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PST Online: Meeting the Need for Teaching Innovation for Virtual Schools

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Abstract. Virtual schools are no longer a pipedream: they are already with us. Pre-service teachers need to be prepared for this alternate teaching medium. Unlike blended learning in the classroom, new virtual schools have no need for physical classrooms, and students can be geographically distant from both each other and the teacher. This change in education delivery in schools will necessitate a new approach to curriculum design accompanied by a reshaping of discipline-based courses in higher education institutions in regard to teacher education. Exclusively online teaching changes the teacher/student dynamics and new skills, techniques and strategies should be developed. While there has been some online teaching for many years, initial teacher education has not prepared students for this new way of teaching. In this article the authors present the conceptual underpinning of the need for changes in teacher education and the perceptions of pre-service teachers in terms of their preparedness for virtual teaching. The data from a survey conducted with these pre-service teachers will inform the development of online resources that are part of a funded, ongoing project.

Keywords: virtual schools, online teaching, pre-service teacher education

1. Introduction

The use of technology in education is widespread in today's world and its affordances particularly support the provision of online education. In higher education, wholly online learning is common with external study (distance, off-campus education) offered by many universities. In schools, blended learning (a combination of face-to-face education and online learning) is widespread and well-known, with the Connected Classroom initiative in New South Wales providing a specific example of this (New South Wales Department of Education and Training, 2010). However, the virtual school movement has grown such that wholly online K-12 education is now a reality.

In the United States of America (U.S.A.), it has been reported that "virtual schooling is one of the fastest-growing areas in K-12 education" (Roblyer, 2006, p. 32) where enrolment "in fulltime online schools jumped from 200,000 in 2009–

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2010, to 310,000 in 2012–2013. This represents a 64.5 % increase in only 3 years" (Toppin & Toppin, 2015, p. 4). Australia also has a growth pattern in virtual schools. In New South Wales, the first virtual high school was *xsel* and, although this selective school has now closed, it has been followed by the advent of Aurora College in 2015. There has also been a long history of distance education via School of the Air across Australia, but virtual schools take online education even further. There are references to other initiatives (see, for example, http://www.virtualschoolsandcolleges.eu/index.php/Category:Virtual_schools_in_Australia).

The authors examine the literature about virtual schools and make a case for changes to teacher education programs to better develop pre-service teachers for new teaching and learning environments. As part of an ongoing Office for Learning and Teaching (OLT) funded research project, we explored pre-service teacher perceptions of their readiness for virtual school teaching via an online survey and report on that specific data here.

2. Background

Virtual schools, defined as accredited schools which deliver education almost solely via the Internet (Barbour & Reeves, 2009), have emerged around the globe, but have had their strongest uptake in the U.S.A. where it is estimated that thirty states have virtual schools (Morgan, 2015). Australia also has virtual schools and the start of a new virtual school, Aurora College, in New South Wales in 2015 is indicative of that state's government commitment, made in 2013, to extend quality education to rural and regional areas (New South Wales Department of Education and Communities, 2013). While there have been some criticisms of the quality and/or integrity of virtual school education (Barbour, 2011; Barth, 2013; Natale & Cook, 2012), there is strong acknowledgement that virtual schools can deliver education opportunities to students who might otherwise be unable to pursue particular studies due to a range of factors such as isolation, mobility (such as with military families), health issues, disabilities, lack of qualified teachers in the area or emotional issues such as bullying (Roblyer, 2006; Toppin & Toppin, 2015; Vasquez & Straub, 2012).

An important area of discussion for virtual school teaching is the capacity of the teachers to deliver in an online environment. Miller and Ribble (2010) argue that not all teachers "have the skills or temperament to be online instructors. Just as some people are not destined to be classroom teachers, there are some who should not be online teachers as well" (p. 5). One concern raised is that there is no systematic pre-service teacher education in terms of online teaching (DiPietro, Ferdig, Black, & Preston, 2010) and that "many teachers are transitioning from a traditional classroom to virtual teaching environments" (Richardson, LaFrance, & Beck, 2015, p. 19). DiPietro et al. (2010) argue that too little research has been done into what constitutes good online teaching in the K-12 environment and that, while 'best practice' documents have been written, these:

> often neglect the unique skills of virtual school teachers, indicating the need for research that focuses on the

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> instructional practices of K-12 teachers in virtual school settings. Lacking a body of research that focuses on the K-12 online arena, these documents also draw on research underpinning the instructional practices associated with post-secondary online settings (p. 11).

Current teacher education programs "prepare individuals for traditional classrooms, and they do so in isolated silos of pedagogy, content, field experiences, and to a lesser extent, technology" (Archambault, 2011, p. 74). They are geared towards face-to-face teaching where technology may be used as a tool for learning, but is not the medium for teaching and learning. Effective online teaching "necessitates a shift from a practice of controlling to engaging students' attention" (Murphy & Manzanares, 2008, p. 1061) and, with online learning increasing in the K-12 sector, teacher education programs will need to adapt to prepare pre-service teachers for this new milieu (Archambault, 2011). The project reported here is a first step in this development.

3. The Project

The growth of virtual teaching and learning in schools outlined in the last section and the lack of pre-service teacher preparation for these virtual environments in current teacher education programs led the authors to a successful Office for Learning and Teaching grant. Bull (2010) argues that "for the most part, teacher education programs are not yet preparing preservice teachers to teach in this [virtual] environment successfully" (p. 29) and this research project aims to begin to re-dress that gap.

The project, Pre-service Teachers Online (PST Online), will provide pre-service teachers and higher education institutions with a range of resources that can be used to enhance the online teaching skills of these initial teacher education students. As virtual classrooms become more common, these skills, currently neglected, will be more important for teachers, particularly those in rural and regional areas. By developing a website repository of these resources (cf. pstonline.info, currently being developed) that is freely accessible to anyone, the project can also assist current teachers with development of these skills to meet their changing needs. A further output of the project will be workshop materials that will be trialled at the project team members' institution in preparation for their use in more diverse studies. This will occur nearer the end of the project which is due to be fully reported in May 2016.

To assist in the development of the online resource packages, the authors conducted a survey of current pre-service teachers enrolled at their university. While experienced teacher educators, we were keen to link the online resources to the concerns or challenges identified by the pre-service teachers. Once these had been identified we began to build the website and we are organising short videos of experienced online academics discussing particular areas such as student engagement, resource selection, etc.

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In the next section, the authors report on the perceptions of the pre-service teachers as developed through the analysis of survey responses. Other aspects of the project will be reported in further articles.

4. The Survey

A survey was sent to all enrolled students in 12 initial teacher education programs at the University of New England (UNE). By including all enrolled students, we were able to gather rich data as the students ranged across all teaching sectors (early childhood, primary and secondary), encompassed both on- and off-campus students (which provided a wide range of ages) and included pre-service teachers at all stages of their program from first to final year. As a university where all students, regardless of study mode, are expected to engage with a learning management system (in this case Moodle), all participants have some familiarity with learning online.

The survey was delivered online and had several components. The first section of questions were demographic and provided information on age, gender, location of residence, course being studied and current academic year. This information enables us to correlate particular comments with demographic information as necessary. The second section consisted of Likert scale questions seeking the participants' perceptions in regard to their confidence in using Information and Communication Technology (ICT) and also their knowledge and confidence with a range of teaching skills.

The final section of the survey related directly to virtual schools and asked the participants the following questions:

- What factors do you feel are important in developing a positive online learning experience?
- What concerns would you have or challenges might you face if you were appointed to teach using online technology?
- How might you resolve these concerns or challenges?
- What resources do you feel you would need to help you in this area?
- Who might you need to provide assistance?

In terms of the findings, these questions became crucial as we moved into the resource development phase of our project. Two hundred and two (202) enrolled students completed the first section and 147 completed Sections 2 and 3 of the survey.

5. Findings

While the demographic data collected was interesting, providing statistics about the age, gender and location of participants, they have been reported in a companion paper and will only be dealt with briefly in this article to demonstrate the extent of student diversity.

As is the trend with enrolments in education courses at UNE, most of the participants in the survey were female, 167 (83%), with 35 males (17%). The majority of participants who completed the survey indicated that they lived in a capital city (69, 34%), with a regional city residence being the second largest of

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respondents (35, 17%) and small regional town/city the third largest (26, 13%), with the least being located in a non-regional city (3, 1%). The responses demonstrate a correlation with UNE's "typical" student: an online enrolled female aged in their mid-thirties. The respondents in this survey clearly showed a skew in this direction, as indicated in Figure 1, towards 36 to 45 years of age, with the second largest group the 26 to 35 years of age. The results clearly show that the majority of respondents in this survey were studying online, aged between 26 and 45 years of age and female.

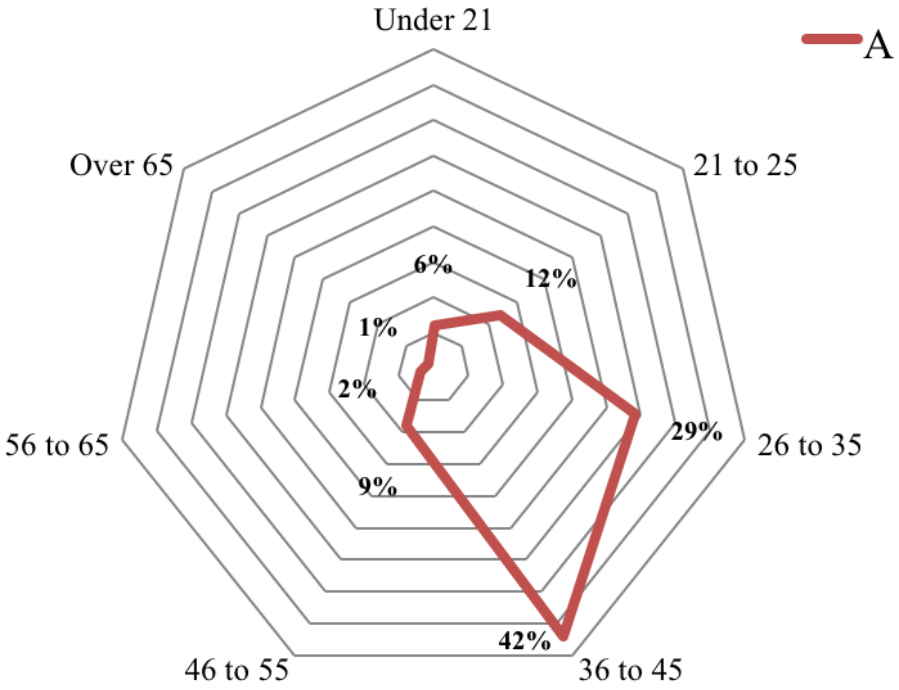

Figure 1. Age of participants who completed the survey

The demographic data also revealed that a large proportion of the respondents (39%) were in the first year of their initial teacher education course. This means that many of these respondents would not have yet completed a practicum and that they still had important aspects of their teacher education still to be completed. Whilst the age of the respondents demonstrates some life experience, the experience within teacher education was low. This is important when considering the responses reported in the next section regarding confidence for teaching in virtual schools.

5.1. Capacity to Teach in a Virtual Classroom Situation

In Section 2 of the survey, participants were asked to rank their knowledge of, experience with, and confidence in a range of teaching skills. These skills incorporated the common teaching skills which were developed in the initial teacher education programs (for example lesson preparation and behaviour management skills), but also included the skill of using a virtual classroom. How the participants rated themselves with this particular skill is shown in Figure 2.

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There is a perception among the participants that their knowledge about, and confidence for, the use of virtual classrooms is reasonable. It is interesting that the knowledge about the skills needed in virtual classrooms is rated at average or above by 53.4% of participants and their confidence to use such classrooms is 56.3%, within the same range. In comparison, the rating of experience in virtual classrooms for the same range drops to 40.2%. This is still a high percentage given none of these students have had any experience in virtual schools. These results were perplexing prior to analysis of the open-ended comments. However, once this was undertaken the results became more comprehensible.

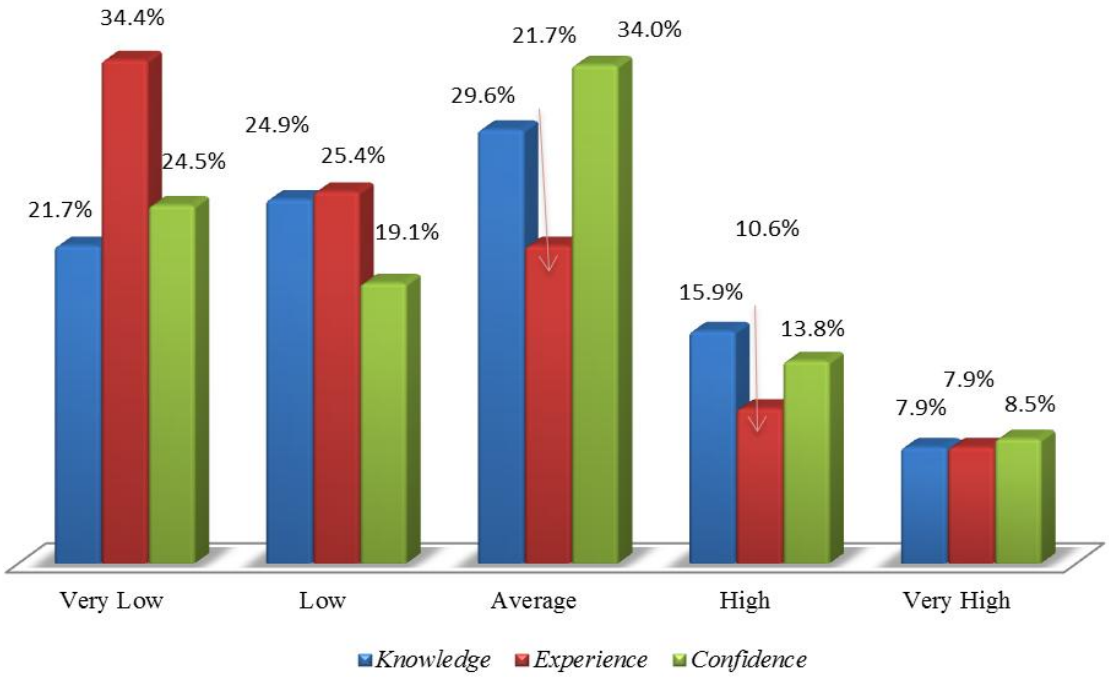

Figure 2. Perceptions about skills in observing and engaging in a virtual classroom

Despite the survey focussing on virtual schools, many participants answered the various questions from the viewpoint of studying by online means at university. They responded about their experience of online learning, rather than concentrating their comments on online teaching, and/or they discussed how academics who have taught them conducted their online teaching. When participants responded to the question regarding the factors needed for teaching online, comments such as those below are indicative of this misunderstanding of the questions:

> Online learning requires effective time-management skills because you will be doing all other work: house chores, baby sitting, cooking, cleaning and you still need to be up-to-date with the lessons, lectures, forum activities and discussions. Therefore, managing time while studying off-campus is a challenging skill for online learning (Participant 17)[1];

[1] The reported participant number is assigned by Qualtrics covering all participants who began the survey and can, therefore, be a higher number than those reported as completing any section.

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> An understanding towards mature age students with young children i.e. the whole "work/life" balance (Participant 195).

One comment in particular demonstrated lack of understanding of completely virtual schools with the respondent commenting that if students in the classroom did not adhere to the rules there would be:

> Repercussions … eg: no ICT for a week! (Participant 108)

However, there were respondents who were willing to embrace the challenges of online teaching with one stating that:

> This could only be resolved by further learning, which I'd be very happy to engage in if a job opportunity arose in this area (Participant 202).

Another participant acknowledged that some online skills are already known from completing online units at university and that teaching in a virtual school could be an extension of this providing that "I was given time to learn how to use the tools properly" (Participant 159).

5.2. Concerns and Challenges

As reported previously, there is a need to develop pre-service teachers for effective online teaching. The authors contend that this will require changes to teacher education programs as the current programs do not consider this new approach to teaching. While pre-service teachers are taught how to use ICT in the physical classroom, this ICT education does not extend to wholly online teaching requirements. In response to the open-ended questions, it became clear not only that there was some misunderstanding of virtual teaching as reported in the last section, but also a lack of knowledge about the advent of virtual schools. Respondents stated that:

> This has not been covered in my course at all and I am about to complete my final unit of study (Participant 129);

> Until taking this survey, and apart from my own experiences in online learning for this degree, I have not considered online teaching, nor has it been mentioned in ANY of my units, even the ICT unit, so this all comes as quite a surprise. I would like to know a lot more about it - where is it based? … I would have looked to my learning institution (e.g. UNE) to prepare me fully for teaching. Until now I hadn't even thought about online education and the topic has not been raised. I wish it had been - then I might not be feeling so inept as I fill out this survey (Participant 202).

Despite this gloomy outlook regarding preparation for online teaching in the current teacher education programs, the survey data also indicated a general

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willingness among the participants to consider the issues that might face them in teaching in this form of learning environment and what might be required for success.

Analysis of the open-ended data was undertaken using manual coding around common themes that emerged. The participant comments were grouped within the emergent themes of engagement, technology, development of community/relationship, and teaching skills. Several of the responses contained more than one of the identified themes. Initial exploration of these themes concentrated on the first two open-ended questions: the factors that participants felt were important for success in online teaching and the concerns or challenges they felt they could currently face. These questions were used to gauge the current understanding of the students about what might be necessary in online teaching and also what their primary concerns might be. This was deemed important in assisting us to develop a relevant and useful website. The breakdown of responses in these areas is shown in Table 1.

Table 1: Percentage of themed responses

	Engagement	*Technology*	*Community/ Relationship*	*Skills*
Factors important for a positive online learning environment	15%	48%	20%	17%
Concerns and challenges in teaching online	6%	50%	25%	19%

A not unexpected result in this table is that technology was rated most highly as a theme in terms of both factors needed for developing a positive online learning environment and also in terms of participant concerns.

5.2.1. Technology

When preparing the survey, we expected that technology and the issues surrounding this would be a key factor in the participants' discussion regarding online teaching. Although the website that is currently being developed will have some suggestions about useful programs for online teaching, it cannot cover technical assistance as the platforms that pre-service teachers will encounter will vary depending on particular school systems. The participants' comments indicated that they were aware of technical issues such as internet reliability, speed and intermittence or computer failure, but some were also unsure about where online teaching would be delivered from, demonstrating that their understanding of virtual schools is low. Indicative comments of this latter confusion included comments about their home connections and who would pay for these:

> Funding for equipment and the level of connectivity available (Participant 32);

and

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> I don't have good quality internet, and would have limits to what I could afford to download and upload (Participant 84).

The confusion was also evident in some of the comments regarding student accessibility to equipment, given that students are generally in a home school and are provided with relevant equipment by the education system. The majority of the concerns about technology centred on the participants' lack of experience with online teaching technologies and also the safety and security of using online platforms. However, there were also comments regarding the use of technology as a learning tool of itself. Table 2 provides examples of these responses.

Table 2: Concerns about the Use of Technology

Lack of experience and concerns about online security and behaviour	*Challenges of effective teaching with technology*
Concern for "mutual respect in online etiquette" (Participant 4)	"Appropriate and effective tools" (Participant 83)
Concern about "having a good understanding of all available technology" (Participant 122)	"Using different technologies that are interesting and exciting to the end user" (Participant 5)
Lack of "experience with learning environment and technologies available" (Participant 129)	"Amenability of digital platforms to customisation for catering to the diverse abilities and interests of students" (Participant 163)
"The main concerns I would have in teaching this way is my lack of experience in using the programs and tools required to teach effectively" (Participant 3)	"The ability to find appropriate educational websites that help the student to learn but also allow them to ask questions (not just websites that give answers to everything)" (Participant 5)
"Technical knowledge - if something fails, I can't just revert to type and teach the lesson without technology" (Participant 37)	"Ensuring the lesson is not an excuse to use technology, rather technology enhances the learning of the students and the lesson" (Participant 109)

While participants were very concerned about their ability to use the technology, it is clear that they also thought about the best ways that technology might be used for effective learning to occur. This observation is borne out by the number of responses that were made referring to engaging students in their learning.

5.2.2. Student Engagement

Student engagement has been linked to both academic success and personal well-being (Corso, Bundick, Quaglia, & Haywood, 2013; Schaufeli, Bakker, & Salanova, 2006). Corso et al. (2013) state that:

> The classroom factors that have the most bearing on a student's engagement fall into three categories: the student

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> within him or herself, the student's interactions with others (the teacher and other students), and the student's interaction with the academic content (p. 53).

Many of the participants remarked on the need for engagement and showed that they felt that online learning environments might be challenging in terms of this crucial aspect of education, particularly in regard to the teacher-student interaction. There were also comments made about what might be needed to maintain student engagement in their lessons. Participants responded to the open-ended questions with comments such as:

> The biggest challenge would be keeping the attention of students. It would be hard to know where the students were up to, how to engage with them (Participant 1).

One of the participants drew on personal experience of online learning to comment that:

> One of my concerns … would be trying to maintain engagement. Personally, when doing online tutorials, I sometimes zone out and not pay attention (horrible I know) but because I am not actually sitting in front of a teacher, and have other things around me to distract me, I lose focus (Participant 19).

Some participants did make suggestions about how they might try to keep students engaged. One respondent felt there was a need to:

> Ensure that my online presence was engaging (Participant 81),

while another participant stated that to gain engagement it would be necessary to:

> Get to know student and their likes/ dislikes; find out what motivates them (Participant 94).

It is clear that the participants, while not always understanding the specific needs of virtual teaching, were able to draw on their knowledge of what is needed for effective learning and to extrapolate from that. This was very evident in their comments coded as a theme of creating a sense of community and relationship.

5.2.3. Sense of Community and Relationship

As is the case with engagement, a sense of inclusion and community is also important for effective learning, particularly in online environments (Akyol & Garrison, 2008; Phillippo & Stone, 2013; Tu & McIsaac, 2002). Akyol and Garrison (2008) make reference to what has been termed as 'social presence' and state that a sense of community "was particularly powerful for participation" (p.

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15) in online communication, but they also mention that teacher (or instructor) presence is even more important for student satisfaction as this promotes social presence. Savvidou (2013) argues that 'teacher presence', related to a sense of immediacy or distance, is very important in building online learning environments**.**

The participants exhibited their understanding of the need for both social and teacher presence in their comments about what would be important in online teaching and how this could also be a challenge. A range of these comments are shown in Tables 3 and 4.

Table 3: Comments on Factors for Successful Online Teaching

Successful online teaching
I think students need to feel like they are part of a significant community, not on their own (Participant 5).
Teachers being present and engaged with students as fellow humans (Participant 18).
A teacher in an online environment still needs to fulfil the social, emotional and intellectual needs of all students as he/she would in an everyday classroom. Obviously by a different means the same outcome needs to be achieved (Participant 25).
Developing a style so it doesn't seem that students are located elsewhere (Participant 33).
Presence and positivity of teaching staff (Participant 36).
Students feel they are as cared for as students in a "real" classroom (Participant 87).
Where possible it is important to make the student feel like they are part of the group/class even when they are miles away (Participant 155).
A feeling of inclusion and involvement and consistent teacher presence and involvement to show that there is learning support available (Participant 130).

Table 4: Challenges in Online Teaching

Online teaching challenges
The ability to ensure that students don't feel alone and isolated whilst using on-line technology to learn. As a student myself this can be a very hard hurdle to overcome (Participant 5).
Developing some sort of relationship with students would be hard (Participant 6).
One of my concerns is that it might be difficult to get to know the students compared to the chance you have in a real classroom (Participant 19).
Ensuring that the course is not impersonal (Participant 30).
Connection to students. "Losing" students online (Participant 36).
Lack of face to face contact removing the personal element (Participant 37).
Difficult to make students feel included in a community ((Participant 51).
The environment can be quite lonely and bridging the gap would be challenging (Participant 84).

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I'd be concerned that being remote from the students makes it difficult to get to know them and their strengths and weaknesses (Participant 152).
Bonding with students so they still see you as a teacher (Participant 169).

As with the responses to making an online environment engaging for students, it is again clear that the participants drew on their understanding of the conditions for effective learning as they discussed what would be both important and a challenge. One respondent, who was not anti-online teaching per se, sums up the general feeling of many of the participants. This respondent said:

> That I do not have as much ability to understand the student as a "real" classroom teacher does. What does the student feel/think? How well is the student really performing? The student might feel an online-mode of teaching is not as serious as "real" classroom teaching (Participant 87).

5.2.4. Skills

Teaching skills are an important aspect of teacher education and, quite clearly, the participants drew on their existing knowledge of these in responding to the various questions. The main skills that they brought to their responses were those of time management, communication, understanding of student needs and behavior management.

5.2.4.1. Understanding Student Needs

Whilst there was an understanding of the need for similar skills regardless of the learning environment, there was again some confusion about what virtual schools are and the ways in which school students would be taught. One respondent, demonstrating awareness that the interpersonal skill for understanding student needs is a requirement for any teacher, then went on to wonder how this could happen in virtual schools:

> The main concern is to assess student's prior knowledge and how they are coping with the lessons. Since it is one-way, i.e. the teacher only delivers weekly resources; it is hard to assess those two factors (Participant 17).

5.2.4.2. Communication

Communication was also seen as a necessary skill and the participants commented on concerns that they had about this. Some responses were:

> I would worry the students may not have understood the instructions and find it harder to communicate (Participant 162);

> I'm quite a direct person and only using online resources, tact might get lost in translation ((Participant 57);

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> Communication can be challenging using online forums at the best of times, and often using these virtual classrooms requires a lot of patience and perseverance on part of teacher and student to allow it to be a mutually helpful space for learning (Participant 11).

5.2.4.3. Behavior Management

Interestingly, behavior management was mentioned as a necessary skill and also a concern, but there seemed to be little understanding about what the difference might be between a face-to-face classroom and a virtual classroom. Participants commented on the need to be able to monitor what sites students were accessing and one respondent stated that behavior management "would be harder", but gave no further detail. It is difficult to ascertain from the data whether participants are responding to the general concern of pre-service teachers with behavior management skills (O'Neill & Stephenson, 2011; Peters, 2009) or are aware that there will need to be other skills developed in this area.

Overall, participants had concerns about being virtual school teachers and could articulate these as demonstrated by the respondent who questioned:

> How do you get to know your students? How do you find out how they learn in order to differentiate your lessons? How do you differentiate your lessons? (Participant 45).

However, it was also clear that they understood that, to teach in virtual schools, they "may benefit from opportunities to develop new skills, techniques and strategies" (Murphy & Manzanares, 2008, p. 1070). They were also able to articulate the resources they feel would be useful to them in developing the requisite skills.

5.3. Resources Needed

A crucial question for the development of the PST Online website was centered on the resources that participants felt would most assist them in gaining the essential knowledge and skills to become effective virtual teachers. Given that virtual schools already exist, and are considered a vital means for improving access to education for disadvantaged students, such as those who are rural or remote (New South Wales Department of Education and Communities, 2013), it is important that current pre-service teachers are assisted to be 'virtual classroom ready'. The assistance that the participants targeted is diverse, but the PST Online website has the capacity to deliver much of this.

An important area indicated by the participants was, not surprisingly, in the area of ICT training. One participant typified a number of similar responses, stating that:

> I'd most likely need help in all technical areas. I am confident with my writing skills, lesson planning skills, communication skills, and other areas of teaching; it's the ICT specific skills that would let me down. So I would require specific and

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> explicit help to learn how to run the programmes used from a teacher's perspective (Participant 202).

This comment exemplifies how many of the pre-service teachers felt comfortable with the general teaching skills, but sought development not only in technical skills themselves, but also how to use technology for effective teaching. It was heartening to see that some respondents knew some of the kinds of programs that would be helpful as a teacher such as Edmodo, wikis, YouTube, and iTunes.

Many of the participants were keen on a resource that provided a supportive network for new ideas, preferably with access to more experienced practitioners in the field. They also hoped to have somewhere that could be a repository for shared resources. These are areas that this project is developing.

Despite a dissonance between virtual school teaching skills and most participants' current understandings of what these may be, the wealth of feedback can be readily adapted to fit the needs of both virtual and face-to-face classroom teachers' use of technology.

6. Conclusion

It is clear that knowledge about virtual schools is limited and also that students in initial teacher education courses do not feel equipped to cope with this aspect of teaching. However, the data from the survey suggest that current pre-service teachers are, in the main, prepared to consider the possibilities of online teaching. However, there were, as one might expect, a few respondents who could not countenance something quite as innovative as teaching without a physical classroom:

> I think I would refuse any position that required on-line technology as I personally feel it prevents the type of personal interaction that I need to complete tasks properly (Participant 48).

Generally, participants showed that they had a solid grounding in what is required to be an effective teacher, but were unable to see how this understanding translated into a virtual teaching scenario. There was awareness of the need to incorporate technology into 21st century classrooms, evidenced by comments which referred to specific programs and also to the use of interactive whiteboards (IWBs) in classrooms, but low awareness that IWBs might not be a tool for a virtual classroom: they did not make the transition from what they knew of traditional face-to-face classrooms. This is to be expected when it is clear that current pre-service teachers have a very limited knowledge of school education outside a traditional school setting.

The PST Online project, and the website that will be the main output, is poised to begin the 'education' of pre-service teachers not only in an understanding of virtual teaching and its requirements, but also providing assistance for those using blended learning in traditional classrooms for, as one respondent stated in

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regard to the use of technology for learning:

> I think this is such a fast growing area of teaching, and yet so many people still know very little about how to utilise it to their advantage (Participant 5).

While the website is a first step, it is clear that the pre-service teachers who participated in the survey feel somewhat let down that they have not heard of virtual schools before this and that there is no inclusion, in an integrated fashion, to incorporate appropriate skills across all aspects of their teacher education. As one participant said, "it would be great if included in a university course". The authors are planning for further research into what can be done to rectify this situation.

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