An opportunity to support beginning teachers in the transition from higher education into practice

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This paper describes an approach for higher education institutions to support beginning teachers across the transition from pre-service into the profession. It presents the need for support with evidence of high attrition rates and of the problems faced by teachers when commencing practice. It suggests an approach that uses mobile technology to facilitate communities of practice during higher education that can then support the teachers in their early years of service.

Keywords: teacher education pre-service transition support community-of-practice

Towards beginning teachers helping each other across distances

The initial years after entering the teaching profession are difficult. There are many accounts of both the problems encountered by beginning teachers (Ewing & Manuel, 2005; Hinds, Williamson, & Gardner, 2011) and the high attrition rates observed (Macdonald, 1999; Plunkett & Dyson, 2011). The need to support beginning teachers is typically addressed through school-based induction and mentoring programs (Barrera, Braley, & Slate, 2010; Bickmore & Bickmore, 2010; Ingersoll & Strong, 2011). This paper describes an opportunity for beginning teachers to be further supported by finding ways for these teachers to help each other across the vast distances in Australia. It builds upon existing work utilising this paradigm (Herrington, Herrington, Kervin, & Ferry, 2006; Sim, 2006; Wilkins & Clift, 2007) by recognising the potential of mobile devices and high bandwidth to propose a nationwide, mobile community of practice that is first developed as a local culture within each cohort within each university.

Anecdotal evidence suggests that the need for peer support in the early years of teaching is currently being met in an ad-hoc way through social media such as Facebook groups springing up within each cohort of teachers in institutions. This can be interpreted as students desiring a continuity with the university community and the support that it can provide (Loughran, Brown, & Doecke, 2001). This paper presents a précis of the opportunity for higher education institutions to be involved in the creation of digital communities that provide support across the transition with a benefit to both the profession of teaching (in teacher support and development) and the institution (adding value to degrees in a cost-effective way).

The need for further support

The need to support beginning teachers is well established through the attrition rates observed and numerous qualitative studies cataloguing the problems faced by teachers in their early years. It is well recognised that the early years of teaching are difficult. Early career teacher attrition rates are one measure of the problem, both in Australia and around the world and this appears to be a long-term issue. A Department of Education, Science and Training (DEST) study put the figure as up to 25% of beginning teachers leaving the profession in the first 5 years (DEST 2003). In the USA a study of 10,080 teachers reached the conclusion of a similar figure of 22% (Boser, 2000). Further evidence shows that this applies specifically to primary school teachers in Australia, with

an Australian Primary Principals' Association (APPA) study of 1351 beginning teachers concluded that 24% planned to leave the profession within five years (APPA 2006). Whilst attrition is not always a problem, such as the case of the teacher ill-suited to the profession, and whilst it may not be significantly higher than in other professions, it represents a real cost to society, to individuals and to the profession when good teachers are being lost due to inadequate support (Plunkett & Dyson, 2011; Skilbeck & Connell, 2004).

For those who do not leave the teaching profession, commencing teaching practice is difficult. Beginning teachers face many problems: overly high expectations; entry shock; conflict with other staff; discipline and behaviour management; and building a professional identity as a teacher are challenges that all strike at once (Ewing & Manuel, 2005; Murnane, 1991; Northfield & Gunstone, 1997; Sanford, 1988). The two most cited reasons for leaving the profession are rated as: (i) lack of on-the-job support; and (ii) workplace conditions (typified by discipline problems, poor administrative support and poor overall school culture) (Boser, 2000).

The effects of these problems are more visible in two groups in particular, teachers in rural areas and secondary Science, Technology, Engineering and Mathematics (STEM) teachers. It is often discussed that schools in rural areas can be hard to staff (Beutel, Adie, & Hudson, 2011; McKenzie, Kos, Walker, Hong, & Owen, 2008). Whilst attracting and retaining rural teachers is a complex issue (Collins, 1999; Plunkett & Dyson, 2011; Roberts, 2004) one of the issues that is commonly discussed is that of the *isolation* experienced by these teachers due to distance and disconnection (Munsch & Boylan, 2008; Sharplin, 2002). There is also a shortage of STEM teachers with Australia's Office of the Chief Scientist (OCS) enacting policies to try and address the problem that "the pool from which mathematics and science teachers are drawn needs to be broadened" (OCS 2012, p. 28). To characterize this in the discipline of Mathematics, the Australian Mathematical Sciences Institute (AMSI) considers a qualified mathematics teacher to be one who has at least two years of tertiary education in mathematics. By this definition, 40% of Years 7-10 students and 20% of Years 11 and 12 students are being taught mathematics by unqualified teachers, and AMSI links these numbers to the decline in enrolments in high level mathematics in Year 12 (Australian Mathematical Sciences Institute, 2013). Similar figures are obtained in a separate survey by the Australian Council of Deans of Science (Harris & Jensz, 2006) and the claim is further supported by the findings that the incidence of 'out of field' teaching in science and mathematics is higher in Australia than in comparable countries (Marginson, Tytler, Freeman, & Roberts, 2013).

Whilst this short summary cannot do justice to the complex issues in attracting and retaining quality teachers in Australian schools it serves to recognise that: (i) the beginning years of teaching are difficult and that teachers identify lack of support and isolation as causes; and that (ii) there is an ongoing need to support these beginning teachers, and that the need is especially great in the cases of rural and STEM teachers.

The opportunity for higher education institutions

When pre-service study ends and teaching practice begins, much of the university community is lost, particularly the weaker connections formed with the cohort during their years of study. There is potential for universities to provide a means of support that commences in the years of study, and that is aimed at maintaining the continuity across to this new community. The advantage of higher education institutions taking this initiative rather than leaving it to companies such as Facebook, in addition to the benefit of being clear from commercial and social distractions, is that there is potential to integrate the development of the community into the university curriculum, involve profession-specific groups in its development, and to nurture cross-institutional links after study and integrate this into profession-specific support and development. It address the gap shown in a survey of over 4000 primary teachers, of whom only 34% considered "follow-up from your teacher education institution" as a form of support they received, suggesting that 66% felt they received no support whatsoever from their institution after leaving (McKenzie, Rowley, Weldon, & Murphy, 2011).

A model that helps to articulate an approach to this opportunity is that of the *virtual community of practice* (Dubé, Bourhis, & Jacob, 2006; Lave & Wenger, 1998; Wenger, White, & Smith, 2009) in which the teachers in transition represent a group of participants with a commonality of developing first a practice of study and then a practice of teaching. This approach takes existing attempts that had some success with digital communities (Herrington, et al., 2006) and Communities of Practice (CoP) (Sim, 2006) for pre-service teachers and combines them with the technology that has only recently become available. Students increasingly have access to mobile devices with internet with some Australian universities even beginning to distribute them to commencing students (Gosper, Malfroy, & McKenzie, 2013). Another factor adding to the opportunity is that availability of high-speed broadband will only increase with the advent of the National Broadband Network (NBN). Bringing these notions together, we have an opportunity for higher education institutions to provide support for students across the transition through virtual communities of practice that take advantage of mobile technology. This

provides the opportunity to develop the community during the years of higher education, and then to use the community to support teachers after the years of service commence. The approach holds benefits for each of the stakeholders of higher education institutions and pre-service teachers.

The teachers in transition

The teachers in transition can be identified as having three phases, in which the first two normally overlap: (i) pre-service preparation; (ii) practical experience; and (iii) the commencement of service. In the first phase (i) the focus is within an institution, within the shared experience of the cohort. In phase (ii) a shift occurs from the student-teacher in a classroom through to the teacher-in-charge and a similar shift occurs in a focus upon institutional goals of study to profession-related goals of development for the sake of improved practice. The third phase (iii) continues in this vein. The opportunity here is to maintain the community that is developed during (i) throughout the shifting changes in needs. Figure 1 depicts the movement from developing a community within a cohort as in this first phase (i) and moving towards a broad profession-wide knowledge-based as in phases (ii) and (iii). The hypothesis is that such an approach can address the key issues of beginning teacher support and isolation across distances using the affordances of mobile technologies, and that a single platform can support the change that takes place during this transition. Evidence of early work that supports this hypothesis can be seen in the work of Wilkins and Clift's (2007) attempt to develop a network of new teachers within the state of Illinois in the United States.
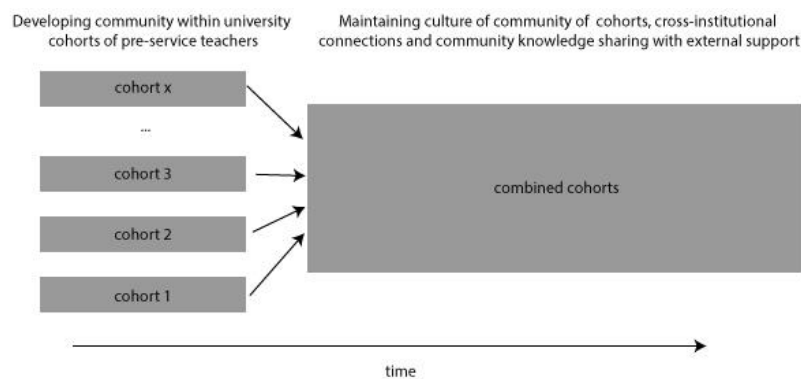
Figure 1: Movement from student communities within cohorts to a professional community of teachers in service within the same mobile platform

The institution

The opportunity for institutions is to further add value to degrees. Higher education is increasingly competitive and it is possible to imagine a future in which, when selecting a degree and institution, students look not only at the quality of the teaching, the practical experience and likelihood of getting a job, but also at the quality of the transition program provided by the institution. Further, the current school-based induction and mentoring programs can be unequal (with different schools having different resources to support teachers) and inaccessible (with teachers more frequently teaching at multiple schools in their first year). A higher education based program is equitable for beginning teachers and can support even those teachers that have short-term contracts – it is a supplement to these induction and mentoring programs rather than a replacement.

Discussion: Designing a platform to support transitions

This paper has presented an opportunity that exists for further supporting teachers during the transition. It has briefly outlined an approach to take advantage of this opportunity. The hypothesis is that: (i) there is a need for further beginning teacher support, particularly for STEM and rural teachers; (ii) that higher education institutions have the opportunity to provide support across the transition; (iii) that mobile technology and high bandwidth further support this opportunity. The paper has sketched a model in which a mobile platform is developed that supports two phases of firstly: (i) support within the university cohort that is integrated into the curriculum; and (ii) support across the profession once teachers begin their practical training and practice.

Research is required to develop these ideas further, examining the way that early career teachers are using existing technology to provide an ad-hoc solution to this need for peer-support (e.g. Facebook), investigation into the design affordances required of the mobile platform proposed here, and finally a pilot with the platform across institutions to establish the utility of the approach.

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