideas happens over time in social systems. Different groups of adopters join innovations at different times throughout the process. At first, only a very small number of “innovators” take it upon themselves to develop an idea. In the context of this project, I have taken role of innovator as the creator, and researcher of the project. The next (slightly larger) group are the “early adopters”. They tend to be those who are very open to change, and usually exist more locally to the area of change than innovators. Early adopters also tend to be “opinion leaders” which means that they have influence over a number of other individuals. These are my teacher participants. They fit the category of early adopters rather than innovators as they are the first within the school to attempt making changes to their practice as a result of the project. It is intended that they will also become leaders in their own locality (learning area) in regards to the learnings of the project once the project has been completed (Frank, et al, n.d.).

It is essential that I reach out to and excite my early adopters about this project in order to persuade them to participate. Rogers' (1962) model also suggests that adopters will go through a process of gaining knowledge, persuasion, decision, implementation, and confirmation (Hahn, 2014). In order to increase my likelihood of success with my early adopters, I will need to ensure that every stage of this model is addressed in some way.

In terms of providing early adopters with knowledge around the project, I will provide an information sheet along with my availability to answer any questions in regards to the project. I intend to persuade early adopters through discussion of the benefits of the project to their teaching practice. In this stage, I intend to utilise my own energy and enthusiasm to encourage interest around the project. I will be unable to influence the steps of decision and implementation, but I intend to engage with confirmation by encouraging participants to share their learnings and highlights from engaging with the project at the beginning of their second hui.

Who will you work with? (collaboration / what is your relationship to them)

I intend to work with a number of interested core-subject teachers from within Papatoetoe High School to develop the lessons as part of the project. The number of teachers that I work with will be dependent on the amount of interest within the school community. I wish to give

as many teachers as possible the opportunity to benefit from the project. By inviting teachers openly, it is intended that I will recruit a diverse range of teachers from different cultures, values, and preferred learning-styles. In this way, we will be able to draw from the experiences of a wide range of practitioners and through this, improve the accessibility of lessons to meet the needs of our learners. Ideally, the teachers that I work with will be individuals who I have little experience working with in the past, in order to maximise my own learnings around building effective relationships in a leadership setting. I think it would be an interesting challenge to work with those who I already have worked with in some capacity, however, because it will challenge me to think differently about how I approach them and their needs.

I do have a number of staff within the school from a variety of learning areas that I have a relationship with already. Some of their learning areas include English, social studies, and science. I personally do not have a significant amount of experience with professional relationships, and as such, I approach them similarly to how I approach other kinds of relationships. I believe that coming from a small, close family without many professional ties has influenced my perception of relationships. Relationships that I have with others tend to be overly-familiar, and while this is appropriate in a social setting, I have discovered that this is not always appropriate in a professional setting. Working with teachers that I already have a relationship with could be useful in helping me to develop my understanding of professional relationships. Working with these teachers could also be beneficial as I am already somewhat familiar with their personalities and how they interact in a group. For some of them, I have the added benefit of having already observed them in the classroom so I have an idea of their approaches in a classroom environment. It would also be an opportunity for me to gain a greater understanding of their needs and develop my skills at meeting these without being in an unpredictable environment, which would exist if I did not already know those who I am working with. There could be some challenges, however, as changes in the dynamic of these existing relationships could create permanent changes in the way that these relationships function.

After considering my options, ideally, I would like to work with a mixture of teachers I both have an existing relationship with, and those I don't.

I will also need to work with senior leadership to ensure the success of my project. Collaborating with Papatoetoe High School's senior leadership team will lend credibility to my project within the school. I will be working mostly with Ele Griffiths, my head of learning area who has taken responsibility for being an acting member of senior leadership for term one and term two of this year. She has great interest in the project, and as such, has agreed to support me. She will be heavily involved in the planning process and will attend both hui for the project teachers, meet with me on a regular basis to discuss updates and progress, and provide feedback to and from the senior leadership team in regards to the project. Her support will be greatly appreciated as it will allow me to keep the senior leadership team informed throughout the project without having to attend their meetings where sensitive topics may be discussed. Working closely with the senior leadership will also allow me to more easily discuss any significant in-school proceedings with them, such as allocating time for involved teachers to attend hui.

Students will act as collaborators in the project in the sense that they will provide valuable feedback and student voice around lessons. As the focus of my project is reducing educational inequality in regards to access to quality digital technologies focussed education, student voice will be essential in ensuring that the learning that teachers provide is accessible to all students involved. This means that student feedback will take a significant role in shaping the lessons that teachers produce as part of the project.

Describe your bias and any conflicts of interest

As a teacher of digital technologies I feel that I will be biased towards making the content of the lessons fit computational thinking rather than organically growing computational thinking into existing knowledge from my specialist teachers. This would be a result of my lack of knowledge around other subject areas. In order to combat this, I will need the specialist teacher to take the lead in the context of the lesson, or give a range of potential options, rather than me providing them with a context that may fit their subject area that already works well with computational thinking. This collaboration is essential to reducing the effect of my own bias within lessons.

As I am a teacher at Papatoetoe High School I am likely to know and teach a number of the students that will be involved in taking part in the lessons developed through the project. Teachers who develop and deliver the lessons will also know all of their own students who participate in lessons developed as part of the project. These relationships have inherent power between them. Students rely on teachers to give them fair grades and comments, as well as awards for different things. I, and other teachers, rely on honest feedback from the students participating in lessons generated by the project in order to ensure valid results. In order to mitigate the risks related to power relationships, it is absolutely essential that participation, feedback or engagement (or lack thereof) with the project will not have any effect on the relationship, grades, comments, or awards that may be provided by the teacher to the student. This includes anonymising any feedback that is given. This will need to be clearly stated throughout the project in order to help mitigate the risks of these relationships affecting students, teachers, or the project.

I am currently a beginning teacher at Papatoetoe High School, and I intend to apply for leadership positions at the school in the future. In order to accomplish this, I will need to have positive professional relationships with those around me, and ensure that I demonstrate my leadership abilities in a positive way. As a result of this, I may approach the project or collaborate with others in a way that makes me appear favourable toward the school. For example, if I was not completely honest about my thoughts or ideas to others within the project, or publicly agreed with something that I did not necessarily believe was the best course of action, it could be considered both dishonest and me acting in a way that serves my future ambitions rather than serving the needs of the students and project. I intend to mitigate this risk by keeping a journal that tracks both decisions made throughout the project and consistently critically reflecting on my own ideas and opinions that lead to my stance on those opinions.

## What assumptions might you be making?

Initially, I might assume that the teachers who I will be working with have no prior knowledge of what computational thinking is, its applications, or ways that it can be developed. This is a good starting point in order to make sure that the learning that takes place is equitably accessible to the diverse group of teachers that will be involved. This assumption may be incorrect in regards to a number of teachers, or even all of the teachers involved, but the content will be able to be modified to meet the needs of the teachers who are involved. In order to challenge this assumption, I will need to first gain some information about the prior knowledge of the teachers involved before any learning begins. I intend to assess this by allowing teachers to self-evaluate their own knowledge. I have chosen to ask teachers to self-evaluate, rather than providing an initial assessment, because I want to ensure that the process is mana-enhancing and focuses on places where we can learn rather than being labelled “good at something” or “bad at something”.

In the context of the lessons, I will ask teachers to ensure that they assume that all students within the class do not know anything about digital technologies concepts, in order to maximise accessibility and neutralise any advantages that students may have from prior knowledge. The application of this will be up to the individual teacher and lesson, but it will be essential for me to make clear the importance of equitable accessibility in lessons developed as part of this project.

## Key stakeholders and their perspectives

### Who are stakeholders?

My key stakeholders include other teachers, learners, Papatoetoe High School, the Papatoetoe community, other schools in the New Zealand, and parents.

My key stakeholders include students because they will be the learners engaging directly with the learning; teachers involved with the project because they will be developing the learning activities around the learning that will take place for the students, teachers at Papatoetoe High School who will not be participating in the project as they will be expected to implement the learnings from the project in their own classrooms by 2020; and senior leadership at Papatoetoe High School as they will be the ones who decide how the findings of the project impact the school on the whole.

### How do you identify who to involve?

Teachers will be involved by volunteering to take part in the project after being given some information about it. The teachers who choose to be involved will most likely be enthusiastic about implementing the project within their subject areas and making positive contributions to digital technologies across learning areas.

Learners will be involved by being part of the class that each teacher decides to develop a lesson for. These will be full classes of students at a year nine or year ten level.

## Students

How do they communicate? How will they inform your project? (also see evidence section below)

I intend to gain insight from students mostly in the form of feedback from surveys conducted after each student-facing iteration of the project. Their ideas and perspectives are the most important of the entire project as they form the main audience of the initiative. This feedback is essential in order to monitor how the project is contributing to the goal of improving accessibility to quality digital technologies education in New Zealand.

How will they be affected?

They will be the main audience of the initiative. Ideally they will come out of the initiative with a greater understanding of computational thinking and its impacts on our everyday lives.

How can they participate?

They can participate by taking part in the initiative as learners and providing feedback on lessons developed as part of the project after they have taken part in them.

## Teachers Participating in Project

How do they communicate? How will they inform your project? (also see evidence section below)

Teachers will inform my project by providing the base knowledge of each learning area context. They will communicate through working part of the team to inform the process and activities developed as part of the project.

How will they be affected?

They will gain key knowledge about integrating computational thinking into their own programmes (something that will be compulsory for students in New Zealand between year one and ten in 2020). They will gain skills such as teamwork, collaboration, leadership, and team teaching.

How can they participate?

They will participate by volunteering to share their learning area knowledge to develop a small number of activities that align with computational thinking. They can participate by providing feedback on proposed activities in order to improve them. They can participate by encouraging their students to provide feedback on lessons that they create.

## Papatoetoe High School - Teachers Not Participating in Project

How do they communicate? How will they inform your project? (also see evidence section below)

Communication with those outside of the project but within the school will take place during e-Pedagogy professional learning development sessions and learning area meetings. These teachers will inform the project through feedback via their head of learning area to me.

How will they be affected?

They will be affected by the implementation of computational thinking within all learning areas becoming compulsory within schools by 2020. Through this project, they will have access to a sample of what a lesson around digital technologies concepts within their subject area could look like. They will also have access to an “expert” within their own learning area who undertook the project and, because of this, should be able to assist in developing further activities and lessons.

How can they participate?

They can participate by engaging with their subject area expert, providing feedback about activities, and observing lessons that are developed as part of the project.

## Benefits, risks and mitigations

What benefits does your project have?

My project has the major benefit of providing teachers with an opportunity to use the digital technology curriculum to strengthen critical thinking through the use of computational problem-solving methods with computational thinking. Teachers will have the opportunity to build their skills around meeting digital technologies progress outcomes within their selected subject areas and using the digital technologies curriculum to bring real authentic problems to solve. Students who do not necessarily take part in the digital technologies optional classes at school will have the benefit of experiencing digital technologies concepts within other subject contexts. Those involved will gain teamwork and collaboration experience.

How will you ensure your stakeholders are included?

I will ensure stakeholders are included by being open to receiving feedback at any point during the process, as well as directly involving them at different points within the project. Students will be involved through trialling lessons developed through the project and providing feedback about their experience; teachers involved in the project will be included in the development and improvement of lessons; teachers at Papatoetoe High School not involved in the project will be included through the invitation of observations during trials, providing feedback about lessons, and engaging with project presentations; and the senior leadership team at Papatoetoe High School will be included in the project by being invited to hui, observing lessons, and feeding back suggestions that they may have.

What risks does your project have? Privacy? Conflicts of interest? Power relationships? How would you mitigate them? Who do you need to consult with? [Include relevant risk mitigation in your learning agreement]

Power relationships will come into play between myself and other involved teachers, as well as myself and other schools. In the case of myself and other teachers, I am likely to be working with teachers who are more experienced in teaching than me, and also those who may be involved in positions of power within the school. Conversely, it is likely that I will have a greater understanding of digital technologies (as I have completed tertiary study around it) than the teachers whom I will work with. This means that I will have to be very aware of any power relationships that exist in these situations.

Another potential risk of this project is the impact of my own world view on the content of the project and my interactions with my peers. As I only recently completed high school, I have a view of what I think different subjects such as English and math look like in a high school context. Another world view I have is that of an experienced user of digital technologies. Based on my own observations, many teachers in the secondary education space are inexperienced in the digital technologies space and require significant support. It is essential that I understand that those who I will work with may have a very diverse range of experience in digital technologies, and I need to ensure that my personal biases do not lead me to make assumptions about those who I will be working with. In order to mitigate some of the risks around my own world view of what different subjects look like in a high school context, I intend to observe some classes outside of my curriculum area prior to the first hui. This will also help to mitigate some risks around power relationships as I will be in a position to learn from the pedagogical practice of the teachers I observe, just as they will learn from me in areas that I am experienced in. I need to recognise that my own view is not necessarily the view held by others and I need to keep my mind open to the ideas and views of others. I will need to consistently critically reflect on any actions taken and decisions made to ensure that they are undertaken with as little of my own bias as possible. I will also consult with a diverse group of educators and students participating in the project about intended changes before decisions are made. This way, changes will be the result of the opinions of a number of people instead of just myself.

There will be a conflict of interest on my part as I will be the researcher as well as the designer of the outcome. I will need to acknowledge that my bias in these roles may have an effect on the outcome of the project and the research design.

## Professional and legal considerations

I will need to manage informed and voluntary consent throughout my project. I will ensure that each participant is provided with an informed consent document outlining the project along with any roles or responsibilities for participants. Participants will grant their approval to participate in the project by signing a formal written consent form. Participants will be informed that they are able to immediately withdraw from the project at any time, for any reason, without any repercussions.

My project involves participants and stakeholders that are known to me. This means that I will need to mitigate risks associated with this, including risk of coercion. In order to minimise the risk of these relationships influencing my results I will ensure that all data gathered via survey is confidential in all reports and documentation. This will be done by allocating each participant a unique generic identification number so that progress tracking will be possible, but identification of individuals will not. As this project is practice-based research and it is fairly limited in its ethical risks, I do not believe that it is necessary for the raw data to be exclusively handled by a third party, provided that anonymity is still intact in any information that is made available. I will inform participants throughout the research process that any participation or data (or lack thereof) will not affect any relationship that we have in any way. Participants will be informed that there will be no incentives for participating in the project, and also that there will be no repercussions for refusing to take part in the project.

My project involves the participation of children under the age of sixteen where parental consent is not being sought. Children who participate in the project will participate as part of a regularly scheduled class. These learners will learn the same content as equivalent classes in that subject at their level, but one lesson per iteration of the project will be presented in a way that highlights the use of digital technologies concepts, according to the lesson plan of their participating teacher. As learners involved in the project will not be asked to participate in anything outside of their regular class routine, other than a short survey around the learning that took place, parental consent will not be actively sought. Instead, an information letter will go home to the whānau of students in the classes that will be involved via both eMail and hard copy. This information letter will outline the project and inform whānau that they are able to immediately withdraw their child from the project at any time, for any reason, without any repercussions by notifying me via eMail or other communication. All data that is gathered from children under the age of sixteen will be anonymised in any research documentation.

## Project aim

### What you hope to achieve by your project?

By completing my project, I aim to provide teachers in a wide variety of teaching areas with the opportunity to develop lesson plans that align with digital technologies curriculum outcomes with support. My hope is that this initiative will support teachers to build their agency in developing quality lessons that align with digital technologies concepts. Through this, I hope to reduce inequitable accessibility to quality digital technologies aligned education in New Zealand.

### What you hope to contribute to?

I hope to contribute to the bank of knowledge surrounding digital technologies in regards to the contexts of other learning areas.

My aim in this project is ... to map, to test, to develop, to design, to track, to generate, to build, to investigate, to have a better understanding, to explore...

My aim in this project is to build the agency of educators in a variety of subject areas in developing high-quality digital technologies concept-aligned lessons.

## Project Question

What do you not know that you need to know to achieve your aim  
Narrow, not broad-based. Can use sub questions or sequential questions

I need to know from teachers of other subject areas:

- What their understanding of digital technologies concepts in relation to their subject area is already
- What support they would want in developing lessons that align with digital technologies curriculum

I need to know from literature:

- What resources already exist that relate to computational thinking and digital outcomes in the following learning areas:
  - English
  - Mathematics
  - Science
  - Social Studies
  - Art/Music
  - Physical Education/Health
- Research question overall?
  - How does supporting teachers in learning areas other than digital technologies help to build their agency in developing high-quality lessons that are aligned with digital technologies curriculum?

## Methodology/Method

How are you going to achieve your objectives to answer your question?

The intended outcomes of this project are that teachers are given an opportunity to gain experience in implementing digital technologies concepts in their own contexts. As a result of this, teachers will have access to three separate lessons that they developed as part of the project. These will remain the property of individual teachers and will not be distributed as part of the project. Individual teachers will be able to distribute them to others if they so choose.

I intend to follow a process of iteration throughout the project. As seen in my “Expected Project Flow” appendix, the project will begin by meeting with heads of learning areas in junior curriculum. This meeting will give me the opportunity to share the project, and encourage early-adopters to ask key questions about the project. Volunteers will then be recruited. A hui would then take place with teacher participants where they will give consent to take part in the project, complete their first measurement of teacher confidence in the area of applying digital technologies concepts within their contexts, and share their knowledge. Participants would then co-construct their first lesson.

Participants will be expected to deliver their first lesson within two weeks of co-construction. These lessons would be observed, and finish with an opportunity for students to provide feedback on their learning. Analysis of this data would take place before the following hui.

Once three cycles of this have been completed in total, data will be analysed to determine the impact of the project on teacher agency in the area of digital technologies concepts in different contexts. A report would be written that explains the findings, and presentations to stakeholder will take place.

In work based-projects, the method needs to be iterative, you need to answer and revise your questions as you go. How is my project iterative? It is essential to continue to gather evidence including seeking internal and external feedback (academic and professional) How does my project gather feedback?

My project iterates over the lesson creation and implementation steps several times throughout the timeline. These iterations are guided by feedback from teachers involved in the project, teachers not involved in the project, and students involved in the project. It is intended that feedback from each of these groups is analysed at the end of each iteration and then that feedback is used to inform the development of the following iteration.

This feedback will be gathered through the use of surveys conducted with students and teachers. Additional opportunities for feedback will be provided for teachers involved in the project as well as teachers within the school who are not involved in the project through email or face-to-face meetings.

## Inquiry Framework

### MTEL Teacher Inquiry Framework V.1.0



Above: MTEL Teacher Inquiry Framework (The Mind Lab)

I intend to use the MTEL Teacher Inquiry Framework to guide the implementation of this project.

## Research Tools

What tools will you use?

My project relies on gathering data from two different sets of stakeholders: the students taking part in lessons developed as part of the project, and the teachers developing lessons as part of the project.

I intend to use surveys to monitor progress and receive feedback in regards to lessons developed through the project. I also intend to use these surveys with teachers involved in the project in order to gain feedback about how they are feeling in regards to their skills of developing digital technologies-aligned lesson plans as the project progresses. When surveying students about lessons developed as part of the project, I intend to measure the overall learning of lessons quantitatively, and highlights of the lessons as well as things that could be improved within the lessons qualitatively. Quantitative data about overall learning from the lessons will take place via diagnostic assessment and then formative assessment at the beginning and end (respectively) of lessons developed as part of the project.

When surveying teachers about their development throughout the project, I intend to measure confidence in teaching computational thinking concepts quantitatively, confidence in teaching design and development of digital outcomes quantitatively, as well as providing

teachers with the opportunity to elaborate on their answers for the previous questions (qualitative data). These surveys will take place via a short one-on-one interview between myself and the participant. This will allow me the opportunity to clarify any questions if necessary, and also to record any comments. I intend to enter the comments and thoughts of teachers directly into the survey.

Another method that will be utilised includes the use of observations to better understand the quality of lessons that take place as part of the project. For this, I intend to utilise Papatoetoe High School's "Pedagogy Reflection Tool", with the addition of one section to better evaluate teaching and learning that takes place in regards to digital technologies concepts, as this is the focus of this project. The original Papatoetoe High School Pedagogy Reflection Tool is available in the appendix.

#### How will you check their validity and reliability?

I intend to collect any feedback provided by students anonymously via google forms. Students whose whānau have chosen to opt them out of the project will not complete these forms. There will be a range of rating questions, as well as two open-ended questions around the pros and cons of each lesson. The number of questions will amount to six or fewer in order to maximise the number of responses by minimising the length of time needed to complete the survey. Students will be provided with a link at the end of each project-developed lesson which they will be given time to complete in-class. Students should be given the opportunity to have someone read them the questions as a form of accessibility to the surveys. Students will not be interviewed individually or through focus groups as further consent would be needed around this, and it would be too time-consuming of a process to allow for them.

The other data-gathering method that students will participate in will be measured by a short in-class task at the beginning and end of each project-developed lesson. These tasks will be used as short assessments with which to gauge any learning that may have taken place around digital technologies concepts that are focussed on within the lesson. These tasks will be different, and based around digital technologies concepts that will be addressed in the lesson. Students will be expected to complete these tasks individually, and within a set period of time (which will remain the same for both tasks set for that particular lesson). Students will identify themselves on these task sheets for the purposes of removing any data provided by students who may have been opted out of the data collection.

Teachers will be interviewed individually in a space of their choosing to maximise their comfort. Interviews will take place with myself, and the google form with questions and responses will be in full view of the participant at all times in order to minimise the risk of incorrect data input. The questions asked will remain consistent across all interviews to maximise continuity across the project, and to ensure that all data is comparable. Interviews will take place over the course of up to fifteen minutes, depending on each participant's response time. The questions asked in the interview and included in the questionnaire will be a range of rating questions, as well as a short answer question accompanying each with which to track any additional comments or explanations. The questionnaire will be ten questions or fewer. I have chosen to facilitate interviews instead of directly providing

teachers with a link to questionnaires for them to fill out in order to ensure that the data that is provided is of a sufficient length and standard for the purposes of the project, and also to allow for the clarification of questions. This means, however, that data may not be as unbiased as it would be, had there been an opportunity for confidential questionnaires. I will mitigate this through ensuring that all participants understand that participation is voluntary and any responses (or lack thereof) will not affect any relationships.

Observations will take place with myself and another participating teacher. This is to minimise the effect of my own bias and to provide other participants with an opportunity to observe similar concepts being taught in the context of a different subject area. These observations will align with the Papatoetoe High School Pedagogy Reflection Tool, with slight modifications made (as previously mentioned). These observations will be used to gain insight into the quality of lessons being produced.

## Data Collection and Analysis

How will you analyse this data?

For teachers, I intend to use the data regarding confidence in developing digital technologies-aligned lesson plans as the main indicator for success in the project. I will analyse this data by taking each confidence rating from the beginning of the project and monitor it throughout the project to see the changes that happen in this area. I will monitor the overall trend of the data.

Any qualitative data provided by teachers throughout interview sessions that could be used to contextualise any changes in their agency and confidence over time will be preserved and analysed for any overall trends or themes.

Data from teachers and students in the form of feedback about lessons or activities will be analysed to see if the feedback is useful, realistic, and implementable. This feedback will be evaluated on a case-by-case basis and ideas about potential improvements around lessons will be discussed between teachers in charge of these lessons.

Student assessment data gained as part of assessments at the beginning and end of each project-developed lesson will be anonymised by removing student names on any worksheets. These assessment tasks will then be marked and analysed based on the number of correct responses. This quantitative data will be measured to gauge any changes between achievement before and after each lesson to examine the potential effect of any learnings from each lesson.

Observation data will be quantitatively monitored for any changes in lesson quality over the course of the project. This will take place through the use of the pedagogy matrix that is utilised within the Papatoetoe High School Pedagogy Reflection Tool. Any significant changes in matrix ratings will be highlighted and asked about during interview sessions as one of the questions provided in the questionnaire.

What information will be gained from analysis of the data?

From teachers, I will gain information about the changes in their confidence with developing digital-technologies concept-aligned lesson plans. I will gain insights into changes in the quality of lessons developed. I will gain feedback about individual lessons from teachers and students. I will gain insight around any changes to student achievement as a result of lessons. This data will allow us to further improve lessons that are developed as part of the project.

How will this analysis help you draw conclusions (answer your project question)?

Monitoring changes in the confidence of teachers developing digital-technologies concept-aligned lessons will allow me to answer my question directly as my question is focused on how the project influences growth in this area. Any insight into these changes will be essential for further exploring how any changes have taken place.

Monitoring changes in lesson quality and student achievement will allow me to gain insight into the effectiveness of lessons, and as a result of this, actual quality of produced lessons.

Analysis of feedback around specific lessons will help me to draw conclusions around the student engagement and interest in particular lessons, and allow us to identify aspects of lessons that can be further improved.

## Project objectives/milestones

Objectives also act as project milestones (monitoring your processes and progress). In The MTEL inquiry framework, Project Objectives should be revisited and revised for relevance during the iterative process

Key dates calendar can be found by clicking [here](#).

Milestone	Date Due	Journal Link
Propose project to school leadership	Friday 5 April	<a href="https://www.evernote.com/shard/s338/sh/c432311e-a30b-41b4-9685-665f6c80d7a2/e66fdf860795b7f03d0d356aa9d7b622">https://www.evernote.com/shard/s338/sh/c432311e-a30b-41b4-9685-665f6c80d7a2/e66fdf860795b7f03d0d356aa9d7b622</a>
Meet with teachers in charge of junior curriculum to introduce the project and recruit participants	Friday 10 May	<a href="https://www.evernote.com/shard/s338/sh/92df7282-7983-4401-88b6-f811d5e86ef5/eaaf05d027dc9d36d1779d123bd3a0fb">https://www.evernote.com/shard/s338/sh/92df7282-7983-4401-88b6-f811d5e86ef5/eaaf05d027dc9d36d1779d123bd3a0fb</a>
Hui One and gain consent	Friday 24 May	<a href="https://www.evernote.com/shard/s338/sh/a240f583-647">https://www.evernote.com/shard/s338/sh/a240f583-647</a>

		<a href="https://www.evernote.com/shard/s338/sh/744cb-be58-cc95bddf7303/8fad778c1e1ad97b955fd1b9962a9b0b">7-44cb-be58-cc95bddf7303/ 8fad778c1e1ad97b955fd1b9 962a9b0b</a>
Pilot initial lessons with students	Friday 7 June	<a href="https://www.evernote.com/shard/s338/sh/05be0b3e-bae2-410e-899e-8c21df7a6915/4b2b1485a0f9890eefa33d716cdb5de2">https://www.evernote.com/shard/s338/sh/05be0b3e-bae2-410e-899e-8c21df7a6915/ 4b2b1485a0f9890eefa33d7 16cdb5de2</a>
Analyse feedback from students in regards to lessons	Thursday 13 June	(see hui Two)
Hui Two	Friday 14 June	<a href="https://www.evernote.com/shard/s338/sh/1559c98d-c6f4-4fc3-a5e6-f79fdfaf92f7/174d985c47063f7d349a72fd10f056bd">https://www.evernote.com/shard/s338/sh/1559c98d-c6f4-4fc3-a5e6-f79fdfaf92f7/174d985c47063f7d349a72fd10f 056bd</a>
Pilot new lessons with students	Friday 28 June	<a href="https://www.evernote.com/shard/s338/sh/28f77824-d66d-4c93-baf8-c21bde6d5fe8/4297aa81ddda5ca0dfcd023e81ddf004">https://www.evernote.com/shard/s338/sh/28f77824-d66d-4c93-baf8-c21bde6d5fe8/ 4297aa81ddda5ca0dfcd023 e81ddf004</a>
Analyse feedback from students in regards to lessons	Thursday 25 July	(see hui three)
Hui Three	Friday 26 July	<a href="https://www.evernote.com/shard/s338/sh/34d60364-0972-40ca-aeda-f131b7ac4703/bca3fad6ccdb74c546f5f7b23be37bff">https://www.evernote.com/shard/s338/sh/34d60364-0972-40ca-aeda-f131b7ac4703/ bca3fad6ccdb74c546f5f7b2 3be37bff</a>
Pilot new lessons with students	Friday 9 August	<a href="https://www.evernote.com/shard/s338/sh/7b627585-ed4a-492e-8443-81b83b0476b8/ae2a4d006fb55354a27d24b884eada0c">https://www.evernote.com/shard/s338/sh/7b627585-ed4a-492e-8443-81b83b0476b8 /ae2a4d006fb55354a27d24 b884eada0c</a>
Analyse feedback from students in regards to lessons	Thursday 15 August	<a href="https://www.evernote.com/shard/s338/sh/75e10fa8-2039-4817-bec1-51c7174d6fad/5da8491db584dc751ab44c14c833990b">https://www.evernote.com/shard/s338/sh/75e10fa8-2039-4817-bec1-51c7174d6fad/ 5da8491db584dc751ab44c1 4c833990b</a>

Measure teacher agency in producing digital-technologies-concepts aligned lessons	Friday 16 August	<a href="https://www.evernote.com/shard/s338/sh/75e10fa8-2039-4817-bec1-51c7174d6fad/5da8491db584dc751ab44c14c833990b">https://www.evernote.com/shard/s338/sh/75e10fa8-2039-4817-bec1-51c7174d6fad/5da8491db584dc751ab44c14c833990b</a>
Analyse teacher agency findings	Friday 23 August	<a href="https://www.evernote.com/shard/s338/sh/24461efb-3dc6-493b-bcb7-6ea81fe502f4/242e8491471e0633e08af164a3018ce3">https://www.evernote.com/shard/s338/sh/24461efb-3dc6-493b-bcb7-6ea81fe502f4/242e8491471e0633e08af164a3018ce3</a>
Produce a report outlining findings	Monday 23 September	<a href="https://www.evernote.com/shard/s338/sh/c1ed7654-a25c-4fa0-addf-e0816fb14543/b4b4c47a6307e04e2d5bc3e5e37e6884">https://www.evernote.com/shard/s338/sh/c1ed7654-a25c-4fa0-addf-e0816fb14543/b4b4c47a6307e04e2d5bc3e5e37e6884</a>
Present findings to stakeholders	Friday 1 November	<a href="https://www.evernote.com/shard/s338/sh/e8917f30-5260-4a51-a84d-d40c67e8bf65/7ccd9f048fd84cd6d7020515f2f72896">https://www.evernote.com/shard/s338/sh/e8917f30-5260-4a51-a84d-d40c67e8bf65/7ccd9f048fd84cd6d7020515f2f72896</a>

## Resources

### Human?

I will require a number of teacher volunteers to create the lessons with which the project will be completed. These teachers will also provide the basis for my research into their overall agency in creating lessons that are digital-technologies-concept focussed.

I will require a number of students who will engage in the lessons that are developed by teachers involved.

### Physical?

I will require a number of Google Forms surveys to be developed to gather evidence with which to answer my research question, and also to receive feedback on lessons.

I will require a space, ideally the school whare, in which to hold the collaborative hui for lesson development and improvement.

## Financial?

I will require a printing allowance of \$25 with which to print informed consent forms, as well as hard copies of letters to whānau.

## Technical?

I do not require any technical resources for this project.

## Other?

I do not require any other resources for this project.

## Closing the loop

### Discuss how you will disseminate your findings

I will present my findings in a meeting with the principal and board of trustees. A short report of my findings will also be available.

### Discuss how you will report project insights worthy of interest to your stakeholders and communities

I will report project insights to teachers involved with the project, as well as teachers at Papatoetoe High School who are not directly involved with the project, through a short presentation during Wednesday professional learning development time after the conclusion of my project. I intend to share my findings with the wider community of teachers in Aotearoa through uploading a copy of my report to the Digital Technology Teachers Aotearoa forum.

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<http://doi.org/10.1177/107179199300100104>

# Appendices

## Signed Learning Agreement

This may also be found here:

[https://docs.google.com/document/d/1Uwo55wQt-tfr2WQ2cIEQUOU5qbANOg8sHKGea\\_pI5T4/edit?usp=sharing](https://docs.google.com/document/d/1Uwo55wQt-tfr2WQ2cIEQUOU5qbANOg8sHKGea_pI5T4/edit?usp=sharing)



THE  
**MIND LAB**®



### **Master of Teaching and Education Leadership Learning Agreement**

#### **MTEL9000 Practice Based Research Project**

*This course conducts and critically evaluates a coherent 'teaching as inquiry' research project that addresses contemporary teaching challenges and the importance of collaboration and leadership towards social justice and equity.*

#### **Learning Outcomes:**

*On successful completion of this course the student will be able to:*

1. *Critically analyse the importance of leadership and collaboration in teaching practice through the application of methodologically and ethically sound teaching inquiry research in teaching specialist area.*
2. *Critically evaluate the application of teaching as inquiry research in relation to equity and social justice including the importance of dissemination of research findings to key stakeholders.*

#### **Assessment:**

1. *Project Report - this can include relevant artefacts (80%)*
2. *Presentation at symposium (20%)*

#### **This Learning Agreement serves three purposes:**

1. To specify how you will meet the learning outcomes of MTEL9000 through the assessment of your project. *i.e. how will your project demonstrate that you are meeting the learning outcomes?*
2. To ensure success of the project including managing risk *e.g. conflicts of interest, support from third parties.*
3. To outline the role/responsibilities of all parties involved in this project.

## Your Project

**Title of Project:** Collaborative Kete: Building Digital Technologies Agency

**Provide a brief description of your project, what you will be doing?**

This project aims to build teacher agency in producing lessons that are aligned with digital technologies curriculum progress outcomes for junior students. Participating teachers will develop three separate lessons within existing learning area contexts, using digital concepts and tools to enhance and strengthen this learning. The development of these lessons will take place through collaboration between participating teachers at three hui throughout the project.

Students will participate in the project by engaging with participant-created lessons, and providing feedback based on their experiences. This feedback will be utilised to inform the development of further lessons.

Throughout the project I intend to measure self-perceived confidence of individual teachers in creating and developing these lessons, along with some external evaluation of competency, agency, and outcomes of this journey.

Findings will be reported to stakeholders through presentations and the digital teachers Aotearoa community through publishing via their forums.

**Who are the main stakeholders and how they will benefit from the project?**

Key stakeholders include learners who will engage in lessons developed as part of the project, participating teachers, and teachers at Papatoetoe High School who are not participating in the project.

Learners who engage in lessons developed as part of the project will benefit from the enriched learning experiences that digital technology tools and concepts can provide. They will benefit from increased engagement with relevant and authentic application of digital skills.

Participating teachers will benefit from opportunities to explore how digital technologies concepts can strengthen learning in their own individual context. They will benefit from collaboration with others to widen their own understanding and collectively critically reflect to improve their practice.

Teachers at Papatoetoe High School who are not involved with the project will benefit from access to an expert in their learning area context who has engaged with the project. This will benefit them in their journey to meet digital technologies progress outcomes that will become compulsory in schools from 2020.

**What are your key project milestones?**

Key dates calendar can be found by clicking [here](#). Dates below are *due dates* and milestones must be completed *by* these dates.

Milestone	Date Due
Propose project to school leadership	Friday 5 April
Meet with teachers in charge of junior curriculum to introduce the project and recruit participants	Friday 10 May
Hui One	Friday 24 May
Pilot initial lessons with students	Friday 7 June
Analyse feedback from students in regards to lessons	Thursday 13 June
Hui Two	Friday 14 June
Pilot new lessons with students	Friday 28 June
Analyse feedback from students in regards to lessons	Thursday 25 July
Hui Three	Friday 26 July
Pilot new lessons with students	Friday 9 August
Analyse feedback from students in regards to lessons	Thursday 15 August
Measure teacher agency in producing digital-technologies-concept aligned lessons	Friday 16 August
Analyse teacher agency findings	Friday 23 August
Produce a report outlining findings	Monday 23 September
Present findings to stakeholders	Friday 1 November

**What will be produced for assessment?**

It is intended that a report and presentation will be produced for assessment.

**Alignment with MTEL9000 Learning Outcomes****How will your project demonstrate competency of Learning Outcome 1?**

*Critically analyse the importance of leadership and collaboration in teaching practice through the application of methodologically and ethically sound teaching inquiry research in teaching specialist area.*

This project will demonstrate the importance of leadership and collaboration in teaching practice by actively supporting teachers to develop their practice. Teachers engaging in the project will be leading their own classes during the project, and potentially their colleagues after the project, in collaboratively building a better understanding of digital technologies concepts.

**How will your project demonstrate competency of Learning Outcome 2?**

*Critically evaluate the application of teaching as inquiry research in relation to equity and social justice including the importance of dissemination of research findings to key stakeholders.*

Equity and social justice is integrated into my project through its purpose in improving equitable access to high quality digital technologies education within Papatoetoe High School.

I will disseminate my findings to key stakeholders through a written report, as well as a presentation made to the school Board of Trustees and all teaching staff at Papatoetoe High School.

## RISK MANAGEMENT

### **Implications for the study related to intellectual property:**

The lessons that are created by teachers who are participating in the programme will not be shared outside of the project, without the permission of those who created them. At this stage, there are no plans to share them.

There are no other intellectual-property related risks that need to be managed as part of this project.

### **Authorship considerations:**

There are no authorship considerations that will need to be managed as part of this project.

### **Potential conflicts of interest**

The potential conflicts of interest that affect myself are the following:

I am both the designer of the research and researcher of this project - this will be managed through the use of a project diary to examine my actions and critical reflection will be utilised to ensure that my actions and decisions are as impartial as possible.

I am a digital technologies teacher and may attempt to drive lessons towards a content focus of digital technologies concepts rather than ensuring that the digital technologies tools are used to support the content of the lesson - this will be managed through the use of my project diary.

I am a teacher at Papatoetoe High School and know many of the participants and students that will be involved in the project - this will be managed through informed and voluntary consent processes, anonymisation, and reassurance that participation (or not) will not have any effect on existing relationships, grades, or classes.

I am a future leader at Papatoetoe High School and my actions may be influenced by my desire to eventually taking up a leadership role - this will be managed through the use of my project diary.

### **Ethics considerations:**

Please see the attached ethics screening form. It can also be found here:

<https://docs.google.com/document/d/1k684kqCx4YBv7UiOHXOYRfRT0eQKPI-TwG2NvrdwWVs/edit?usp=sharing>

## **RESPONSIBILITIES**

### **Project Progression and Milestone Setting**

1. The supervisor will give guidance about the nature of research and the standards expected, the planning of the work-based project, literature and sources, academic integrity, milestones, relevant academic policies and deadlines.
2. The participant will accept responsibility for his or her own research activity and learning.
3. The participant will accept responsibility for submitting reports and work in accordance with the time frame agreed in the project plan.
4. The participant will bring to the attention of the supervisor any circumstances that might require the mode of study to be modified
5. The participant will participate in forums, to meet with and seek guidance from the supervisor.

### **School Role**

1. Provide a supportive environment for participants to complete their project.
2. The school will notify the MTEL programme lead if there are any concerns regarding the MTEL project.

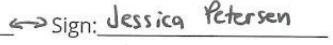
## **DECLARATION**

We confirm that we have reached agreement on our roles and responsibilities as Supervisor, Participant, School Leadership and the MTEL Programme Lead for the implementation and assessment of the MTEL9000 Practice Based Research Project outlined above, and underpinned by The Code of Professional Responsibility (TCANZ).

### **School Leadership**

Name: E. Griffiths Sign:  Date: 4/4/19

### **MTEL Participant**

Name: Hansen Sign:  Date: 04/04/19

### **Supervisor**

Name: \_\_\_\_\_ Sign: \_\_\_\_\_ Date: \_\_\_\_\_

### **MTEL Programme Lead**

Name: \_\_\_\_\_ Sign: \_\_\_\_\_ Date: \_\_\_\_\_

# Ethics Screening

This may also be found here:

<https://docs.google.com/document/d/1k684kqCx4YBv7UiOHXOYRfRT0eQKPI-TwG2NvrdfWVs/edit?usp=sharing>



## Ethics Screening Process

Name: Jessica Petersen

Project Title: Collaborative Kete: Building Digital Technologies Agency

**Preamble:** Use this ethics screening process to help you think about ethical principles which might be relevant to your research, and to determine if an ethics application is required for your project.  
Ethics is a critical part of any research project as well as professional conduct:

- Think carefully about whether you are collecting data from individuals or groups in the capacity of a research participant, or if they are participating in the capacity of a stakeholder. It is critical to consider the risks to all groups and individuals involved, including yourself as the researcher. Is there any conflict of interest, for example, are you a colleague or employer of the groups or individuals involved or is there any other power relationship between yourself and individuals/groups involved?
- Think carefully about how you might wish to disseminate your research. Is having ethics approvals a requirement of an organisation (for example, funding providers, or any journals you might wish to publish your research in (this is optional)?

*Please note: A blanket ethics application for your cohort projects is being submitted to the United Ethics Committee, but if your project falls beyond the scope of this application, you may need to submit a separate application. Completing the screening process below will help you identify potential ethical issues and your GTP will assist you if any further application is required.*

Are there human stakeholders and/or participants involved in your project?	Continue	→ No Ethics application required?
<b>Risk of harm (Physical or psychological):</b> Is the potential for harm minimal and no more than is normally encountered in professional life? What is the degree of risk/benefit?	No	
Are you at risk of harm more than that encountered in professional life? If yes, please explain.	No	
Will your consultation cause discomfort, embarrassment, or psychological or spiritual harm to your stakeholders? If yes, please explain.	No	
Are there any processes that are potentially disadvantageous to a person or group, such as the collection of information which may expose the person/group to discrimination more than that encountered in professional life? If yes, please explain.	No	
Did you answer Yes to any of the above Risk of harm questions?	Enter the nature of these risks into your Learning Agreement. If beyond normal consultation (i.e. human participant data collection) discuss with your GTP to determine whether a separate application is required.	
<b>Is Informed and Voluntary Consent required?</b> Are you going to be engaged in a consultation process that involves collecting information that would not be normally collected in a professional project situation? i.e. that this is research and you are collecting data from human participants.	Yes	I will already have relationships with a number of participants as I work with them on a day-to-day basis. Participation in the project (or lack thereof) is voluntary and will not have any impact on relationships. Participants will be required to give informed and voluntary consent before commencing their involvement in the project by reading the information

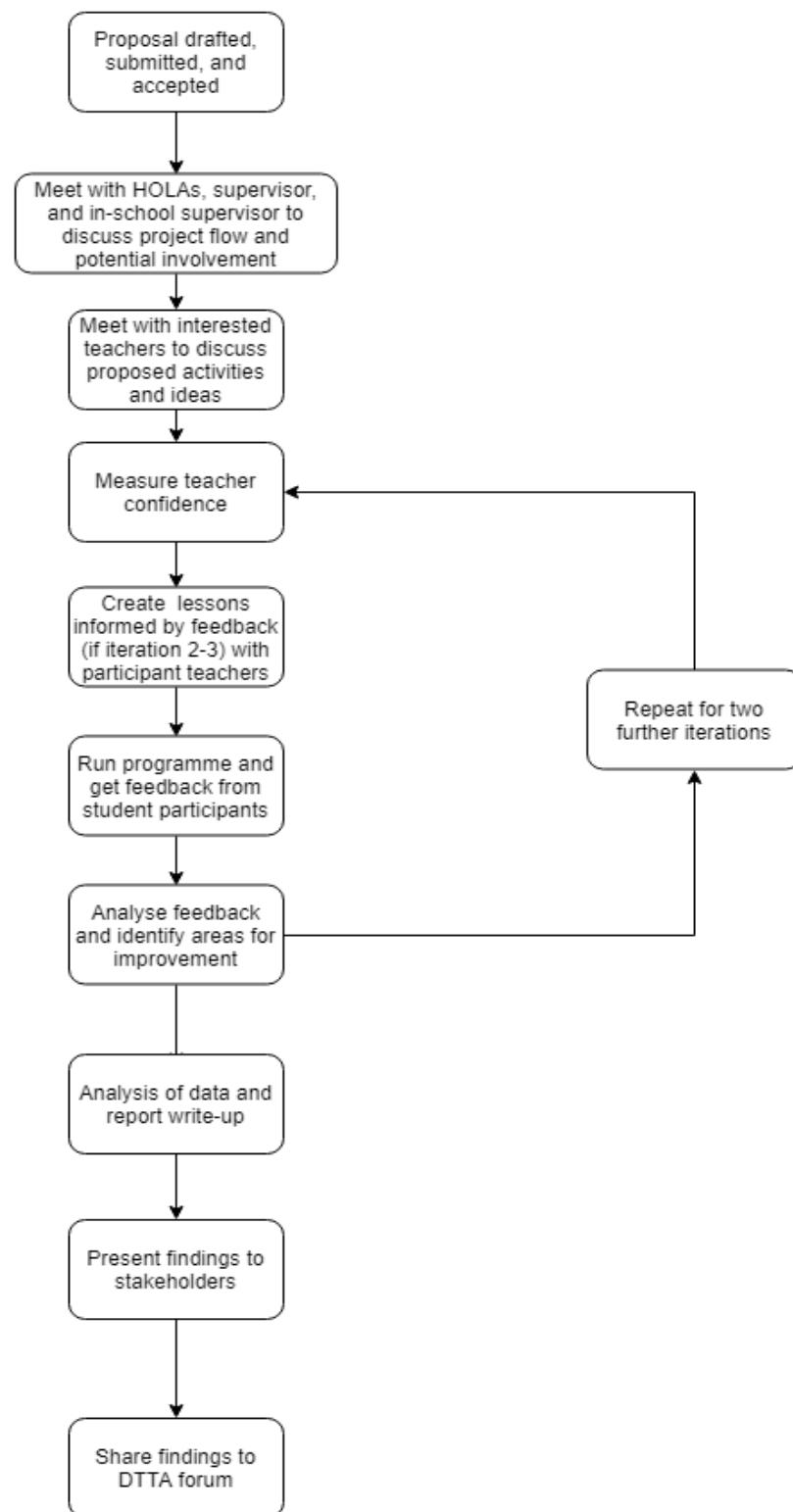
		<p>sheet provided and signing the participation agreement. This consent can be withdrawn at any time, for any reason, without any penalty. There will be no incentive for participating in the project.</p>
<i>Does your project involve Participants/stakeholders who are unable to give informed consent? If yes, please explain.</i>	No	
<i>Does your project involve research on your own employees? Can you mitigate risks associated with this including the risk of coercion? Please explain your response.</i>	No	
<i>Does your project involve the participation of children (seven (7) years old or younger)? If yes, please explain.</i>	No	
<i>Does your project involve the participation of children under sixteen (16) years old where parental consent is not being sought? If yes, please explain.</i>	Yes	<p>Children under the age of sixteen will be participating in the research by engaging with and providing feedback on lessons developed by teacher participants in the programme. These lessons will be part of the normal school programme and will not be any different in content to those taught to equivalent students in other classes of the same subject. Participation in data collection (or lack thereof) be voluntary and will not have any impact on the grades, coursework, or relationships with teachers. Letters will be sent physically, and via eMail, to whānau of students involved in these lessons, with the stipulation that any student can be withdrawn from participating in any data collection at any time, for any reason, without any penalty.</p>
<i>Does your project involve participants/stakeholders who are in a dependent situation, such as people with a disability, or residents of</i>	No	

<i>a hospital, nursing home or prison or patients highly dependent on medical care?</i> Can you mitigate risks through organisations already charged with codes of conduct that protect these stakeholders who are in a dependent situation?		
Please explain your response.		
<i>Does your project involve participants who are vulnerable?</i> Can you mitigate risks through organisations or otherwise already charged with codes of conduct that protect vulnerable stakeholders who are in a dependent situation?	No	
Please explain your response.		
<i>Does your project involve the use of previously collected information for which there was no explicit consent for this research?</i> <i>If yes, please explain.</i>	No	
<i>Does your project involve research where cultural consultation is required?</i> Can you mitigate risks through appropriate consultation?	No	
Please explain your response.		
<b>Privacy and confidentiality issues</b>		
<i>Does your project involve any evaluation of organisational/practices where information of a personal nature may be collected and where persons may be identified?</i>	No	
<i>Does this evaluation involve more than that encountered in professional life? i.e. an audit. Can you mitigate risks through processes to ensure persons cannot be identified?</i>		
Please explain your response.		
<i>Does your project involve deception of the participants, including concealment and covert observations more than that encountered in professional life?</i> <i>If yes, please explain.</i>	No	
<b>Did you answer Yes to any of the above Informed Consent questions?</b>		Discuss with your GTP to determine whether a separate application is required.

# Expected Project Flow

## Expected Project Flow

Jessica Petersen



Papatoetoe High School Pedagogy Reflection Tool



Papatoetoe High School pedagogy reflection tool

Teacher: \_\_\_\_\_ Class: \_\_\_\_\_ Observer: \_\_\_\_\_ Lesson: \_\_\_\_\_ Date: \_\_\_\_\_

Ask 5 students at the end of the observation:									
How much thinking did you do today?					How much work did you complete today?				
1	2	3	4	5	1	2	3	4	5
None	A little	Some	Lots	Too challenging	No work completed	Little work completed	Some work completed	Lots of work completed	All work completed

(The first 5 mins) Lesson context:	Total Students:	Māori Students:
Time: Teacher location: Front/middle/back		Engaged Māori Students:
What do you see & hear? (5 mins)		



## Papatoetoe High School pedagogy reflection tool

Time:	Engaged Māori Students:
Teacher Location; Front/middle/back	
What do you see & hear? (5 mins)	
Time:	Engaged Māori Students:
Teacher location: Front/middle/back	
What do you see & hear? (5 mins)	
<b>Responsible Learner      Be a      Respectful</b>	



## Papatoetoe High School pedagogy reflection tool

	Tāmata/A foundation	He Kakano/A seed	Kia Tupu/To grow	Kia Hua/To Prosper	Kia Puawai/To Sustain
Learning activities Ako	Indicators:				
-Teacher centred instruction -Individual activities -Teacher provides knowledge -All learning is passive	-Little student centred learning -Little collaboration -Different perspectives of knowledge acknowledged -Mostly passive learning	-Some student centred learning -Some collaboration - Different perspectives of knowledge acknowledged & explored -Some active learning	-A lot of student centred learning -Meaningful collaborative learning - Different perspectives of knowledge acknowledged, explored & integrated -Mostly active learning	-Student self-determination evident in learning - Authentic collaborative learning -Co-construction of knowledge -Active & reciprocal learning	
-Ls & SCs not shared -All students complete the same tasks -Closed questioning -Feedback & feed forward not evident	-Ls & SCs shared -Tasks differentiated by outcome -Mostly closed questioning -Teacher directed feedback	-Ls & SCs shared & reviewed -Some differentiated learning tasks -Some open questioning with guidance for responses -Teacher directed feedback & some feed forward	-Ls & SCs referred to, engaged with & reflected upon -Learning tasks adapted to all learners' needs -Open questioning encouraging critical thinking -Personalised & dialogic feedback & feed forward that promotes interdependent learning	-Ls & SCs co-constructed, engaged with & reflected upon -Learning tasks co-constructed to meet learners' needs. -Questioning & responses encourage critical thinking & challenge assumptions. -Co-constructed, personalised & dialogic feedback & feed forward that promotes interdependent learning	
-Teacher in one place -Hauora unsafe in learning environment -Planning not evident -Class routines & expectations not evident	-A little teacher movement -Learning environment shared by teacher & a few students -Limited planning & resources available -Unclear class routine & expectations	-Some teacher & student movement with learning focus -Learning environment shared & respected by some -Planning evident, prepared resources readily available -Class routine & expectations aligned with WHAITAKE & respected by some	-Purposeful teacher & student movement with learning focus -Learning environment shared & respected by most -Evidence-based planning evident, student/teacher resources readily available -Class routine & expectations aligned with WHAITAKE & respected by all	-Meaningful teacher & student movement with learning focus -Dynamic learning environment shared & respected by all -Evidence-based planning evident, student/teacher resources contribute to co-construction of understanding -Co-constructed class routine & expectations aligned with WHAITAKE & respected by all	
-Te reo Māori not evident -Culturally responsive learning contexts not evident -Acknowledgement of cultural identity not evident. -Cultural iconography not evident	-Attempts te reo Māori -Culturally responsive learning contexts emerging -Cultural identity acknowledged -Cultural iconography evident, but not used	-Uses te reo Māori -Some culturally responsive learning contexts -Cultural identity acknowledged & used for learning -Cultural iconography & visual displays show cultural diversity	-Tikanga & te reo Māori meaningfully linked to learning -Culturally responsive learning contexts encourage reciprocal learning & value diverse perspectives -Cultural identity celebrated & encourages learning -Visual displays celebrate cultural diversity & are used for learning	-Tikanga & te reo Māori authentically linked to learning -Culturally responsive learning contexts promote reciprocal learning & value diverse perspectives -Cultural identity authentically valued & integral to learning -Classroom environment authentically reflects cultural diversity & is integrated with the learning	
-Teacher not aware of who their students are. -Expectations of students' learning & success not evident -Respectful connections between students not evident	-Teacher shares a respectful connection with a few of their students. -Expectations of students' learning & success not clear to all -Respectful connections evident between some students	-Teacher shares a respectful connection with some of their students. -Teacher has expectations of most students' learning & success. -Respectful connections evident between most students	-Teacher shares a mana enhancing connection with most of their students -Teacher has high expectations of students' learning & success -Mana enhancing connections evident between all students	-A mana enhancing connection shared by all -High expectations of learning & success shared by all -Mana enhancing connections evident between all students	



## Papatoetoe High School pedagogy reflection tool

After your lesson observation, arrange a time to meet with your observer to reflect on your pedagogy. Use the evidence gathered during the observation, and the 'pedagogy reflection matrix' on the previous page to help guide your conversation. The '*learning conversation questions*' (shared drive) may also be useful.

Date:

Teacher:

Observer:

**Key reflections:** (Eg. what are your key evidence-based reflections about the learning activities, facilitation of learning, learning environment, cultural competencies and relationships. What worked well? What was not effective? Why?)

**Next steps:** (Eg. identify an area of focus. What will you try? How? Timeframe? What evidence/literature/colleagues will you critically engage with to refine your practice?)