

Virtual practicum experiences to build professional identity

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Abstract: This paper reports on a how pre-service teacher use of an online classroom simulation (ClassSim) supplemented existing practicum experiences and contributed to the development of their emerging professional identity. ClassSim was developed to provide pre-service teachers with a safe virtual environment in which they can explore ‘authentic’ and practical classroom scenarios. Users were able to assume the role of a teacher during in the virtual classroom, and during its running time make a number of decisions about the management of the classroom and the organisation of virtual teaching and learning experiences. Embedded tools were designed to enhance the development of connections made between educational theory of their pre-service teacher course and the practicalities of operating in a classroom environment. The data we present in this paper shows how the experience with ClassSim contributed to the emerging professional identity of the users.

Keywords: pre-service teacher, professional identity, simulation, theory to practice

1. Background

As pre-service teachers progress through their degree, they are expected to develop their professional identity via a combination of university coursework (theory), practicum experiences (practice). To begin the process of developing a professional identity pre-service teachers need to begin to make connections between the theory and the practice of their profession. As Allen (2005:1) states “Teaching is a profession that requires skills, dispositions (personal qualities), and knowledge in four areas: subject matter, child development, teaching methodology, and self-awareness/identity”. Thus, a teacher’s professional identity is shaped by their understanding of the theory of teaching/learning and their unique set of life experiences both inside and outside the classroom. Moreover, Barty (2004:2) suggests that a teacher’s professional identity “impacts a teacher’s philosophical beliefs, and ultimately, the pedagogical approaches used in their classroom”. However, identity formation is an ongoing, dynamic process that is open to discussion and modification, and always occurring in a social context (Britzman, 1986). Weber and Mitchell (1996:109) assert that identity formation “is a constant social negotiation that can never be permanently settled or fixed”. Very little is explicitly taught about how one can develop a teacher professional identity via pre-service teacher education and this is the research that this study contributes to.

Killian (2003) explains, an effective teacher needs to have a deep understanding of the four types of knowledge including, knowledge of subject matter; knowledge about how students learn; and general pedagogical knowledge. The fourth type of knowledge is known as ‘pedagogical content knowledge’ (Shulman, 1987) and this knowledge develops in the areas where the three previously mentioned areas of knowledge overlap and inform

each other. In this study refers to the developing an emerging pedagogy refers to pedagogical content knowledge. The recommendations of the 2002 report by the Commonwealth Department of Education, Science and Training stated that initial teacher education programs should aim to intertwine content and pedagogy in teaching and learning. Likewise, the Ramsey (2000) review of teacher education in New South Wales asserts that pre-service teachers do not understand how classroom practice produces effective student learning. These findings suggest that a key constraint on the effectiveness of pre-service teacher education courses is the limited opportunity to develop pedagogical content knowledge through bridging the gap between theory and practice.

Simulations have been used throughout history for the purpose of training and performance testing (Doyle, 2002). Jonassen (2000) asserts that simulations have the potential to greatly enhance any learning experience by supporting the learning of the individual within a domain. Further Aldrich (2004) suggests that simulations can provide authentic and relevant scenarios making use of pressure situations that tap users' emotions and forces them to act.

Drawing upon such assertions ClassSim was developed to support existing teacher education programs in one university, by providing pre-service teachers with access to additional classroom experience within a virtual environment. ClassSim allows the user to take on the role of a kindergarten teacher in a virtual classroom during a literacy learning session; referred to in the simulation as a 'literacy block'. The design of ClassSim has been reported Ferry, Kervin, Turbill, Cambourne, Hedberg, Jonassen, & Puglisi (2004).

During the running time of ClassSim, the user is required to make a number of decisions regarding the management of the classroom and the organisation of the virtual 'literacy block' (teaching and learning strategies, behaviour management techniques and classroom organisation). A number of different design features have been incorporated within the simulation software for the user to interact with. These include the incorporation of:

- Targeted students – a representative of the range of needs and abilities of students within a typical classroom (the more challenging students);
- An embedded cognitive tool called the 'Thinking Space' – which provides a framework in which the user can reflect upon issues within the virtual classroom, articulate their rationale at decision points and record their professional learning as they engage with the support material;
- Support materials - to inform and support the pre-service teachers in making connections between the theory and the practice of teaching as they make decisions within the simulation. The summaries include links to websites, textbook references and other literature; and
- Decision-making opportunities.

2. Methodology

A qualitative case study approach was adopted, utilising semi-structured interviews, observations and the collection and analysis of artefacts as data collection procedures.

Pre-service teachers within the University of Wollongong's Bachelor of Education program complete a compulsory course, 'Professional Practice'. This course has been developed with the aim of assisting students to develop an understanding of learning and teaching as an interactive process within a classroom setting. Pre-service teachers are introduced to essential curriculum concepts. The courses guide pre-service teachers in

curriculum planning and encourage reflective practice. The pre-service teachers observe a range of demonstration lessons at local demonstration primary schools and apply their knowledge and skills in scheduled teaching situations. The pre-service teachers also complete ten days of field experience at an assigned school.

This research draws upon the experiences of ten pre-service teachers enrolled in a Bachelor of Education (Primary) degree at the university. They were purposively selected from the first year cohort with specific predefined characteristics to ensure the collection of data was representative of the specific cohort.

The participants were introduced to the software during the first few weeks of their degree within the 'Professional Practice' course. As part of their usual class schedule the first year students engaged with ClassSim for a period of one hour. They were encouraged to use an embedded thinking tool known as the 'Thinking Space' to reflect upon scenarios within the simulation, rationalise the decisions made, suggest alternative decisions not offered, and make connections with university coursework and practical experiences. These 'Thinking Space' entries were collected and analysed. Observations were captured during these periods by the research team.

After their initial engagement with ClassSim, all participants were interviewed, using a semi-structured approach. The purpose of these initial interviews was three-fold: to build rapport with the participants; to investigate the individual background experiences of these participants; and to explore their initial perceptions of ClassSim.

At the end of their first semester of study, the pre-service teachers are allocated a school, in which they spend ten full days as field experience. During this time, participants were asked to reflect upon their experiences of the school environment drawing upon their use of ClassSim and their university studies. After this period of field experience, they engaged in a second semi-structured interview.

The data were categorised according to emerging themes within data. These categories were identified and compared with emerging themes from different data sets with the purpose of determining similarities and differences. Constant comparison and contrasting procedures were employed. Methods of ensuring trustworthiness and credibility such as triangulation of data, member checking and peer debriefing were ongoing throughout the study.

3. Findings

Sarah explained that the simulation had broadened her understanding of the role of a teacher. *"I gained an understanding of how little I knew and it made me aware of the facets of teaching. It's not just education and learning, but things like the well-being of the students, how they feel on that day, each of the students' background, etc. ClassSim was a real wakeup call. I now realise there is a lot more involved with teaching than just teaching"* (Sarah_ 17/4). Sarah's comments suggest that through her engagement with ClassSim she became more aware that her future role as a teacher is multi-faceted and as such entails more than just teaching.

Natalie stated that the ClassSim helped her to prepare for her practicum experience. *"I learnt that I need to be prepared and organised. It [ClassSim] helped me to think about things I need to consider as a teacher"* (Natalie_29/3). This suggests that some of the pre-service teachers were thinking about the link between their experience with ClassSim and their future role as teachers. In particular, many used ClassSim to better prepare for their initial practicum experience which was imminent.

Rachael explained that she was previously unaware of the amount of in-depth thinking a teacher must do within a typical day. *"It really gave me an idea on the sort of*

decisions that would be faced with in a classroom situation, because I, being a first year student, had absolutely no idea. I only had experience as a student, but as a teacher it's completely different" (Rachael_8/4). As the simulation enabled Rachael to take on the role of a teacher in a virtual classroom, it gave her a better understanding of the role of the teacher, as opposed to that of a student, and the types of decisions a teacher must make.

During an interview, Nick indicated that he believed the summaries were of most use to him in regards to his professional learning. *"If I had of read about invitational language or medication of students or any of that stuff I would have forgotten it by now, but with the Sim showing us practical situations and the information behind it I'm going to remember it a lot easier"* (Nick_20/3). This suggests that Nick utilised the summaries within the classroom simulation to better understand practical situations, thus making vital connections between classroom practice and educational theory.

During another interview, Ashley commented on the advantages of engaging with ClassSim in conjunction with her practicum. *"The theory that we learn at uni is very good and when you're on prac you experience it, even though you don't necessarily know you are. ClassSim is another component, sort of bringing it to life rather than just being a theory"* (Ashley_17/4). This suggests that Ashley's engagement with ClassSim enabled her make valuable links between the theory of teaching/learning and what this looks like in a classroom.

4. Discussion

Many pre-service teachers in the course have moved from high school, straight into university, having never left the classroom. Suddenly they find themselves on a steep learning curve, as they move from the role of a student to that of a teacher. Their past experience as a student provides them with an awareness of what happens during a typical day in a classroom and an understanding of how teachers 'act' and the 'face' they wear in order to be successful (Allen, 2005:1). This change of role is often confusing for pre-service teachers and appears to be an important factor in the development of a professional identity. The findings suggest that through their engagement with ClassSim, many participants not only gain insight into the role of a teacher, but also feel better prepared to enter into a practicum situation, having experimented in their own virtual environment. The findings also suggest that the pre-service teachers found the ClassSim to be a safe environment in which they were able to obtain an initial glimpse into the profession, thus understanding the importance of preparation and organisation, thus shaping and developing their professional identity

Many beginning teachers often find it difficult to retrieve important theoretical knowledge when they need it (Kervin & Turbill, 2003). A reason for this situation is the belief that theory and practice are regarded as separate entities of teacher education (Calderhead, 1988). The findings suggest that the classroom simulation appears to aid pre-service teachers in bridging the gap between the theories of pre-service education and teaching in practice via the classroom simulation's support materials (the summaries in particular). Thus, ClassSim has the potential to facilitate the connections pre-service teachers have between the virtual scenarios of the classroom simulation and the theories surrounding these, thus providing a way to develop explicit links between theory and practice.

5. Conclusion

A teacher's professional identity is shaped by their understanding of the theory of teaching/learning via university coursework and their experiences. This research indicates that these experiences can be through professional field experiences and virtual environments. Teacher educators continually identify the need for more effective and meaningful ways to bridge the gap between theory and practice, and in the process support the development of professional identity in pre-service teachers. The use of simulations as a tool for pre-service teachers to engage scenarios while making explicit connections to theory is promoted as a powerful option in this research. The analysis of findings reveal that through engagement with ClassSim, many first year pre-service teachers gained a greater understanding of the role of a teacher and made significant connections between theory and practice. Thus, it seems there is great potential in the use of ClassSim within pre-service teacher training to aid pre-service teachers' emerging pedagogical content knowledge and developing professional identity.

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