Research on current technology-related issues in Australian education reflects some common themes: the fast-changing nature of available tools and current push to nationalise the curriculum alongside substantial increases to both technology access and use in Australian schools. At the same time, there exist problems such as a misplacement of focus on technology over pedagogy, ineffective use of ICTs for learning, poor change management and “one-size-fits-all” interventions that do not properly address the needs of each school – problems that are not unique to the Australian context. The Connected Communities 21 project is a collective case study of seventeen Australian government schools promoting the development of self-managed models of change while leveraging digital tools for teacher professional learning and connecting best practice within and between schools. This paper reports on how change has been employed in three of these cases as they implement a range of ICTs to transform pedagogy and meet the demands of a new curriculum. Interim findings from the study suggest that the use of digital technologies to connect school communities plays a key role in developing 21st century participatory cultures within and beyond the classroom.

Introduction and Context

The new Australian Curriculum encompasses its own broad set of skills and standards, the seven “general capabilities” include ICT, critical and creative thinking, ethical behaviour and intercultural understanding (ACARA, 2012a). This new curriculum represents ICTs both as specialised subject skills and content knowledge, and as broader, cross-curricula skills. Moreover, future curriculum development will focus on the areas of design and computational thinking as new skillsets to be developed further (ACARA, 2012b). In the context of these and other curriculum demands, many accept that our students need to become “creative and productive users of technology, especially ICT, as a foundation for success in all learning areas” (MCEETYA, 2008, p. 8, our emphasis).

In line with many of the changes to technology devices and applications in recent years, education systems throughout Australia continue to plan and implement one-to-one device-to-student ratios through large-scale deployments of laptops and mobile devices. As part of the Digital Education Revolution (DER), this wide-scale implementation of technology devices still represents what could be regarded as a “heretofore-unattained scale and disturbance in the equilibrium of classrooms and schools” (Bebell & O’Dwyer, 2010). Improved access to technology devices in the classroom is a trend likely to continue, given the
ubiquity of very low-cost mobile smart devices along with the proliferation of education apps, e-textbooks and web tools for collaboratively engaging with, remixing and publishing content. For students in Australian schools, the level of access to technology devices and software now places us very highly in international OECD rankings – a close second position in the percentage of students (91.6% to Norway’s 93%) who regularly use a computer at school (OECD, 2011). Further, Australian students are well above OECD averages in access to computers at home and in terms of the percentage difference in access (both school and home) between the top and bottom quartiles of the PISA index of socio-economic status.

At the same time, some have found that while programs like one-to-one facilitate increased access, they “do not automatically add value and their high financial costs underscore the need to provide teachers with high-quality professional development to ensure effective teaching” (Dunleavy, Dexter, & Heinecke, 2007, p. 440). Such findings are reflected elsewhere in specific criticisms of the DER (Reid, 2009) and in other state and local jurisdictions around Australia and throughout the developed world. For example, recent data suggests that the levels of effective ICT use in Australian schools are still cause for concern. In the most recent public report tabling the last three NAP ICTL assessments (2005, 2008 and 2011), for example, ACARA (2011) draws attention a growing ‘long-tail’ in skills demonstrated by students, with noticeably widening gaps of achievement between students from remote, regional and metropolitan areas and a substantial gender gap in levels of engagement with technologies in the classroom.

As we move forward, there are at least as many questions around effective use of technology in education as there are perceived benefits. In stating its goals for equity and excellence in schools, the products of which should be confident, creative, successful, active and informed citizens, the Melbourne Declaration on the Education Goals for Young Australians subtly draws attention to the disjuncture between technology access and effective use: “while schools already employ these technologies in learning, there is a need to increase their effectiveness significantly over the next decade” (MCEETYA, 2008, p. 5). In order to explore use further, as Clinton et. al. (2006) point out, we need to “shift the focus of the conversation about the digital divide from questions of technological access to those of opportunities to participate and to develop the cultural competencies and social skills needed for full involvement” (p. 6).

The Connected Communities 21 Project

In examining the effective use of technology in education, many elements have been addressed in the literature, including the roles of teacher and principal (Hayes, 2006), the divide between technology access and use across communities (New Media Consortium, 2012), the cultural clash between old and new technologies (Williams, 2008) and the nature of different technological, pedagogical and discipline knowledge dimensions (Koehler & Mishra, 2009). All of these areas underscore the need for teacher professional learning with new
digital technologies that is informed by change while being sensitive to current demands and the specialised and situated learning needs of staff and students within the school (Fullan & Smith, 1999).

The Connected Communities 21 Project (CC21) was developed as a research and professional learning partnership between Macquarie University and the Department of Education and Communities in December 2012, running as a yearlong project in 2013. The purpose of the project is to explore how schools self-manage change when confronted with the pressures of a redeveloping materials for changing curriculum, adopting new technologies and re-thinking pedagogies. The project employs the research design of a collective case study, which closely examines the professional learning of educators from seventeen Australian government schools. Each individual participant was identified by his or her school community as either a technology innovator or as someone who is disposed towards learning about innovating with technology in the classroom. As part of the study, schools were asked to submit expressions of interest and successful schools received AU$9000 in funding which they were then free to employ in any way they saw best.

Each expression of interest articulated a school project for enabling teacher professional learning that addresses the three areas of pedagogy, technology and the new Australian Curriculum. Because of the different needs and collective interests in each school, the proposed projects differed in scope, focus and scale. For example, while some schools focused on technologies that were currently in place, others used their project as an opportunity to acquire and explore new technologies. Likewise, while some schools attempted a school-wide project with every teacher involved, others included only a small number of teachers. Consequently, each school also employed their resources differently. Figure 1 shows the breakdown of reported expenditure from all schools based on the categories shown:

Figure 1: CC21 Reported Expenditure from participating schools

![Diagram showing expenditure distribution]

- Training: $8,874.87, 7%
- Release: $704.86, 1%
- Hardware: $4,599.00, 4%
- Software: $10,830.00, 8%
- Infrastructure: $41,405.46, 33%
- Accessories: $60,170.00, 47%
As the above figure shows, the largest area of expenditure was teacher release from class (47%), followed by the purchase of hardware (33%) and technology-based training (8%).

As schools implemented their projects, researchers studied each school in relation to the following research questions.

1. What teacher actions impact upon ICT usage in the classroom?
2. How can teachers be supported to effectively employ ICTs as part of their pedagogy?
3. How can teachers be most effectively supported to effectively implement the new Australian Curriculum?
4. What are the contextual constraints that impact on teacher use of ICT as part of implementing the new curriculum?
5. How can contemporary technologies be most effectively used to support learning and teaching?
6. How can evidence-based approaches to learning technology innovation influence teacher practice?

Four stages of data gathering were employed. First, one-on-one structured interviews were conducted with all participants using the Levels of Use of the Innovation framework devised by Hall, Louks, Rutherford and Newlove (1975). Though now considered seminal, this instrument that forms part of this framework has been widely recognised as a tool to accurately measure an individual’s use of an innovation and the extent to which this individual use has permeated throughout their own context. Second, an unstructured online weblog was used over a twenty-week period, in which participants were asked to discuss the ongoing implementation of their school’s project, citing key decisions, actions, problems, questions and perceived solutions in relation to their project and the broader areas of technology, pedagogy and the new curriculum. This online tool enabled open dialogue between the schools and the establishment of a shared community of practice where each school could reflect on their own project in relation to work being undertaken in other schools. Third, to better understand the implementation of each school project in context, researchers visited six schools in the northern and western regions of Sydney, collectively representing a wide socio-economic range of the schools involved. During these school visits, classroom observations were followed by semi-structured focus group interviews between the principals and participating teachers. The fourth stage of data gathering in late 2013 will involve a questionnaire delivered to all participants that measures perceptions on the extent to which the innovation has spread throughout the school context, the relationship between teacher professional learning and online communities, the impact of both leadership styles and contextual constraints.

Broadly speaking, the collective case study employs emergent design framework with an assumption of “unique case orientation” (Johnson & Christensen, 2008) to enable researchers to explore subsequent themes based on the initial findings discussed in this paper. The data matrix shown in Figure 2 illustrates how each of the research questions is addressed through the four stages of data gathering:
**Figure 2 – Project stages, instrumentation and research questions matrix**

<table>
<thead>
<tr>
<th>Research Questions:</th>
<th>Project Stages and Instrumentation</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Orientation:</strong> Interviews</td>
<td>Digital Learning Journey: Shared blog posts</td>
</tr>
<tr>
<td>What teacher actions impact upon ICT usage in the classroom?</td>
<td>• Interview questions explore teacher levels of use. Researchers identify patterns of use.</td>
</tr>
<tr>
<td>How can teachers be supported to effectively employ ICTs as part of their pedagogy?</td>
<td>• Levels of Use framework is applied to interview structure in order to gauge teacher knowledge.</td>
</tr>
<tr>
<td>What are the contextual constraints that impact on teacher use of ICT in the classroom?</td>
<td>• Participants interact via blog posts to develop collective strategies for improving school environments.</td>
</tr>
<tr>
<td>How can contemporary technologies be most effectively used to support learning and teaching?</td>
<td>• Participants identify and explain technologies that they use as part of classroom practice and those they would like to develop further as part of their learning goals.</td>
</tr>
<tr>
<td>How can evidence based approaches to learning technology innovation influence teacher practice?</td>
<td>• Participants are asked to identify their own research questions that will inform their personal learning goals and identify ways of addressing these throughout the study.</td>
</tr>
</tbody>
</table>
Interim Findings

As outlined earlier, three of the four data gathering stages are complete and there has been some initial data analysis. To facilitate consistency across the data sets, all qualitative data were coded in relation to the research questions and emerging themes using NVivo. These cases were selected for discussion on the basis of early themes that emerged in relation to the areas of pedagogy, technology and the new curriculum. All of the following three cases involved school visits mid-way into the implementation of each school’s project and to draw relationships between each school’s socio-economic status (SES), the Australian Index of Community Socio-Educational Advantage (ICSEA) (for further discussion, see Barnes, 2011) is used. All three schools were Australian primary schools, which include seven year levels mapped across three stages: Stage 1 (Kindergarten to Year 2), Stage 2 (Years 3-4) and Stage 3 (Years 5-6).

School A: Whole-of-School, “Top-Down” Approach

Of the seventeen schools involved, School A was unique in reporting, early in the project, an innovation involving all teachers (30) and students (approximately 580) in the school. The school is the highest in terms of SES among the participating schools in Western Sydney, with the majority of families (78%) in the upper-middle and top quartiles. Their initial project plan articulated the school’s innovation as “the use of self-assessment through technology-rich Inquiry-Based Learning,” a model that is reflected in research exploring how technology can be used to support real-world inquiry in the classroom (Owens, Hester, & Teale, 2002) and one also supported through the development of thinking scaffolds (see, for example, Clark, 2009). To implement this model, teachers from each year level explored different technologies – including the use of robotics, iPads, game-based learning and a range of collaborative web tools - while implementing pre-developed, sample units of work published by the New South Wales Board of Studies. A key intention articulated by the principal of the school was for all teachers to adopt “yes we can” attitude in relation to both technology and the new curriculum. In an early blog post, the assistant principal reflected further on this, suggesting that in order to achieve a whole-of-school innovation, the leadership needed to “build professional trust and challenge staff to embrace change as we drive the implementation of the new curriculum.” The whole-of-school innovation was further enabled by the implementation of a school technology levy paid by 93% of parents, as reported by the principal.

Since this school was the first school in the study to be visited, data from the semi-structured interview with the principal, leaders and nominated teachers established some themes that informed later analysis, discussion and findings in other school visits that followed. One theme emerged around the apparent need for the school to adopt a top-down style of leadership to ensure that every staff member was fully involved in the project. When asked about this in relation to the “yes we can” project goal, the Assistant Principal remarked, “I think our staff reflect our children a lot, in that they don’t like to take a lot of risks, but they are becoming greater risk takers in their own practice. They are [now] changing
their practice from conventional teaching styles, knowing they have twenty-first century learners in front of them.” To illustrate this further, she described her interactions with one very reticent Kindergarten teacher:

if she were here I’d say it straight to her face: [this teacher] likes full control at all times, at every minute. So I said to her, “you’re doing built environments... use Google SketchUp.” She said, “I can’t, I can’t, I can’t…” I said, “too bad... you’re going to. Work it out. Find a way. Just so you know, I’m going to come and watch one of the lessons.” So panic set in. Now, she had no option but to go to the kids and find a child who knew how to use it. So she did. That child then taught her. She then used that child in the first couple of lessons and she called that child out of class to come and teach the class she was working with... Well! Of course, then, we get messages down here [in my office] from one of her kids: “you gotta come up! Miss wants to show you something!”

Another theme emerged around how pedagogy is developed through communities of practice within the school. When researchers explored pedagogy as a topic of discussion with School A, the principal cited the influence of educational thought leaders including Lane Clark, John Hattie and Stephen Heppell. The combination of these three educational leaders helped her to articulate how pedagogy operated within the school environment. In particular, she remarked that “Lane Clark beautifully worked with the modules [the students were studying], stating clearly what the twenty-first century skills are,” while reference to the meta-analytical work of John Hattie encouraged her staff to make sure that “it’s all research based” and, following a Stephen Heppell workshop, all of the teachers involved “came back and rearranged their rooms as best they could” to represent a twenty-first century learning space. Pointing out the connections between the practices of her teachers and these thought leaders, the principal stated, “you’ve gotta have good pedagogy... this is not somebody’s whim!”

Finally, several themes in relation to technology emerged. When reflecting on her leadership style towards the end of the interview, the principal of School A remarked, “so, it’s not really been me that’s driving it [the project]. It’s been the technology team. What they’ve learned along the way is that every six months, that technology plan goes out the window... and that’s fantastic.” This positive perception of technology as rapidly changing was reinforced by a Year 4 teacher who described the shift in the teacher’s mindset, where “technology used to be seen as the extra thing, whereas now we see the technology is so vital to what is going on in the classroom.” Perhaps in response to this changing context and mindset, many of the participants reinforced the importance of students having substantial input into learning with technology. One teacher described her experience using the Kahoots software: “I guided those kids through what I wanted that software to do based on what that software would tell me. Now, can I actually make anything move on Kahoots? I have no idea! But the kids can work it out very easily and they taught each other.”

School B: Small Team, “Offering” Approach

In contrast to School A, School B is among the very lowest in SES of the participating schools, with the majority (64%) in the lower middle and bottom
quartiles. The school has 17 teachers, six of whom (including the principal) are directly involved in Connected Communities 21. With only 259 students, the school was the smallest school involved. Similar to School A, their project involved an exploration of “Inquiry-Based Learning and the way that technology can be used to access and interpret information for a real life situation.” To enable classroom application, participating teachers worked together to produce five-week integrated units of work for each stage as part of the new Australian Curriculum English syllabus. The Australian Curriculum now requires every teacher and student to address the curriculum priority area of Sustainability (ACARA, 2012a) in every stage, which School B planned to address through a study of growing flowers and life cycles in Stages 1 and 2 and a study of natural disasters in Stage 3. Unlike School A, who placed their project’s emphasis on a range of technologies and de-emphasised curriculum through their use of pre-developed sample units, School B chose to focus mainly on curriculum development and mapping across the three stages. Their technology focus principally involved the purchase and deployment of two iPads in each classroom, which began with the teachers who were involved directly in the project and would later extend to all teachers in the school.

Being a small school, researchers were interested in the extent to which new approaches such as Inquiry-Based Learning could become common practice in each classroom. When asked about the adoption of this model in particular, one of the teachers remarked that most teachers “had been doing it for the last few years” but that some “were on a higher level than others.” She also cited the work of Lane Clark and the role of technology:

we did a lot of work with Lane Clark - I don’t know if you’ve heard of her? - yeah, we started with her, but not so much having adopted every idea… it was about two years ago that we started... I mean, it’s [IBL] always sort of been fundamental, like a part of our school... but it’s actually been a lot easier, having the technology, to go and do Inquiry[-Based] Learning now...

Another teacher described her own experiences attending a Lane Clark workshop. She had made extensive use of Lane Clark’s learning scaffolds and her class had engaged in video conferencing with Lane Clark using Skype. As she related:

[Lane Clark] speaks to me... like, when I listen to her, there’s something about what she says and what she does that resonates with me... and I think that that is something that’s poignant in relation to teachers and moving them... It [the pedagogy] has to speak to them... it has to hit them in terms of their moral purpose and if the person speaking to them resonates with what they’re doing and why they do what they do, and perhaps forces them to challenge some of those things that they themselves weren’t quite comfortable with about their practice... that’s what pushes people forward.

Exploring the different levels of innovation and experience with Inquiry-Based Learning further, the principal pointed out that she encouraged her small team of innovators to develop new approaches and “offer” them to other staff members. For example, when developing the new units of work, she stated that when other teachers heard about the new ideas, they would, of their own accord, “come on board.” One teacher suggested that this process of co-opting new
teachers to the project goals involved time, patience and not forcing staff members to follow the new initiative. She referred to her own experiences working in a team of three, with one cooperating teacher and one who “just did her own thing,” pointing out that her and her colleague were trying gently “to bring the other teacher on board this term,” a process that involved showing “what a great time the kids are having” to encourage reticent teachers to try similar approaches. The principal also addressed the school’s innovation in relation to her own style of leadership:

One of my biggest philosophies is that you go with who’s ready to go first... and hopefully that ripple effect will take place... once they [innovating teachers] have the opportunity to share it [their ideas] with the rest of their stage, it [the reaction by other teachers] will be, “We want some of what you’ve having... we want some of that too.” It’s not “you will do this” [to the staff]... it’s “if you would like to... here it is for the offering.”

When asked specifically about the importance of “offering” a new approach over mandating it, one teacher cited the role of the teacher professional as choosing to “buy in” to a new idea based on “what is going to move their children forward.” All interviewees strongly agreed that forcing members of staff to try new ideas was not at all part of their school’s culture.

Finally, School B commented on technology as both an enabler and contextual constraint. For the teacher whose Kindergarten class had video-conferenced with Lane Clark, obtaining proxy settings to allow Skype within the school network was a time-consuming and difficult process: “originally I was told we can’t and then I said well I really need to – please work out a solution for me.” Upon successfully working out the solution, the teacher reflected:

so in terms of Skype, it’s giving them a really meaningful context for their learning because they’re so desperate to get onto Skype and tell Lane what they’ve learned now. So that’s really powerful in terms of reflection, you know the old “sit down and write about what you’ve learned” is now “communicate to an authentic audience”

Similarly, while the participants from School B were embracing the newly acquired iPads, they agreed that the iPad was simply one of many tools they wanted their students to use. As the principal pointed out, “what we need to teach them is not necessarily how to use an iPad, but how to transfer knowledge from one piece of technology to another.”

**School C: Mid-Size Team, “Innovate First – Plan Later” Approach**

School C is similar in size to School A, with approximately 650 students and 31 teachers, seven of whom were directly involved in their school’s project. Located in the outskirts of Western Sydney, School C resembled School B in terms of SES, with the majority (57%) of families in the bottom two quartiles. The participating teachers initially articulated two goals for their school’s project: first, the use of iPad-based literacy apps to support a whole-school reading program; and, second, the development of a “learning alliance” of schools in the local area with a shared website for pooling curriculum-related resources and
communication. Separate members of the school’s executive managed each of these goals; in both cases, however, this management involved setting strategic direction but leaving the operational logistics up to individual teachers to decide. In particular, the members of the school executive claimed to have limited understanding of how the technologies worked and therefore relied on other members of staff (especially younger members) to “show us the way.” As part of their involvement in the study, School C used their funding mainly to purchase new iPads.

Similar to School B, the Assistant Principal of School B talked about what he described the “snowball effect,” where most teachers in the school were observing the positive changes developed by the school’s CC21 participants and then trying these new approaches in their own classrooms. At the same time, he conceded that the initial project goals were “stalling a little,” because the impetus provided by other members of the project team were taking the school in new directions. In particular, two young teachers were exploring a very broad range of apps on the iPads purchased with project funding and, unlike the other teachers in the school, both had constant access to six iPads in their classroom. One of these teachers described the possibilities for a connected classroom that she saw in the future:

> When we do [get connectivity] there’s lots of things we can do... like my class uses the Internet for Edmodo and blogs and stuff... and it [more connectivity] would make reporting to parents and showing their [the kids’] learning online so much easier... and they could just upload things and you [the teacher] can just sit there and approve all of their comments...

Similarly, another teacher discussed how she got started with iTunes U, a platform she was exploring for sharing content with her own class:

> well I was a little scared when I first saw it... because I have my own iPad and I am just so used to these apps that are just fun... with a couple of games and that... and then I saw them [the apps being explored for literacy] and I was like “what am I going to do?” I just went on the Mac and Apple website... and watched video after video of schools that were incorporating these apps... and iTunes U... and learnt how to do it [set up an iTunes U course] myself... it’s really easy.

Interestingly, while this teacher had been exploring the sharing potential of iTunes U with her class, other participants – including the school’s executive – were unaware of this, with one commenting, “well, the iTunes U... this the first I’ve heard that she’s doing that! I’ve not done it myself.” Referring to both of the younger teachers, another member of the executive commented, “I’m nowhere near as au fait as these girls here,” stating that the school was “at the stage where these girls are still playing and learning with the technology,” suggesting that “we’ll come to the point where they share, and then people like me can pick it up and run with it.” Summing up this process, she said, “we’ll let the young ones do all the hard work and then we’ll suck them dry later.”

While School C regarded their exploration of the technology as still in the initial stages, they were keen to explore further technologies in the future. In particular, they saw the potential of Google Apps for Education, with two members of the executive having used Google Forms for a staff survey. Both of these leaders were
keen to see this technology used when they returned to their second project goal, the network of schools as a “learning alliance”:

and that’s where we see the learning alliance [going] of the four schools being able to use this technology... [our Deputy Principal] might be able to send something out and they can be there on the same document... sitting at their own desk... collaborating in real time... so we’ve talked about that [technology] as an important part of getting that learning alliance happening... and I mentioned that we pushed [the staff] hard a little bit and now we’re just sitting until we get really going...

Discussion

As the case summaries above show, each of the schools presented have adopted considerably different approaches in their emphasis on, and treatment of, technology, pedagogy and the new curriculum. Accordingly, each of the projects that were outlined in the project plans and discussed further in interviews reflects the perceived needs and interests of each school community. All three schools used their funding to explore new technologies in the classroom; while School A appeared to explore a wide range of devices and applications, Schools B and C chose to focus mainly on the use of iPads. The leaders in School A employed what could best be described as a “top down” approach to technology adoption, where leaders from the school co-opted all members of staff – including resistant teachers – into using the tools, citing equity as a guiding principle. In terms of curriculum, School A’s use of sample units enabled them to learn about the requirements of the Australian Curriculum without needing to create new teaching resources. In contrast, School B’s focus on the curriculum provided an opportunity to try a form of collaborative planning that was consistent with their “offering” approach. While some members of staff were keen to get started immediately, others took time “to come on board,” and this was an accepted part of the school’s culture. School C used literacy and their reading program as a curriculum connection in their project plan; however, the fact that these programs had “stalled” meant that the current direction for their school’s project was a little unclear.

In all three cases, the perceptions of participants about their school’s innovations were positive – and the themes that emerged when examining data from all data points thus far suggest several areas that now warrant further investigation. In particular, researchers were surprised by each school’s relationship with pedagogy. For both Schools A and B, questions on pedagogy prompted a discussion on current educational thought leaders such as Lane Clark, while School C seemed unable to articulate current pedagogical approaches that were being employed by their teaching staff. Both Schools A and B adopted the instructional model of Inquiry-Based Learning and deferred to this when explaining aspects of their pedagogy in practice. However, in the case of School B, the adoption of this model was inconsistent due to teachers not being explicitly required to work towards the school’s project goals. While teachers in School B were using Lane Clark’s method to program inquiry-based units of work, researchers felt that participants had not demonstrated their own conceptual understanding of this instructional model in a broader context. Both School B
and C seemed to deliberately avoid a “top-down” approach to leadership; while School B’s model of “offering” stemmed from the principal’s own philosophies of learning, School C actively encouraged a “bottom up” approach through the two younger teachers whose innovations were valued but not arguably consistent with the school’s articulated project goals.

In terms of overall consistency between project goals and what has taken place in each school, the actions in Schools A and B seem more consistent with stated goals. The culture in School C was, on the other hand, positively geared around the innovations of the two younger teachers. However, given their exclusive access to a class set of iPads, it is unclear how School C might plan to scale their innovations across the school community. In both Schools A and B, the allocation of a small number of iPads in each classroom appeared to ensure greater equity for the students and address the learning needs of both experienced and inexperienced teachers alike. In all three schools, the culture that School C labelled “the snowball effect,” was used as a justification for the success of the school’s project.

Conclusion

This paper has sought to present interim findings for Connected Communities 21, a model for teacher professional learning that promotes self-managed change in relation to the areas of pedagogy, technology and a new curriculum. Each of these areas reveals a number of challenges that are faced by all schools in the twenty-first century. As the interim findings suggest, each school responds differently to the challenges faced, based on their own perceived needs and interests. While these findings suggest that there can be no “one-size-fits-all” approach to innovation, further research is warranted. In particular, how schools manage change is warranted. In particular, how schools approach pedagogy when exploring new technologies and the impact of leadership styles on both the scale and nature of innovation are areas for further research. The final data point to the study will enable this project to draw together findings from all seventeen participating schools, divulging further insights into how this model can be effectively leveraged in the future.

References


