Why Virtual Mentoring? Impacts on Professional Learning and Development

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Abstract

Population growth, demographics, advances in technology, globalisation and associated economic imperatives are a few of the drivers behind the changes we are experiencing. In response, some research studies suggest that we will see a shift in social values (Wilson, 2009), as well as a re-framing of notions of what constitutes 'knowledge'. These factors have significant implications of the 'how', 'what', 'where' and 'why' of learning, including education practitioner Professional Learning and Development (PLD). Issues such as sustainability will become increasingly important, as will the ability to respond rapidly to novel situations and ill-defined problems. These all call for alternative approaches to PLD.

The range of affordances of a virtual environment, when complemented by virtual mentoring and an online Community of Practice (CoP), can be exploited to provide PLD that has flexibility of location, choice, time and approach. Educators can therefore, within their own context, build and shape their knowledge and skills. Virtual mentoring has great potential to support this form of PLD, in part by developing learning partnerships based on mutual respect and trust. The virtual mentor wears many 'hats' in this role, including offering support for innovative practice, boosting confidence, help with career options and progress, and asking the 'hard questions'.

The paper has two main aims; 1) to describe the roles of a virtual mentor working in a Virtual PLD initiative that has been offered in New Zealand from 2010 to date; and 2) to present and discuss key findings from the associated research study, including evidence of changes in the participants' roles, which have resulted in, for example, shifts in beliefs about learning and teaching, corresponding changes in professional practice, and an increase in the development of students' metacognitive skills.

Keywords: virtual mentoring, professional development, online communities of practice.

1. INTRODUCTION

It may sound rather cliched, but it is worth re-stating: the world is changing; and population growth, demographics, advances in technology, globalisation and associated economic imperatives are some of the drivers behind this change. In response to these changes, some research studies suggest that a shift in social values will occur (Wilson, 2009), including a re-framing of notions of what constitutes 'knowledge'. These factors have significant implications for the 'how', 'what', 'where' and 'why' of learning, including education practitioner Professional Learning and Development (PLD). Issues such as sustainability will become increasingly important, as will the ability to respond rapidly to novel situations and knotty problems. These all call for alternative approaches to PLD.

Shifts towards contextualised, personalised, self-paced learning experiences, underpinned by the development of an online professional social identity, are already challenging notions of what actually comprises PLD provision. This challenge means that change is not a simple process because it requires wider understandings around expectations of what PLD should be and what it should provide (Stoll, 2004), and also requires "leadership support and professional development … [to] facilitate adoption" (Davis, 2011, p. 143).

There area a range of affordances available in a virtual environment, when complemented by virtual mentoring and participation in an online Community of Practice (CoP). These can be exploited to provide PLD that retains flexibility of location, choice, time and approach. Educators can therefore, within their own context, build and shape their knowledge and skills. Virtual mentors can help develop learning partnerships based on mutual respect and trust, whereby they can offer support for innovative practice, boost confidence, help with career options and progress, and ask the 'hard questions'.

This paper has two main aims: 1) to describe the roles of a virtual mentor working in a Virtual PLD initiative that has been offered in New Zealand from 2010 to date; and 2) to present and discuss key findings from the associated research study, including evidence of changes in the participants' roles, which have resulted in, for example, shifts in beliefs about learning and teaching, corresponding changes in professional practice, and an increase in the development of students' metacognitive skills.

2. PROFESSIONAL DEVELOPMENT

It is hypothesised that the context in which knowledge and skill development occurs effects how, or if, it is applied in other situations and settings (Lave, 1997). For example, Carraher, Carraher, and Schliemann (1985) found that a trader could perform complex calculations while trading on the street, but was not able to perform the same calculations within a formal education setting. As such, it can be postulated

that an education practitioners' professional knowledge is inextricable from their domains and contexts (Cranefield, Yoong, & Huff, 2011), beliefs about learning and teaching (Cranefield, Yoong, & Huff, 2011), interpretive frameworks (Richardson, & Placier, 2001), and routines and practices (Handal, 2004).

Contextualised PLD, which recognises the sociocultural considerations of learning, has been reported to also have a positive impact on student learning. Timperely (2008) explained this is because there is a direct connection between principles of effective teaching practices, recognition of relevance, and consequent adaptation of those practices to local circumstances. As such, educators are more likely to apply strategies to address known issues around student learning in their specific learning community (Timperley et al, 2007). While engaging in this process they also engage in the exploration, development and application of conceptual frameworks that encourage consideration of their students in a new light (Timperley et al, 2007).

Sherry and Gibson (2002) identify further critical aspects of PLD. These include access to resources and expertise over an extended period of time, as well as clear recognition of the mutual benefits to all stakeholders who will be affected by any changes that occur. Additional complexity is created by the fact that virtual PLD provisions "cannot be separated from their ecological contexts, or from the educational activities that they enhance" (Peled, Peled, and Alexander, 1994, p. 49). Sherry (1998) explained the aim of PLD is:

> to bring about major change in all of the interconnected ecological systems, including classroom accommodations, school modifications, centralized policies, visions of learning, and beliefs and attitude-based behaviours (p. 141)

As such, the focus cannot be only individual participants, but must include other key stakeholders and policy making bodies.

1. VIRTUAL MENTORING

By definition, virtual mentoring is based on practices developed in face-to-face contexts, but which occur at a distance via, in this paper, computer mediated communication (CMC) (including mobile devices). Virtual mentoring may also be known as distance mentoring, remote mentoring, tele-mentoring, and eMentoring. With all except tele-mentoring (which tends to specify mentoring over the phone), a virtual mentor works with a mentee using both synchronous (webinar, text chat, VOIP such as Skype, and phones, for example) and asynchronous (including emails, discussion forums, blog posts, and comments on posts) tools. The processes are similar in that they relate to two people working together in a mentoring relationship, although in different geographic locations. In other words, a virtual mentor might be located in Kaitaia (on the North Island of New Zealand) and working with someone in Dunedin (on the South Island of New Zealand). The virtual mentor may be working from home, partly based in an office environment, or completely based in an office.

Mentoring, either face-to-face or virtual, has many definitions, and these often vary depending on the context in which the mentor relationship is formed. In part, the range of definitions indicate some of the complexities of mentoring. In this paper the author has selected a definition by Hay (1995) as it is inclusive of a range of mentoring environments:

> Mentoring is a developmental alliance between equals in which one or more of those involved is enabled to: increase awareness, identify alternatives, initiate actions and develop themselves (p. 3).

One of the key things to note in this definition is Hay's focus on the developmental aspect of mentoring, as opposed to a more functional approach. Where there is a developmental approach, the mentor works with a mentee to help them develop personally and professionally. There is trust that, when a school, institution or organisation is funding the initiative, the mentee's development will benefit all parties involved. In a developmental model, therefore, there is respect for the individual, as well as a focus on school, institutional and/or organisational goals.

Hay's definition was underpinned by the understanding that the mentee is given voice so that both the mentor and mentee became as Stokes explained (2011) more aware of shifts in perspectives and thinking, "eventually introducing conflict to promote self-examination and further development of alternative perspectives" (p. 8). Other factors Stokes identified as critical to the mentoring relationship were motivation, recognition and celebration of positive growth, and the provision of "a mirror… to extend the...[mentee's] self-awareness" (Daloz, 1986, in Stokes, 2011, p. 8). These factors helped mentor and mentee watch for indications "that the relationship may be transformative and growth producing for both partners" (Stokes, 2011, p. 8).

3. OVERVIEW OF THE VPLD

The VPLD initiative was instigated and funded in October 2009, by the NZ Ministry of Education[1]. The VPLD model and approach was trialled and evaluated in 2010 with with nine secondary and primary school teachers and one tertiary teacher across a wide range of disciplines. It was then rolled out in 2011 with a total of twenty teachers and principals. This number increased to 26 in 2012, and 46 in 2013. In 2013, there are 5 funded virtual mentors. Two are contracted for 0.6 (project leader) and 0.7 EFTs. Three are contracted for 0.1 and they work purely with the mentees, rather than being involved in project administration and research.

The aim of the VPLD programme, and associated research study, was to develop a model of Professional Learning and Development (PLD) for education practitioners

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based on authentic and meaningful learning and teaching contexts using virtual tools and services. Key foci were:

- improving student achievement;
- improving capability of participants;
- creating effective learning communities;
- facilitating virtual mentoring; and
- working with wider education communities.

The VPLD programme has no formal 'content', associated accredited institution, or formal assessment. Instead, the programme offers a customisable, individualised PLD experience in which there are multiple ways to participate (see Fig 1). The programme is of three years in duration; in the first two years education practitioners work on projects that interest them, driven by their own investigation and based on the needs of their students, school and school community. In the third year, participants focus on transitioning into a mentor role,or choose to continue work on their original project. The PLD itself is subsumed within the participant's role of being part of their own school's/institution's community, rather than being the central focus as can happen with more traditional approaches to PLD.

The VPLD programme has three main online spaces:

1. An online CoP (Ning);
2. A 'sandpit' area and access to self-paced resources (Moodle); and
3. Adobe Connect (a webconferencing tool that enables interactive synchronous communication)

The VPLD online CoP is an active space, with 230 members at the time of writing, which offers a comfortable environment to discuss and challenge theories, and views about pedagogy and practice. This activity is enhanced by the participants' eclectic combination of disciplines and sectors. Social structures (including agreements about interactions, processes, norms, and rules) are negotiated on an ongoing basis.

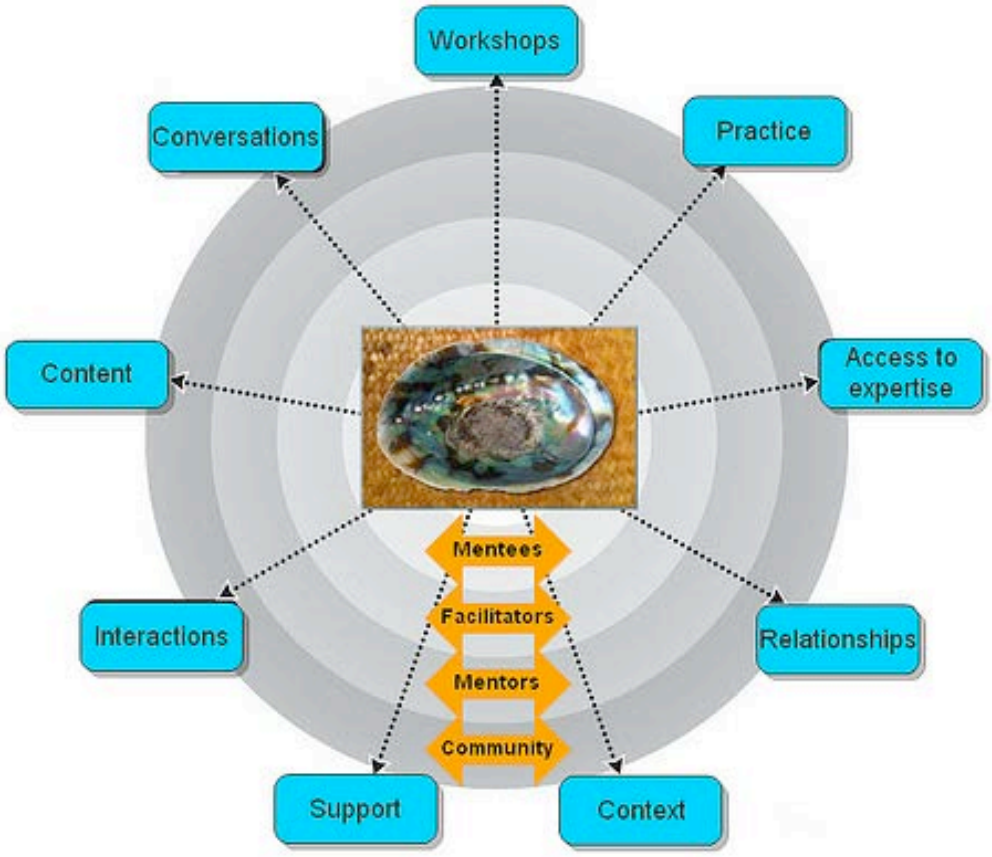
A variety of community building strategies are employed, including sending out a monthly e-newsletter that highlights conversations and contributions in the online CoP, as well as showcasing the work of community members and celebrating successes. There are also all-community webconferencing sessions, either to mark specific events, such as the end of the year celebration, or with a specific pedagogical and/or skills focus.

Each participant in the programme is partnered with a virtual mentor with whom they meet online, using Adobe Connect, Skype, or Google Hangouts, once a month for between forty-five to ninety minutes. Mentoring strategies are customised to suit the needs of both the mentee and the mentor, and during monthly meetings a variety of subjects are discussed including pedagogy, what the participant has been working on with their students, and how their students have reacted. The participant also identifies areas of support they need, and plans for 'next steps' and interim goals.

4. RESEARCH

Since inception the VPLD was studied by the author who aimed to collect qualitative and quantitative data to generate a rich, examinable body of evidence, which performs an iterative feed-forward function as well as providing outcomes and comparative longitudinal evaluation data.

The longitudinal research approach was included to capture evidence of emerging patterns and tendencies through repeated observations of the same variables over an extended period of time. Due to repeated observation on an individual level over time,



Owen, 2011 (Adapted from Digital Habitats, Wenger, White & Smith, 2009, p. 152)

Fig 1: Components of Virtual PLD that meets diverse requirements and interests of participants (Owen, 2012, adapted from Wenger, White, & Smith, 2009)

longitudinal studies, unlike cross-sectional studies in which different individuals with same characteristics are compared, make the observation of changes in attitudes, beliefs, and behaviours, more accurate (Anderson, 2005).

Five research questions were developed, including the main research question pertaining to this paper is: How does working with a virtual mentor affect participants' opinions about their own efficacy and teaching practice?

The tools used to collect data included (but are not limited to) three online surveys per year (January, June, and November/December), recorded discussions and notes from virtual mentor meetings, contributions from all areas of the VPLD online CoP, Webinar sessions, and emails. The surveys, designed with mainly open-ended questions, aimed to gather richer, fuller understandings of the experiences of the VPLD participants. The quantitative data were exported into Excel, analysed and interpreted. A qualitative approach was used to interpret the open-ended survey responses. Recurring words were noted as possible emergent themes and used as codes. Comparative methods of analysis were used during coding (Charmaz, 2008).

1. Results and discussion

Drawn from the large amount of data collected, the author has chosen to highlight and discuss emerging themes and trends. Each highlight or theme is illustrated with comments and observations gathered during the study.

Affective factors

An analysis of emerging categories and comments suggest that affective factors play an essential role in the mentoring experiences. The relationships built, along with feelings of bonding, support, empathy, and trust are as important, if not more important, than professional 'knowledge' and skills acquired. Respondents consistently indicated that virtual mentors provide timely support and engage in conversations that are directly related to their particular needs (*"I would have left teaching by now without the fresh new vision for education that the support of the VPLD programme and my mentor has given me"*, survey response 2013).

Fostering a positive environment that embraces non-cognitive factors also enables robust, informative discussions, where alternative points of view can be explored, as well as similar interests and goals. Virtual mentors were seen as playing a central part in this process:

> *Having a mentor to share ideas with, use as a sounding board ... and even from time to time vent frustration on...is a key element of the VPLD. It gives you an independent, completely understanding and knowledgeable critical friend to help....* (survey response, 2011); and
> *Having a great mentor...has allowed me to express ideas and thoughts and expand on these to focus and refine my thinking on many issues*

that I encounter or think about (survey response, 2013).

The reference to a 'sounding board' was revealing. The respondent saw their virtual mentor as a someone who would listen to their ideas, with no risk or adverse consequences because the mentor is external to their direct working environment. In addition, the mentor challenges thinking and actions, offer alternative perspectives, and can also "see when...[a] leader is part of the problem and highlight when (s)he needs to consider their own contribution to the situation" (Perry, 2013, Para. 5).

> *It is the contact that is always there reinforced by...[my mentor's] guidance, expertise and never ending patience. Her approach has been one that has been centered on the outcomes of both me and my students. It is also her genuine interest in all that we are doing and trying to achieve* (end of year reflection, 2010).

As such, the strengthening of identity and feeling of socially-mediated shared understandings and experiences can help decrease the sense of isolation, and strengthen resilience in the face of change. This combination appears to enable the individualised, long-term support of education practitioners, where they are also encouraged to build networks, thereby fostering the improved connections that form part of the sustainability of the approach ("*X has made every effort to link me with teachers who have common interests as myself within the...wider community as well*" - survey response, 2011).

Flexible individualised contextualised PLD

As described earlier in the paper, the VPLD programme utilises approaches to PLD that exploit the affordances of the virtual nature of the programme. As such, the participant does not have to be physically present at scheduled sessions, and the practitioner can tailor their participation to their ongoing work commitments.

> *I think it is really 'real' how the mentees are mentored in their own school setting so they can be honest about what they are experiencing and access support straight away - [they are] not taken out of school on special days for pd - it is integrated*

One respondent commented that "*I don't feel overburdened. Everything works alongside things I am already doing, and my current inquiry focus*" (survey response, 2012). Another participant commented that I "*see this as the way of the future and the most accessible, available professional learning for these current times*" (2011, survey response).

Vygotsky (1978, 1987) developed the notion of the zone of proximal development (ZPD), which suggests that opportunities can be provided where the gap between a learner's already assimilated knowledge or skills, and knowledge or skills yet to be

assimilated, can be bridged when assisted by a more advanced peer or teacher - a concept known as 'scaffolding'. In the process the participation and guidance are "mutual efforts...that can result in advances in learning for all participants." (Mentis, Ryba, and Annan, 2001, p. 3). The data from the VPLD study suggest that a virtual mentor, when working with an education practitioner to unpick various aspects of their practice and knowledge, while also helping to provide 'just in time' upskilling, support and access to resources, is in an ideal position to provide individualised scaffolding. As one participant indicated

> *monthly meetings with my mentor C have made all the difference. He has been able to support me when I encountered barriers, push me in new directions, provide encouragement and network me with the wider e-Learning community. He has been a huge resource....* (mentor notes, 2011)

Adoption of alternative approaches occurs when the participant either sees it as addressing their concerns (Davis, 2008) or their dissatisfaction with the status quo (Davis, 2008). The educators who do so appear more open to developing their own practice via, for instance, collecting student voice and outcomes as way of measuring the effectiveness of their own shifts (Sherry, Billig, Tavalin, & Gibson, 2000). As mentioned previously, VPLD participants identify and work on their own inquiry project, and develop their own goals, while being scaffolded through the process by their virtual mentor. One participant explained that "*Setting goals...and sharing them with a mentor has...been invaluable for my own personal reflection on my professional practice*" (webinar recording, 2011), and another mentioned the "*wonderful discussions...[that] provoke much thought and reflection*" (survey response, 2011).

Impact on teaching practice / student achievement

Theories of learning and teaching, and pedagogy are constantly revisited and discussed by participants, especially during meetings with their virtual mentor. The results suggest that individuals participating in the VPLD programme develop a sense of self-efficacy that motivates them to trial alternative approaches, and to initiate an iterative cycle of trial, error, and improvement ("*We have had time to try our ideas, to make our mistakes and to reflect upon our success*", survey response, 2010). Each participant's sense of self-efficacy is reinforced as they share their experiences with their virtual mentor and with other members of the VPLD online community, where their efforts are recognized and acknowledged, and development of 'voice' is encouraged.

> *It's hard to put this into words as it has been invaluable to my growth and development over the past 3 years. The power of mentors is amazing* (survey response 2013).

This has led to, for example, the design of pedagogically informed blended programmes of learning that align with standards and curriculum requirements. In one

example a respondent explained they had engaged in:

> *the progressive resolution of how to develop the middle-school math program to support the standards...at NCEA level, with corollary aims of enhancing the relevance of math to students' lives"*, survey response, 2010), while also enabling high levels of differentiation (*"Introduced moodle [sic] into my classroom as an additional way for extending able students*, end of year reflection, 2011)

At the same time the mentoring relationship enables high levels of differentiation. One mentee explained the actions they had taken and the provision of authentic learning opportunities:

> *[I] ...introduced moodle [sic] into my classroom as an additional way for extending able students* (end of year reflection, 2011).

Another participant reported that:

> *My students have commented that I am different, and teach differently. It's great"* (survey response, 2013).

In addition, there have been positive behaviours from students reported such as this from an end of year teacher reflection.

> *I see my students bouncing into the classroom, and where before they might be packed up and ready to go 10 minutes before the end of a lesson, now it's often tricky to get them to stop working!!*" (end of year reflection, 2011).

Many students have become empowered co-constructors of outcomes and facilitators of sessions, as well as more confident, engaged learners who are *"empowered ...to learn on their own terms"* (survey response, 2011). One respondent commented that his *"students' work has improved in quality and some parents are now coming to ask what I've done to their kids because they really want to do their homework"* (survey response, 2011). While it is problematic to suggest a direct causal effect between this PLD intervention and impact on student achievement of learning outcomes, improvements were reported, along with increased in the the assimilation and application of key competencies. One teacher, for example, after collating and analysing the eAsTTle data (numeracy) for 18 students, shared with their mentor that they felt as a result of being part of the VPLD programme,

> *It has been pleasing to see the positive movement of most of the students in their understanding and learning with a couple even going up 3 sub levels especially those students that were in the lower quarter for the initial results* (mentor notes, 2012)

The ripple effect: Emerging leaders and change agents

In 2011 a trend emerged from the study, that was termed 'the ripple effect', whereby it was observed that participants chose to undertake some type of either formal or informal roles, in their school and/or wider community, electing to work with between 1 and 200 colleagues each. This trend continued, and in 2012, the VPLD programme had 26 participants working with 829 staff, and in 2013 there are 46 participants working with 2,139 staff.

The participants taking on the roles appear to be self-motivated leaders and change agents, who carry forward learnings and guidance to their professional community and students. In part, this is because of increased confidence in skills and knowledge "*knowing that i have things to offer as well*" (mentor notes, 2011); and "*in my school community seeing myself as a mentor*" (survey response, 2012). Sherry and Gibson (2002) describe a similar result whereby "experienced teachers expanded their roles...shared their improvements in practice with their peers, and taught new members of their virtual learning community" (p. 182). In other words, a VPLD mentor working with one self-motivated teacher/school leader can potentially influence the professional learning and development of a large number of other practitioners, therefore increasing the impact on positive outcomes for students and the wider community.

One participant did indicate, however, that *"I would have loved to do something with PD with teachers this year. Unfortunately I haven't been given an opportunity to do so"* (mentor notes, 2012), which suggests that further work with school leadership and the wider education community is required.

Bandura (1963) asserted most learning is shaped by our experiences and we are likely to imitate, and in part, replicate what we have participated in; in the words of the oft used cliché is 'we teach as we have been taught'. The implications of this - given their immersion into a learning experience that recognises each individual's political, social, economic and personal drivers, while embracing them in a community of practice - is that VPLD participants working with colleagues are likely to replicate these experiences, at least in part. This tendency in turn may well have a significant impact on leadership and practice, as well as perhaps policy and the shape of education (including teacher education) in future years.

Challenges

As with most forms of PLD, there are challenges, some of which influence the effectiveness of, and satisfaction with, the VPLD programme. Some factors identified were beyond the control of the project team, but are still essential to be aware of.

Participants' frustrations were often linked to issues with the technology as opposed to technical skills (something that was also identified by Sandholtz and Reilly, 2004). While the roll out of ultra-fast broadband in New Zealand may help address some

challenges, others will still be faced. For instance, one respondent commented that

> *We have had an interesting yet frustrating start to our year with the technology the students should be using. We still have the issues now created for remote access, using our LMS, and in some cases even having the wireless disappear....To top that off it has been found that half the school is working off a switch so decrepit and old that, of the 50 schools the Tech who looked at it today works in, he has only seen one other* (Survey response, 2013).

Buy-in from senior management around initiatives is important, and where support may not be quite as strong as it might, working with a virtual mentor and an online CoP can be a lifeline. As one participant indicated

> *The role I hold is so very singular in my school. It's isolating and vulnerable without this resource. With it, I have ammunition to counter the cynics, and resources to share with my willing but under-skilled colleagues. It's fantastic* (survey response, 2013).

Finding enough time to participate fully was identified as an issue by a few respondents, although the accessibility of the PLD was felt to mitigate the time issue to some extent; as one member mentioned virtual PLD is *"good use of time rather than travelling to PD. [I] can do it at a time that suits...usually evenings*" (mentor notes, 2011). In addition, it must be acknowledged that in any self-motivated learning environment, participants will have a range of responsibilities, as well as the freedom to choose whether to engage (with or without genuine enthusiasm), and some will decline to embrace the opportunity (Bruckman, 2004).

The importance of self-nominated participants

Data has been collected that strongly indicates individuals, who are *nominated* for the VPLD programme[2], do not participate with the level of commitment required for transformation in teaching practice and related positive impact on student achievement. These findings align with literature that suggests that to be effective participants need to be self-nominating (e.g. Cameron, 2007). With self-nominated participants within the VPLD programme the speed of transformation of professional practice has been significantly higher than with nominated participants (80% of nominated participants from 2010 have taken 1 to 2 years to show shift, along with possible impacts on student learning outcomes). In contrast 80% of the 2012 intake are showing significant shifts in practice, and are reporting improvements in student achievement.

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2 For the pilot in 2010 all (10) VPLD participants were nominated. In 2011 (20) and 2012 (26) VPLD participants were mainly self-nominated then went through a rigorous selection process. In 2013 all (46) VPLD participants were self-nominated then went through a rigorous selection.

5. CONCLUSION

This paper has described the roles of a virtual mentor, and has illustrated some of the dynamics and possible results for education practitioners participating in a VPLD programme. Key findings from the associated research study have been presented and discussed. The results provide insights into the perceptions of participants about the impact of working with a virtual mentor, in particular on their own practice and professional identity and the knock-on effect for students' learning experiences. In addition, there are implications for PLD providing sustainable support for education practitioners as 'change agents' and leaders.

Virtual mentoring fits neatly alongside other forms of PLD - both formal and informal. Therefore, PLD can be tailored exactly to the needs and interests of the mentee, and they are empowered to choose what, how and where they participate. A final benefit is, virtual mentoring as a form of PLD is portable. If a mentee or mentor move context or location, they can still continue to work together.

Whenever we learn anything we are influenced by other people, our culture, our beliefs, by experiences we've had, the understandings we've developed about the world and the way it works, our current context...and how open we are to learning itself. Every human being's learning is therefore shaped by the people around them, even when they are not directly seeking to learn collaboratively. Virtual mentors can work to create spaces and opportunities where mentees can learn together, even when they are geographically disparate.

It might be argued that participation in the VPLD programme not only increases practitioners' ability to cope with change, but also helps participants develop strategies that help them celebrate and embrace change. It is important to note the role of the virtual mentor is critical for the personalised guidance and motivation that they provide, especially when participants are under stress. The combination of individualised support and guidance, a community of peers with whom to tease out and develop ideas, and access to relevant resources appears to have created a powerful, flexible system of contextualised PLD. In this safe, supportive environment participants have enthusiastically trialled and evaluated new approaches, developing skills and ways of thinking that can have a profound far-reaching impact ("*It has been a career changer for me,...I think that as a member of VPLD you feel truly valued as an educator but it does not stop there, as you make goals and advance*" - survey response 2013).

There are affordances built into the VPLD model that encourage and enable teachers to move at their own pace, in a supported, supportive environment, with access to all that they need to scaffold their learning journey: "*Thanks for the opportunity. I've learned much and been inspired over time, without pressure of instant results. That's what PD should be about*" (end of year reflection, 2010). Thus, if it is accepted that

student outcomes frequently mirror teacher performance (although this is a somewhat simplistic relationship), it would therefore follow that if teachers can be mentored and guided in their own continual professional development and thinking around learning and teaching philosophy(ies), there is a strong potential that the overall learning experience for students can be enhanced. However, it is still incumbent upon the wider education structures to act to minimise constraints that discourage, prevent or enforce.

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