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An Online Mentoring Practicum in Physical and Health Education teacher preparation: Preliminary findings and future directions

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Abstract: An important aspect of any professional education is the opportunity for students to engage in meaningful practical experiences. In pre-service teacher education, this vital practicum component has undergone challenges in recent years due to increasing student numbers (due to the increasing demand for new teachers) and limited resources in university and school sectors. As a result, new innovations to enhance the practical component of this professional degree have been sought.

This paper highlights preliminary findings of one aspect of a larger study that used asynchronous Web-based communication tools to facilitate mentoring and peer support through the practice teaching experience. Analysis of the statistical data, online discussions and interviews with participants provides an indication of the nature of the interactions, perceived value of the intervention, and informs the potential for the future development and application of the intervention.

Background

Opportunities for students to engage in meaningful professional experiences are essential and central to any professional education. Faculties of Education and teacher education institutions, across a range of developed countries, are constantly exploring potential opportunities to integrate increased practice based, professional experiences. In so doing, students are provided with enhanced opportunities to link theory into practice and further develop their professional knowledge and skills.

An important aspect of this endeavor is to find appropriate ways to draw on the abilities and experiences of like professionals, who are able to provide the necessary professional guidance and direction required. As such, students are provided with credible sources of advice and support while giving justification to the knowledge, skills and abilities of experienced others.

Of recent times there has been a focus on mentoring to assist in providing the guidance and support that is essential during professional experiences. Mentoring, and the relationship that is established between the mentor and mentee, provides opportunities for the development of the novice professional while recognizing the knowledge, skills and abilities of experienced peers. The literature that has focused on the use of information and communication technologies to facilitate peer-collaboration, mentoring and practicum experiences have highlighted the potential of the technology to support students to:

- have continued and frequent contact with other students thus supporting a philosophy of collaborative learning.
- share their practical learning experiences to develop a collective body of knowledge.
- discuss content material and their understanding of that content in light of their practical experiences
- engage in reflective practice that is valued by mentors and peers.
- develop a support network to facilitate ongoing information sharing.
- combat isolation through the development of a networked community that includes access to peers, mentors and resources (Bruffee, 1993; Naidu & Olsen, 1996).

This paper describes the methodology and preliminary findings of one aspect of a larger doctoral study that used asynchronous Web-based communication tools to facilitate mentoring and peer support through the practice teaching experience. The findings relate specifically to the outcomes experienced by a group of twenty 2nd year physical and health education students who volunteered to be involved in an Online Mentoring Practicum in physical and health education teacher preparation. The 2nd year students were mentored, online, by 4th year physical and health education students during the 2nd year practice teaching experience, which is the first in a secondary school. Preliminary data analysis provides an indication of the richness of the interactions possible in such technology-supported learning environments. Focus group interviews provide a participant perspective on the intervention and suggestion for future directions for implementing such a program.

Context

The Faculty of Education in the University of Wollongong provides undergraduate pre-service teacher education and postgraduate continuing and professional development. A specialised Bachelor of Education prepares secondary school physical and health education teachers. Graduates of this program also gain positions in community health and fitness and recreation centres. This initial teacher preparation in physical and health education involves the development of discipline-based knowledge, curriculum and pedagogy skills and professional ethos. In each year of the four year program, pre-service teachers engage in school-based practice teaching experiences. This practicum is designed to provide students with the opportunity to put theory into practice.

Throughout the Bachelor of Education (Physical and Health Education) degree at the University of Wollongong, there is a strong emphasis on the role of critical reflection in the development of a teacher. Preservice teachers have been encouraged to use a variety of sources of information to guide them in such processes when engaging in micro-teaching, coaching and practicum experiences. With the changing formats for the delivery of practicum experiences for 2nd year physical and health education students, there has been a gradual reduction in the use of peers at the same school and liaison lecturers to provide the necessary feedback on their teaching.

Pilot projects

A larger doctoral study is an extension of two small scale pilot studies that were conducted during 2000 and 2001. In 2000 ten 4th year physical and health education students were involved in a trial of online peer support and mentoring (see Lockyer et al 2001). These students were mentored online by two physical and health education academic staff acting as expert mentors during the 4th year final, five week, extended practicum in Spring session (July/August).

In 2001 this pilot was further developed to include seven 4th year students who mentored 2nd year students, using an online environment, during the 2nd year practicum. This practicum consisted of one week in

Autumn session (May) and one week in Spring session (October). During this pilot study the Practice Teaching Experience questionnaire was piloted and validated. Between these two weeks of 2nd year practicum the 4th year students were again mentored online by two academic staff members from the physical and health education unit during the final, five week, extended practicum for 4th year students. The results of these pilot studies were encouraging, and informed and provided focus for the larger doctoral study. They provided direction in relation to the potential support and benefit to be gained by both 4th year student mentors in their preparation to join the teaching profession and 2nd year students being mentored in the early stages of their preservice preparation.

The study

Second year physical and health education students, at the University of Wollongong, currently complete two sessions of practice teaching per year (5 days per semester). Ten 4th year physical and health education students, with access to internet facilities, volunteered to participate as online mentors for this study with a further sample of fifty 4th students (who did not act as online mentors) asked to participate in questionnaire completion.

The ten 4th year physical and health education students mentored a pair of 2nd year students in a small online learning team. This took place as the 2nd years undertook two single weeks of practice teaching, both weeks at the same secondary school. The online mentoring intervention has been named the Online Mentoring Practicum. The remaining 2nd year students completed their practicum experiences with the traditional support of a supervising teacher and liaison lecturer.

To prepare participants for the Online Mentoring Practicum training sessions were provide for all participants. A key aspect of these sessions was to clarify the students' tasks and responsibilities related to their participation in the online discussion. Similar attempts to support professional practice experience though online interaction have suggested use of an explicit structure to develop interaction (Brehm, 1999).

These sessions enable the:

- introduction of 4th year mentors to their 2nd year mentees to begin the process of developing the mentor/mentee relationship.
- introduction of participants to the theory related to mentoring. In the context of the teaching profession and preservice teacher professional development these themes include:
 - discussion and guidance about the technical aspects of teaching eg. teaching strategies, classroom management ideas.
 - support and guidance for career development
 - social interactions and exchanges
- engagement of participants with the technology that supports the Online Mentoring Practicum. Online learning teams were able to experiment with their dedicated discussion space to become familiar with its functionality and features.
- negotiation between mentors and mentees as to the most appropriate times to be online to facilitate the exchange of ideas and advice during the Online Mentoring Practicum.

Data collection methods for 2nd year students in this study included the Practice Teaching Experience questionnaire, focus group interviews and logs of online discussion. Data was collected using each of these methods following both 2nd year practicum experiences.

The aspect of this study involving 2nd year students and the associated data gathering was designed to answer the following research question.

What was the nature of the practicum experience for 2nd year students who were mentored during the 'Online Mentoring Practicum' compared to those 2nd years who were not mentored?

Preliminary findings

In an attempt to provide some initial response to this research question an introductory analysis of the data relating to the 2nd year students was undertaken. This involved a statistical analysis of the Practice Teaching Experience questionnaire results, as well as an analysis of focus group interview responses.

The statistical analysis involved comparisons between:

- the level of advice, support and satisfaction from various sources during the practicum
- support and guidance provided by supervising teachers and online learning teams
- online discussions and support during the first and second rounds of practice teaching

The statistical analysis was undertaken using the SPSS software and was produced using frequency tables.

The analysis suggests some interesting and encouraging preliminary results relating to the use and potential support that the Online Mentoring Practicum can provide to 2nd year students undertaking their first practice teaching experience in secondary schools.

Comparison of the level of advice, support and satisfaction from various sources during the practicum.

The analysis of data, from 2nd year students, in this study indicates that the advice and support offered by a supervising teacher to a preservice teacher remains an important form of guidance.

	Online Mentoring	Practicum 1	Online Mentoring	Practicum 2
	<i>I received advice and support:</i>	<i>When the support was given I was:</i>	<i>I received advice and support:</i>	<i>When the support was given I was:</i>
	<i>Always/ Often(%)</i>	<i>Very/mod. satisfied(%)</i>	<i>Always/ Often(%)</i>	<i>Very/mod./satisfied(%)</i>
supervising teacher (n=40)	86	94	95	95
other PDHPE teachers in the school.(n=40)	92	94	82	95
on-line 4th year mentor. (n=20)	40	89	80	94

Table 1: Advice, support and satisfaction from various sources: Online Mentoring Practicum 1 compared to Online Mentoring Practicum 2

Table 1 supports the notion that supervising teachers and other PDHPE teachers in the practice teaching school provided high levels of advice and support across both rounds of 2nd year practice teaching. Notably however, a shift of 40 percentage points occurred in relation to the advice and support provided by the 4th year online mentors across the two rounds of the Online Mentoring Practicum. Coinciding with this is a shift in the level of satisfaction provided by the 4th year online mentors greater than the other two reported sources ie. a 5% shift for the 4th year online mentors as compared to a 1% shift for supervising teachers and other PDHPE teachers in the school. Overtime, therefore, the advice, support and satisfaction provided by the 4th year mentors during the Online Mentoring Practicum intervention compares very favourably with that provided by the traditional support of the supervising teacher and other PDHPE teachers in the same school.

This trend is supported by focus group interview responses of a 2nd year student involved in the Online Mentoring Practicum.

I just found the extra support was good, all the way through it, because I had a really good supervising teacher as well. He was really supportive and so it was just an extra bonus really to have someone else there.

Advice and support provided by supervising teachers compared with online learning teams.

Data in this analysis further supports the traditionally supportive role of the supervising teacher. Importantly, however, the data also indicates encouraging trends in relation to the advice and support provided during the Online Mentoring Practicum.

The Practice Teaching Experience questionnaire, administered to 2nd year students in this study, contains 22 items that describe a typical range of aspects of teaching that a preservice teacher, completing practice teaching, would be expected to engage in and experience. Second year students responded to these items on a scale of 'strongly disagree, disagree, agree, strongly agree, not applicable' as a measure of the advice and support they received. As can be seen from Table 2, the mean level of advice and support from supervising teachers remained high and consistent across both administrations of the Practice Teaching Experience questionnaire. Compared to this however, the mean level of advice and support from the Online Mentoring Practicum intervention shows a positive shift of 7 percentage points from the first to the second administration of the Practice Teaching Experience questionnaire.

These statistical trends are further supported by qualitative data from the focus group interviews of 2nd year students participating in the Online Mentoring Practicum. For example, in response to a question about the value of the Online Mentoring Practicum in the development of preservice teachers the following responses resulted.

So that was the important thing that you knew that if you got into a situation where you didn't know where to turn, that there was somebody there that you could turn to.

That's what I appreciated is knowing that she was there if I needed help and just the personal aspect of support and drawing on their experience.

... but had the supervising teacher not have been so supportive then I probably would have relied more on the mentoring.

	Online Mentoring Practicum 1	Online Mentoring Practicum 2
	<i>strongly agree/ agree (mean %)</i>	<i>strongly agree/ agree (mean %)</i>
Advice and support from supervising teacher (n=40)	86	87
Advice and support from online learning teams (n=20)	60	67

Table 2: Mean level of advice and support: supervising teacher compared with online learning teams from Online Mentoring Practicum 1 to Online Mentoring Practicum 2.

Online advice and support during the first and second rounds of practice teaching.

An initial analysis of individual items within the Practice Teaching Experience questionnaire provide some insight into the improvements in advice and support from the Online Mentoring Practicum 1 to the Online Mentoring Practicum 2.

Of the 22 items in the Practice Teaching Experience questionnaire, 16 items increased in the combined 'strongly agree/ agree' response category from Online Mentoring Practicum 1 to Online Mentoring Practicum 2. Of the 16 items that increased in this combined category five items shifted 20 or more percentage points. These items and the respective combined 'strongly agree/ agree' responses are reported in Table 3.

The items in Table 3 indicate a large, positive shift in aspects of the practice teaching experience that assist a preservice teacher to reflect on their experiences. Each of these items is central to the development of reflective practice. Practical opportunities to develop the skill of reflection are considered as highly desirable outcomes of the practicum in any teacher preparation program.

	Online Mentoring Practicum 1 (n=20)	Online Mentoring Practicum 2 (n=20)
	<i>strongly agree/agree (%)</i>	<i>strongly agree/agree (%)</i>
The advice I received enabled me to understand the reasons why lessons went well or poorly.	33	58
My discussions helped me to analyse my lessons.	56	77
I was able to share my goals for the week.	39	63
I was encouraged to experiment with new teaching ideas.	44	66
I felt confident in expressing my views about teaching	65	90

Table 3: Items from the Practice Teaching Experience questionnaire: a comparison between Online Mentoring Practicum 1 and 2

The idea that the Online Mentoring Practicum has the potential to contribute to the development of reflective skills and abilities is supported by focus group interview responses from 2nd year students. In reply to a question about the positive aspects of the Online Mentoring Practicum, the following responses were recorded.

I ended up using it more for feedback, saying "this is what I did, what do you reckon, this is how my day went", just to have somewhere to write it down, like a kind of diary almost I guess.

I would write how the day went and probably it has made me reflect on my day instead of just going home and not thinking about it. I had to think what I did and maybe some things that I could have done better or things like that.

Discussion

The preliminary findings reported in this paper provide some encouraging trends for the further development and application of the Online Mentoring Practicum intervention.

Both quantitative and qualitative data suggests that students undertaking practice teaching experiences, in what can be isolating and anxious circumstances, have found that the Online Mentoring Practicum is able to provide an additional source of credible peer support and guidance. This support however, is not seen as being a replacement for the advice and support traditionally provided by the supervising teacher but as an additional support mechanism that can compliment that provided by school based personnel. This finding supports the view of Rasmussen (2002) who suggests that mentors do not replace instructors; rather they provide additional support and clarification to learners.

The data also suggests that the Online Mentoring Practicum has the potential to support the development of reflective practice in preservice teachers. Over time, the discussion generated within the online learning teams became more reflective in nature and requests for support in relation to the technical aspects of teaching eg. teaching ideas and classroom management approaches, became less of an urgent requirement for the 2nd year students being mentored. The discussion moved to a level where the focus was on reflection, evaluation and clarification of teaching issues that the 2nd year students were experiencing

during practice teaching. Herrington, T., Herrington, J. and Oliver, R. (2000) in supporting this notion cite the work of Knight (1985) who contends that reflection is not the kind of activity which its name suggests – a solitary, internal activity – but a two way process with the aware attention of another person. The shift from technical discussion during Online Mentoring Practicum 1 to reflective discussion during Online Mentoring Practicum 2 may be attributed to several factors including:

- the 2nd year students completed the two single weeks of practicum five months apart, but at the same secondary school. Therefore, some familiarity with school culture, policies and procedures, as well as prior knowledge of the students and their abilities would reduce some of the anxiety and uncertainty of teaching as the 2nd students begin their second practicum week.
- as the 2nd year students approached their second week of practice teaching they had almost completed two undergraduate method subjects in teaching physical and health education. By this stage the students were equipped with a range of teaching and learning, and classroom management techniques. This allowed the 2nd year students to approach the second practicum in a more relaxed way, enabling them to devote more time to considering some broader educational issues with which they are confronted during the practicum.
- between the two single weeks of 2nd year practicum the 4th year cohort of students, including the online mentors, completed a five week, extended practicum as their final practical preparation before beginning teaching. This experience provided the 4th year students with many opportunities to reflect upon their own developing knowledge, skills and beliefs about teaching. This may have enabled the 4th year mentors to extend the reflective abilities of the 2nd year mentees as the online teams participated in the Online Mentoring Practicum 2

Future Developments

The preliminary findings discussed in this paper provide direction for potential future developments of the Online Mentoring Practicum intervention as a means to further develop the mentoring relationship.

Firstly, extending the development of the mentoring relationship beyond the 2nd year practicum. Online learning teams could continue to engage during the 4th year, five week, final practicum. In this way the 2nd year students could use their 4th year mentor as a lense into the nature of a practicum experience they will engage with at a future time.

Secondly, extending the concept to other aspects of teacher education programs at the University of Wollongong. This could take the form of 1st year students being mentored online during their introductory practicum experiences that are situated early in the 1st year program.

Thirdly and more broadly, the mentoring relationship may be developed to include support for 1st year students as they adjust to university study and life. This may have some potential for an Australian regional university, such as the University of Wollongong, as many students relocate from their homes and existing support networks to undertake university study.

Finally, the application of the Online Mentoring Practicum into other contexts and situations where mentoring, and the development of a mentoring relationship are perceived as appropriate in guiding the introduction of those less experienced into particular aspects of professional practice. One example of this within an education context would be to apply the concept of online mentoring to the induction of beginning teachers in their first year of teaching. This could be particularly useful for beginning teachers working in remote and isolated locations developing an online mentor relationship with an experienced professional colleague who could advise and support the subject specific development of the novice teachers.

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