Deakin Research Online

Developing teacher-researchers

A practice-based Masters of Education

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Theme: ODL and human capacity building

Abstract

Teachers' work can increasingly be described as knowledge work conducted in a rapidly changing globalised, digital environment. In order to support contemporary teachers' work, professional learning needs to be grounded in the contexts and identities of teachers, while engaging them in theoretical discourse. Such an approach challenges traditional approaches to the offering of a Masters in Education by distance learning.

This presentation reports on a university-educational authority partnership designed to enable practising teachers to gain Masters qualifications through practice-based ethnographic data collection and research. The context of this partnership is a new professional learning program being offered by Deakin University, Australia and the Catholic Education Office Melbourne. Teachers plan and conduct projects in which they identify an issue to be addressed at their school; research the issue identified; develop and implement an intervention to address the issue; and report on the intervention. Teachers have the option of gaining credit towards a Masters of Education by submitting their work for formal assessment.

The participants in this mixed methods study are teachers who are undertaking the post-graduate units embedded in a professional learning program. Teachers are invited to undertake anonymous online pre- and post- surveys with both qualitative and quantitative data collected. Data is also collected through teacher interviews and collection of classroom artefacts including planning documents and work samples.

Initial findings illustrate that a practice-based approach to Masters studies engages teachers as creators rather than reproducers of knowledge. The use of a range of print and new digital media both within the design and operation of an online learning environment and pedagogies for effective adult professional learning enable flexible and creative pedagogical responses and knowledge creation by teachers.

Introduction

> *If being an educator in the 21st century centrally involves the capacity to inquire into professional practice, then the notion of inquiry is not a project or the latest fad. It is a way of professional being… if the task of educators is to develop in children and young people the learning dispositions and capacities to think critically, flexibly and creatively, then educators too must possess and model these capacities (Reid, 2004).*

Recent research into teacher professional learning in Victoria found that teachers who undertake professional development activities do not necessarily change their practice, however positive their learning experience. Evidence showed that,

> *… enhancements to teacher expertise may not necessarily lead to changes in teaching practice. While almost all Victorian teachers in the survey indicated that they have modified their teaching to some extent as the result of their professional development, almost as many said that they have only done so 'occasionally' (43%) as have done so 'frequently' (49%) (Victorian Parliament, 2009, p. 10).*

This is of concern as a growing body of research confirms teacher quality as one of the most important factors influencing student achievement, more important than class size and school size (Darling-Hammond, 2000, 2003; Lovat, 2003). This has resulted in positioning teacher professional learning – as distinct from professional development - as a priority area in education, locally (Victorian Parliament, 2009).

Professional learning can be considered as growth in teacher expertise, a qualitative change, whereas professional development is regarded as a set of activities teachers take part in (Education and Training Committee Report, 2009). Professional learning is something that teachers do for themselves and in which they actively participate (Easton, 2008). Professional learning has come to be considered as a long-term process that includes regular opportunities and experiences planned systematically to promote growth in the profession; what Cochran-Smith & Lytle (2001) call a 'new paradigm'.

Context: A new paradigm for teacher learning

Deakin University School of Education has introduced school-university and school-educational authority partnerships designed to support teacher professional learning and/or gaining of post-graduate qualifications specialising in contemporary literacy education. Practice-based inquiries are emphasised as is the building of collaborative learning cultures and communities. Deakin staff scaffold and support teacher learning both within an online learning environment and onsite via negotiation. Pedagogies emphasise effective adult professional

learning principles and enable flexible and creative pedagogical responses and knowledge creation by teachers.

Working as individuals or in teams, teachers research their own literacy education practices, engaging with core and elective readings; identifying issues to be addressed at their school (or an associated educational setting); developing and implementing projects which address the issue/s; and reflecting and reporting on project implementation. The issues are self-selected addressing localised areas of interest in contemporary literacy education.

The accredited units of tertiary study focus on self-selected issues in literacy education within the context of a professional learning program. Examples of areas of interest include (but are not restricted to) teaching contemporary literacies; specialisation of literacy in curriculum discipline areas; and literacy pedagogy informed by an assessment for learning focus.

The opportunity is open to teachers with four years of tertiary study, inclusive of a recognised teaching qualification. Fees are funded by the school or educational authority (Commonwealth Supported Places).

Credit for Prior Learning (CPL) is available and is negotiated on a case-by-case basis on enrolment.

Teachers enrol in a Masters of Education with pathways into:

- a Specialist Certificate in Education (/2 units)

- a Graduate Certificate in Education (4 units)

- a Masters of Education (8 units).

It is expected that teachers working fulltime would generally undertake two units per year for four years to gain an eight-unit Masters in Education. There are also options for exiting early including a two-unit Specialist Certificate in Education or a four-unit Post-Graduate Certificate in Education. Pathways into Specialist Certificate, Post-graduate Certificate and Masters of Education are shown in table 1.

Table 1: Pathways into Specialist Certificate, Post-graduate Certificate and Masters of Education

Specialist Certificate (2 units)
EEL701 Professional Learning and Literacy
EEL702 New and Traditional Literacies and Diverse Students
Post-graduate certificate (4 units) *2 units CPL available*
As above (EEL701 and EEL702) PLUS
EXE740 Independent Reading Study: Action Research Focus
EEL700 Knowledge Creation in the Media Age
Pathway Masters in Education by Coursework & Research Paper (8 units) *4 units CPL available*
As above (EEL701, EEL702, EEL700, EXE 740) PLUS
EXR780 Research Perspectives and Practices
EXR790 Research Design and Development
EXR796 Research Paper A and EXR797 Research Paper B (2 units equivalent)

These pathways are **practice-based** and have been specially designed to deepen teacher learning issues and practices related to their own

teaching of literacy. The units of study engage teachers in inquiries, identifying issues which require addressing, reading and researching around the issue, formulating research questions and designing implementation plans, implementing the plans and reflecting and reporting on the outcomes. Teachers collect evidence of the impact on their own and student learning. To give the reader an idea of the units of study, descriptions of the context and assessments of the two first units are included in table 2.

Table 2: First year units in practice-based Masters of Education

First year units in practice-based Masters of Education
EEL701 Professional Learning and Literacy This unit examines strategies and resources used to assist teachers to develop their own understandings of key aspects of literacy teaching and learning. Methods of facilitating key skills needed by teachers of literacy are examined, especially the ability to determine and address the literacy needs of individual students and to differentiate instruction to meet these needs, and the ability to orchestrate all aspects of the literacy classroom. **Assessment (2 x 2500-3000 words)** Teachers will conduct research to identify an area of need that will become the focus for professional learning and then develop a program to address that need. 1. Identification of area of literacy need and professional development focus and the development of a program to address need (50%). 2. Report and reflection on the conduct of the program. This report will be presented either at the school or workplace community or to a small team of colleagues and be submitted to the lecturer for assessment (50%). workplace community or to a small team of colleagues and be submitted to the lecturer for assessment (50%). **EEL702 New and Traditional Literacies and Diverse Students** This unit explores ways in which teachers can engage diverse student cohorts in the development of new and traditional literacies. Core materials engage students with current debates, issues in the field, teaching strategies and resources. Participants select a specific area on which to focus their study and specialise through engagement with elective and self-sourced materials. Within the selected specialisation, participants research, develop, implement and reflect on a school-based application of their learning. Students will develop ways of applying their knowledge with either students or colleagues and reflect on this application. **Assessment (2 x 2500-3000 words)** There will be two pieces of assessment for related to participants' chosen area of study: 1. Critical reflection on readings related to a particular literacy-related issue. 2. Application of participants' learning from the study through design, implementation and reflection on EITHER specific teaching approaches used with students OR a presentation of a literacies issue.

Researching a pilot partnership program

The context of the research discussed in this paper is the piloting of the practice-based Masters in Education offered by Deakin University Australia in partnership with the Catholic Education Office Melbourne (CEOM) – the Collaborative Literacy Learning Communities Program (CLLC).

The participants are drawn from the CLLC professional learning program which focuses on literacy education and is co-designed and co-conducted by the CEOM in conjunction with Deakin University. School-based teams of middle years literacy leaders and teachers

drawn from 15 schools have been selected by the CEOM to participate in the pilot with a total of 50 teacher and leader participants.

Deakin University School of Education has offered teachers from this cohort the opportunity to CEOM to gain post-graduate qualifications as a result of their participation in the CLLC. In the first instance seven teachers have taken up this opportunity. 20 places will be offered in 2012.

Teachers undertaking the Masters of Education participate in the program and, in addition, complete the assessment requirements of accredited post-graduate units.

Three big ideas and three literacy interests areas

The CLLC and the accredited units aim to support the professional learning of literacy leaders and teachers and students' literacy learning outcomes through a program underpinned by the three big concepts:

- learning communities of practice

- the structures and characteristics of distributed leadership; and

- processes of teacher inquiry.

These three powerful ideas – learning communities, distributed leadership and inquiry learning - found to be effective in teacher professional learning, combine to build literacy leaders' and teachers' capacities.

Active collaboration in communities of practice and learning is characterized by individual and collective responsibility (Darling-Hammond and Richardson, 2009; Leadership and Teacher Development Branch, 2005) which offer intellectual, social and emotional engagement, including procedures for feedback of results and sufficient time, continuous follow-up, support and pressure (Villegas-Reimers, 2003). Connections and communication using offsite, online and school-based learning spaces offer literacy leaders and teachers the means to build understandings, confidence and productive relationships. Sustained job embedded, contextualised learning is intimately linked with school reform and may look different in diverse contexts, but includes monitoring practice over time to ensure that change processes are not derailed (McTaggart, in press, p.28).

Engaging teachers and students in creative opportunities for distributed leadership involves mobilising leadership activity within and across schools. Leadership is seen as primarily about influence and direction, grounded in activity rather than role functions (i.e. mutual enquiry, dialogue, partnerships). This emphasis acknowledges the increasing evidence to support a strong relationship between distributed patterns of leadership and improved student outcomes and the need for new ways of understanding, analyzing and making sense of teaching practices (Harris, 2008).

Inquiry-based, action-oriented learning is an alternative to 'top down' delivery styles (Education and Training Committee Report, 2009) with teachers adopting a research orientation, a self-questioning approach which leads to reflection and understanding, and from there to action (Nisbet, 2005). Inquiry processes of planning, action, observation and reflection (Kemmis & McTaggart, 1988) informed by evidence and analysis, building teacher knowledge and facilitating their professional learning. Teacher team inquiries enhance the professional quality and status of the profession by empowering teachers to develop insights and understandings to make their work more professional and improve their teaching practice (McTaggart, in press). Inquiries are focused on developing academic content and how to teach it to students (Darling-Hammond and Richardson, 2009; Easton, 2004).

Underpinned by these three big ideas the professional learning project and associated accredited units aim:

- to create a professional learning culture within and between school teams;

- to generate coherence and continuity of literacy teaching through new knowledge and shared language to describe literacy learning and teaching; and

- to improve middle years students' literacy outcomes.

Inquires charaterised by collaboration and distributed leadership practices, have been undertaken by teams of teachers and leaders into the following areas of literacy learning and teaching:

- increasing specialisation (complexity and technicality) of literacy in years 5–8 curriculum discipline areas;

- teaching informed by contemporary understandings of literacies such as multimodality; and

- pedagogy that is enacted through and energised by an assessment for learning focus.

Contemporary literacies involve engaging students with multimodal texts combine oral language, written language, visual, audio, spatial, gestural and tactile meanings. Multimodal literacies involve reading, listening and talking, writing, presenting, viewing, recording, locating, analysing, interacting with, responding to, designing, acting and creating digital and other texts (Cope & Kalantzis, 2000; Kress, 2003; Walsh, 2011).

Use of social networking technologies and digital tools

The CLLC learning program and associated accredited post-graduate units have used a range of face to face and social networking and other digital tools to support teacher learning. These include

- a wiki which is used a the main online organizing tool and repository of teacher and project information, professional reading and tools and intra-school discussion
- a blog used for inter-school sharing and teacher reflection
- microblogging tools used to tap into the 'backchannel' of discussions during face to face sessions
- Blackboard Management System for those enrolled in accredited units to access further readings and resources and assignment information.

The incorporation of the social networking and digital tools have two inter-related purposes: to engage and model the use of tools that literacy teachers will then use with their students.

Research methodologies, data collection and timeline

A research project exploring the effectiveness of the impact of the pilot project has been undertaken with the major question underpinning the research:

How does literacy leader/teacher participation in the CLLC impact on literacy leader/teacher learning and on student outcomes?

Inherent in this question is the effectiveness of the participation in the accredited units.

Teams of literacy leaders and teachers from two schools have enrolled in the accredited units. The discussion in this paper concerns one of these school teams – from St Anne's. The team consists of four teachers, three female and one male. Three of the teachers are in their first three years of teaching. The fourth, the literacy leader, is an experienced teacher of twenty-five years.

Evidence of impact of the CLLC on their learning was gained through administration of online surveys of all teachers in the cohort and case studies into the learning of teachers from three participating school teams including St Anne's.

The methodologies employed to undertake the research integrated with characteristics that underpin the CLLC and associated units. Teachers were engaged as researchers of their own practice through participatory action research (Kemmis & McTaggart, 2005) with formal research element enriching deployment of participatory action research as a means of professional learning. This approach ensured that the research was conducted *with* teachers rather than *on* teachers; and in so doing sought to add to teacher capacity.

While the research used a mixed-methods design qualitative and quantitative research, this paper draws on the qualitative case study of the teachers at St Anne's.

Data was collected from teachers from the school-based teaching team who responded to an invitation to particpate case studies. Initially these focused on the teaching team and then narrowed to particular teachers over the course of the research. Case study data included responses to

open-ended questions asked in teacher interviews; teacher reflection in the online CLLC wiki; researcher observation during professional learning days and in situ in their Professional Learning Team and classrooms; through interview with Literacy Leaders and Principals; and through document analysis of meeting agendas, minutes and planning documentation.

Data relating to student performance is being collected by teachers as part of their participation in the CLLC and made available to researchers. Student data include the usual informal and formal assessment tasks and work samples undertaken by students as part of their literacy school program including assessments developed as part of the CLLC. Student focus groups – twelve students from each of the three schools were also conducted to enable students to comment directly on the impact they perceived the CLLC to have on their teachers. This data is still being collected.

The integration of the CLLC professional learning program, the accredited units and the research is shown in table 3:

Table 3: Integration of the CLLC professional learning program, accredited units and research

2011	Professional learning		Accredited units	Research
Term 1 Feb-April 2011	Ongoing online and school-based communication and inquiry	CLLC Literacy Leaders Offsite Day CLLC Leaders & Teachers Offsite Day 1	EEL701 Professional learning and literacy	Approval of National Ethics Application by Deakin University Ethics Committee and CEOM Research Division Distribute Plain Language Statements and Consent Forms to participants Selection of three case study schools Implement survey and interview questions Observation of team at CLLC Day 1 Field trip 1 to each case study school: PLT and teacher interviews
Term 2 Apr-June 2011		CLLC Leaders & Teachers Offsite Day 2		Observation of team at CLLC Day 2 Field trip 2 to each case study school: teacher interviews and classroom observations; students focus groups
Term 3 Jul-Sep 2011		CLLC Leaders & Teachers Offsite Day 3	EEL702 New and traditional literacies and diverse students	Observation of team at CLLC Day 3 Field trip 3 to each case study school: teacher interviews and classroom observations; students focus groups
Term 4 Oct-Dec 2011		CLLC Leaders & Teachers Offsite Day 4		Observation of team at CLLC Day 4 Field trip 4 to each case study school: teacher interviews and classroom observations; students focus groups Administration of survey (post)

Enrolled teachers have captured their learnings in their assignments for the accredited units which have seen them documenting their inquiries and sharing these with colleagues.

Case study: St Anne's Primary School

Established in 1932 in an outer suburb of Melbourne, St Anne's Primary School presently has over 380 students. The school is committed to building a learning culture to enhance student learning and wellbeing. Children are expected to contribute to their own educational journeys with inquiry being a major vehicle for this. The school prides itself on utilising the latest digital technologies to meet the needs of the 21st Century learner. Commitment to teacher professional learning, team work and team planning is strongly evident and supported by development of dedicated centre and planning rooms.

The Index of Community Socio-Educational Advantage (ICSEA) indicates that nearly half of students (46%) come from advantaged families where parents are employed in either professional, or skilled/trade fields. Almost all students were born in Australia with just 6% with a language background other than English.

On entry to the CLLC, the Professional Learning Team developed an inquiry focus that emanated from the installation of Interactive Whiteboards (IWBs) into all classrooms. The team was formed mainly from mid to late career teachers who lacked confidence in the effective use of IWBs. The purpose of the inquiry was to skill the team through researching the use of interactive whiteboards to further enhance literacy in the Years 5 and 6 classes (students aged approximately 10-12 years of age).

Their initial focus question was:

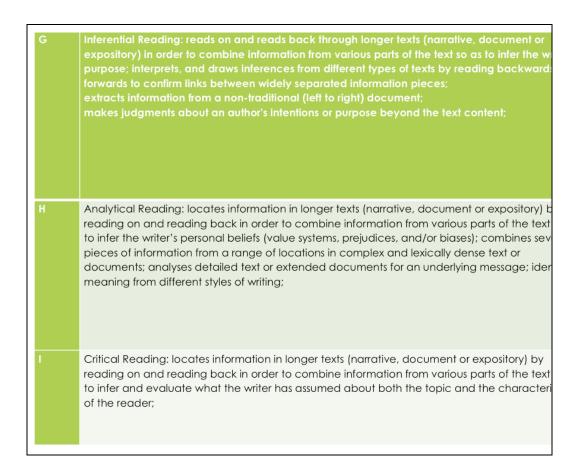*How can we use interactive whiteboards to further in enhance literacy in the Middle Years?*

The team sought to engage their students through contemporary technologies and enhance their literacy program, however a change of personnel at the end of 2010 resulted in a re-focussing of their inquiry.

The team agreed that the decision to solely focus on teacher learning failed to focus on the impact that teacher learning had on students' learning. The new Years 5 and 6 team, consisting of early career teachers were confident in using contemporary tools. They decided that the focus question was a) too broad b) did not have enough depth, c) didn't have enough consideration for student learning d) was not relevant to the new team. They agreed on a new inquiry question:

How can the use of digital technology further develop students' comprehension?

Evidence of student achievement from the end of 2010 and beginning of 2011 showed that over 50% of students in Year 5/6 are operating at the 'higher thinking' levels of comprehension according to the Progression of Reading Comprehension. They were concerned that student learning varied significantly depending on where they sat in the Progression of Reading Development (Griffin, Murray, Care, Thomas & Perri, 2008) and were keen to ensure that all students were engaged with reading and improving their capacities.

Figure 1: Extract from the Progression of Reading Comprehension

G	Inferential Reading: reads on and reads back through longer texts (narrative, document or expository) in order to combine information from various parts of the text so as to infer the w purpose; interprets, and draws inferences from different types of texts by reading backward forwards to confirm links between widely separated information pieces; extracts information from a non-traditional (left to right) document; makes judgments about an author's intentions or purpose beyond the text content;
H	Analytical Reading: locates information in longer texts (narrative, document or expository) b reading on and reading back in order to combine information from various parts of the text to infer the writer's personal beliefs (value systems, prejudices, and/or biases); combines sev pieces of information from a range of locations in complex and lexically dense text or documents; analyses detailed text or extended documents for an underlying message; ider meaning from different styles of writing;
I	Critical Reading: locates information in longer texts (narrative, document or expository) by reading on and reading back in order to combine information from various parts of the text to infer and evaluate what the writer has assumed about both the topic and the characteri of the reader;

The team wanted to improve students' reading comprehension particularly at the analytical and critical stages of reading. Aims for student learning included:

- to engage with multiliteracies with the focus on digital literacy

- to use the skills within their zone of proximal development (Vygotsky, 1978) on the PRD

- to apply the elements of digital literacies to other learning

- to become more reflective through the use of journals.

Working as a team, teachers developed and used a common language around reading comprehension and digital literacy. They discussed and developed understandings during fortnightly literacy Professional Learning Team meetings undertook relevant professional readings and analysed a variety of student data. These discussions informed the direction teachers take to further student comprehension. Teachers tracked and monitor edstudents and bring evidence of their progression to each meeting for further intervention.

The team was influenced in particular by a number of readings from the areas of contemporary literacies and assessment for learning. Quotes which resonated strongly with the teachers included:

21st Century education integrates technologies, engaging students in ways not previously possible, creating new learning and teaching possibilities, enhancing achievement and extending

interactions with local and global communities (Contemporary Learning: Learning in an Online World MCEETYA 2005)

The data needs to provide teachers with curriculum relevant information and needs to be seen by teachers as something that informs teaching and learning (Timperley, 2008).

The challenge for literacy educators is to consider to what extent digital technologies can be incorporated within classroom literacy programs without reducing the importance of the rich, imaginative and cultural knowledge that is derived from books (Cope and Kalanzis, 2000)

The PLT worked to ensure that a range of data informed their decision-making. This required maintenance of evidence, so that individual progress and needs were monitored and reflected on and learning experiences planned which allow students to operate in their zone of proximal development (Vygotsky, 1978).

To meet the goals for student learning, a plan for teacher learning was developed. It included:

- engagement in Digital Literacy Professional Development by two team members who also took responsibility for sharing their learning with other members

- participation in more literacy-specific interactive whiteboard professional development

- increased use of current technology e.g. ipods, whiteboards, ipad and audio books.

- development of a common language around reading comprehension and digital literacy

- linking of eLearning teaching and learning sessions directly to the Inquiry question

- utlisation of an intranet page

- development of individual student blogs

- regular meetings of the team

- collegial learning around the use of other digital technologies e.g. blogs, ipads, wikis

The teachers highly regarded showing that best teaching practice is based around evidence and using assessment data to improve teacher and student learning. They saw evidence in board terms and decided that to gain insight into student perceptions about their capacities as readers and ways to offer them further support in their learning, student interviews would be undertaken with three students from each class:

one each considered to be functioning *below*, *at* and *above* the reading comprehension levels defined by Progression of Reading Development.

These were viewed as a team and highlighted for the teachers the different levels of engagement with reading by students. Many who were performing at lower standards seemed disengaged from print literacy practices and teachers were eager to attend to their negative attitudes through the use of digital tools with the ultimate aim of improving students' reading capacities.

From its formation the team displayed a strong commitment of professional behaviour and distributive leadership. This is shown in the active participation of all team members in group reflective discussions and decision-making. It is also evident in quotes such as:

> *We believe in empowering everyone to make his or her job more efficient, meaningful and effective. We believe under distributive leadership that everyone matters and we value tapping into the expertise, ideas and effort with everyone involved in our team (Literacy Leader, St Anne's).*

Working with students: Contemporary literacy learning

When all members of the team were comfortable with the use o interactive whiteboards they introduced an iPad and an IPod into each classroom. They developed intranet sites for each class, which has links and information such as homework tasks for students. They created a blog for each of the Year 5/6 classrooms and invited a teacher from another school to share knowledge on developing and maintaining a blog particularly focusing on the issues of parental permission and cyber safety.

They also invited a past student (now in Year 9) to speak to the children about blogging protocols, discourse and maintenance. Students learn that blogs require heightened attention to correct writing and careful selection of images. As the students explained,

> *In a blog you have to spell correctly. You're not allowed to use any texting. It actually has to be written correctly and spelt correctly. It has to be perfect as it's a published piece (Poppy)*

Literacy contracts formed a major part of the team's literacy program. Teachers developed a number of tasks related to an inquiry topic, including 'must do' and 'can do' activities, giving students choice. For example an inquiry topic into contemporary technology included tasks such as:

- reading and comprehending a newspaper article about smart phones
- playing an internet game about cyber safety and writing an explanatory piece of writing

- reading a newspaper article about various technologies and m how making predictions about how our lives will change as a result of technology by the year 2020

- reflecting on their blog about their reading and writing goals and progress.

When asked about the benefits to student learning the teachers' responses indicate a broad range of benefits. For example in the area of articulating and presenting insights into books studied in literacy circles, the use of cameras to capture, playback and reflect on learning has been evident. As one teacher explains,

> *We're using video cameras as a way of monitoring the groups and also as a learning tool for the students. The students engage in literature circles, then undertake a reflection about their reading and do a presentation about their understanding of the book. Teachers film them sharing their thoughts and ideas about the book and then the whole class watches and gives them feedback on the quality of their discussion. Over time we're seeing the complexity of their understandings grow… and their capacities to articulate them (Sienna)*

When asked how the benefits for her range of students, another of the teachers, Tina, described the impact on students' engagement and on reading comprehension in particular. While the students were re-engaged with their literacy learning, many students continued to require scaffolded support in inferential reading.

> *There's been a big change in their engagement. They are all very excited and desperate to be able to use the technology. In their learning I think it differs for different students. Those reading at the analytical end do that automatically whereas with or without technology the students that aren't quite at that inferential reading need more support and assistance. Even though that the technology is helping engage them, they need support in finding it or in looking for inferences (Tina)*

The need for explicit focused teaching remained as important as ever for students to develop strong skills in comprehension. Through the use of digital tools, however students were exposed to a broader notion of comprehension, for example the use of image and audio in text.

> *There are new skills that come with digital literacy such as interpreting pictures or that reading between the lines of what that music is implying. Or with an episode of a digital story, we introduced it by showing only the writing and asking what each sentence might mean. Then when we showed the picture, the digital episode, we made a comparison. The text on its own doesn't give you the full story but when that picture is added or when a sound effect is added, or when music is added, it creates a whole new meaning. So it's looking at those visual and audio elements too (Sienna)*

In addition to developing traditional literacy skills and capacities, students have been seen to develop technical, organizational and personal learning skills. For examples, students have acted as experts on some aspect of digital literacy such as using a microphone or posting a blog post. It has become clear to teachers that some students are more disposed to try something new while others need encouragement to set out of their 'comfort zones'. Skills in navigation and file saving have required increased organizational capacities.

Conclusion: Early findings

Too often learnings remain in the abstract; as knowledge known but not as knowledge enacted. In the case of teacher learning this amounts to a wasted opportunity for teacher learning to impact on students. This is the equivalent of a medical practitioner learning about a cure, but not putting knowledge into practice where it can help patients; or a farmer not putting knowledge into practice where it can improve crop quality. Investments in teacher learning have to impact on a teacher's capacities and their practices, so impacting on student experience and student outcomes.

The CLLC and associated accredited units have been an experiment in proving cultural change: for leaders, teachers and students. Teachers enrolled in accredited units have captured their learnings in their assignments which have seen them documenting their inquiries and sharing these with colleagues.

The teachers have had to re-think what it means to engage in ongoing learning, rather than have experiences provided for them. It has also involved them in transformational professional identity work, occurring at numerous levels simultaneously.

On one level, teachers have been transforming into inquiring researchers, challenging taken-for-granted beliefs; tolerating tentative views; developing an openness to new views; tolerating ambiguity as they try something new, monitor the change and judge impact. It has meant learning about research and how researchers do their work; developing a self-questioning persona so that this becomes 'how I approach my work' or ' a professional way of being' (Reid, 2004). This calls for a new way of thinking about professional learning – from something that others provide for you, to something you commit to on behalf of oneself, one's colleagues and one's students.

On a second level, teachers have been transforming into collaborators as they develop trusting, respectful relationships with colleagues within and across schools. This has called for increased honesty and transparency about the actual performance of students and the actual implementation of pedagogy and assessment rather than the 'stated' performance. This kind of transparency can be both exposing and uniting. It is the antithesis of teacher competition; requiring collective responsibility for students and close listening to one another and to students and parents. Again it has called for avoiding a rush to 'knowing' as they engage in ongoing dialogue, seeing things from different points of view and really understanding what others are saying.

A third level of cultural change has been that of transforming to leading own and others' learning. This was perhaps the most difficult of the three big ideas for some teachers to commit to as it sits uncomfortably in some contexts with traditional hierarchical forms of leadership.

For academics the pilot has brought the issue of differentiation to the context of professional learning programs and accredited units challenging previous models of provision in the same way that differentiation in the classroom challenges the curriculum and pedagogies used by teachers. Differentiation has required closer engagement with the situated issues of teaching teams. As teams have taken individual pathways they have sought guidance and feedback. Differentiation takes many forms: different interests in terms of content as teams develop personalised inquiries; different entry points in terms of team processes, team dynamics, protocols and cohesion. These differences have always been there, however they are amplified by the foregrounding of differentiated context. This requires academics to move to the role of critical friend engaging closely with the contexts of teachers.

The finds offered in this paper are interim and so partial. However the model, which is set to expand appears to a useful one in changing teachers professional identities. As one teacher describes it,

> *The experience has changed the way I work as a teacher. I used be 'stand up and deliver' to my students. I am not that person any more. I listen to student voice and negotiate their work with them. We are all responsible for learning. We look at the curriculum together and their assessments and set learning goals. If I don't know something, like how to make a wiki, I'm like 'let's find out together'. Its completely different and I couldn't go back. It's just not me anymore.*

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