

Creating a learning community of postgraduate nurses through online discussion

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This paper considers the process of developing a virtual learning community amongst a diverse group of postgraduate nurses, inexperienced with technology and online learning. Strategies used to promote the creation of the community are described and evidence of the educational and professional benefits is presented using data from students and teacher.

Keywords: online discussion learning community nursing education

Introduction

Established in 1999 within the Faculty of Medical and Health Sciences, the School of Nursing commenced postgraduate studies for registered nurses seeking to advance their professional knowledge and skills. The School has developed a range of programmes to meet the needs of contemporary nursing practice in an environment of scholarship and research. Most courses use traditional on-campus models, but a selection of core courses are offered in flexible mode. One such course 'Clinical Scholarship', allows students to explore dominant themes and concepts in contemporary nursing knowledge and to apply them to individual areas of specialism. Three broad themes, models of scholarship, scholarship and practice knowledge and application of scholarship to professional development serve to link concepts, organise the delivery of course content and assist student learning. The objectives require students to:

- Articulate the nature of professional practice knowledge;
- Demonstrate clinical scholarship;
- Contribute to the development of nursing practice knowledge.

The course involves both on-campus and online components. It begins with a two day on-campus workshop with formal input from academic staff. A hands on computer session ensures that students can access the online learning management system (LMS), change their personal settings, access resources and contribute to an online discussion. The LMS is a web-based environment (Cecil) developed in-house.

Postgraduate nursing students are homogeneous to some extent. They are predominantly female mature students with an average age of 37 (Division of Nursing, 2001). Most are employed more than 30 hours a week (Honey, 2004) and combine employment, study and other commitments. Diverse aspects are areas of clinical practice and geographical location, making formation of a learning community particularly challenging. The flexibility of online study offers access to nurses working shifts or at a distance, though many are not familiar with online learning as most courses are still campus-based. Twenty-one students enrolled for 'Clinical Scholarship' in 2003 came from various locations around New Zealand.

Learning community: Theoretical framework

The goal of a learning community is to advance the collective knowledge and in that way, to support the growth of individual knowledge (Scardamalia & Bereiter (1994) cited in Bielaczyc & Collins, 1999, p. 4).

The instructional rationale for creating a learning community within the context of postgraduate nursing courses relates to the current literature. This serves to situate the learning design within a contemporary theoretical framework and to articulate the theoretical concepts within a specific educational setting. A

contemporary belief is that learning is best supported when individuals learn to construct knowledge through exposure to models of expert behaviour and interaction with others in a community setting. One example among many from authors who support these social-constructivist principles states:

the defining quality of a learning community is a culture of learning in which everyone is involved in a collective effort of understanding (Bielaczyc & Collins, 1999, p. 4).

According to this definition, a learning community has the following characteristics:

- Value is attributed to the contributions of members with diverse areas of expertise;
- Members benefit from exposure to multiple perspectives;
- Support for individual development is offered by all members of the community;
- The objective of advancing the collective knowledge base is shared;
- Opportunities are offered for sharing what is learned;
- Collective effort is applied to problem solving situations.

This approach represents a radical departure from focus on individual ability and all students acquiring the same body of knowledge at the same time. The learning community approach extends beyond the classroom to all aspects of professional and social practice (Lave & Wenger, 1991; Wenger, 1998, 2000).

In the case described in this paper, characteristics of the learning community also reflect the professional context in which the students work. This aspect of authenticity in the learning environment addresses the challenge identified by Oliver & Herrington (2003), to create technology mediated learning environments that also act as an effective setting for learning within courses. Practitioners with diverse areas of expertise interact to make a complex system of healthcare organisations work, so the benefits of multiple perspectives and shared experience in an educational setting may enhance awareness and understanding in the professional context. The instructional strategy is thus well founded. Evidence of the participants' appreciation of this aspect is presented in later sections of this paper.

Additional educational goals of the post-graduate nursing courses are confidence, independence and professional identity building. In terms of the literature, this roughly corresponds to critical theorists' conceptions of empowerment, autonomy and participation described by Carr & Kemmis (1986), Sarantakos (1993) and others. In the early era of technology-mediated learning (e.g. Laurillard (1988), it was proposed that the instructional goals supported by emerging models of technology-mediated learning could well serve such objectives. In the contemporary context, emerging evidence further supports this assumption. There is also support for the case presented by Lave & Wenger (1991) that what they refer to as "legitimate peripheral participation" is an aspect of learning that is neither immediately obvious nor always measurable, but no less valuable because of this. The type of learning that this describes is that achieved through engagement in social (or professional) practice where formal or incidental learning is an integral feature of the interaction. In other words, it is a key element of the enculturation process that allows individuals to learn and build confidence to act, interact and react within social and professional settings. One objective of the educational setting described in this course is to build the students' confidence in their own professional practice. Another is that they become more fluent users of information and communication technologies for learning. The theme of this conference "beyond the comfort zone" reflects well the reaction of many mature students to their first experience of online learning and interaction. It is therefore important that all aspects of confidence building occur within the learning community where professional skills and understanding are effectively promoted, and where support for development of technical skills is an integral feature.

Method

The data analysed in this paper comprise a subset of a larger ongoing case study that has received ethical approval from The University of Auckland Human Subjects Ethics Committee. Data available for analysis included:

- Course documents - course outline, grades and reports
- Online assessed and non-assessed discussions
- Teacher interview transcripts from the beginning, mid and end of semester.

- Student interview transcripts
- Student diaries

Data related to the development of a learning community is drawn only from the postgraduate nursing course, 'Clinical Scholarship' in a single semester in 2003.

Methods to support technology-mediated learning

Creating an online learning community implies a reliance on technology. Technology related factors that affect online learning can be considered from three perspectives: students, teacher and technical.

Students

A previous study of postgraduate nurses at this School of Nursing found that while 60% of students considered their computer skills adequate, they also identified barriers that impeded them making more use of the Internet (Honey, 2004). To ensure all students had the necessary skills to access and contribute to the online discussion a practical session was included during the on-campus workshop within the first weeks of the semester. Students were shown how to access and use the online discussion, and then asked to contribute online about their experience in the course so far, as a practice exercise. Comments from students about the hands-on computer session were favourable and included:

This session on the online system is great - very easy to use and I am looking forward to using this at home.

Some students initially expressed concern about their keyboard skills and wondered if their lack of typing skills might be a barrier to contributing online:

I was really terrified to start with when I found that this course was to have online discussions that one had to participate in. I thought my two finger typing would be a disaster!

While a lack of keyboard skills was identified as a barrier to participating early in the semester this was not mentioned later when they had more experience. A small number of students entered the course with prior experience in online learning. Data was not collected on a student's previous experience of online courses, but evidence was found within their transcripts. For example a student indicated during an interview that previous experience with online learning might have been a positive factor for her, saying:

This is the second online course I have done and it has gone better than the other course perhaps because I was new to online learning before.

Another student articulated the public and visible nature of online discussion saying:

I had to think carefully before I put my discussion thoughts online. Online makes me feel rather vulnerable as there is not just me and the marker to see my work.

There were online contributions from all students and to keep up with the emerging online discussion students stated it was better to log on regularly. One student identified this as a need for self discipline:

The online modality of learning is excellent for those who are skilled in self discipline and is more of a challenge for the likes of me!

Whether it was their lack of computer or keyboard skills, or little experience with online learning these students were out of their comfort zone using an online discussion and supporting students, by such methods as clear directions, prompts and the hands-on session, was important for ensuring their continued participation.

Teacher

There was evidence that the teacher too was out of their comfort zone in terms of experience managing online discussions and was not in a strong position to support students. The teacher expressed concern about using technology effectively for online discussion before the semester began:

My only concern is the discussion. I haven't run an online Discussion before using [this online learning management system]. I know [others] did last year, but they had some hassles, which I would hope to avoid.

At the end of the semester, reflecting on the role taken in the online discussion, the teacher commented:

Well when I look at it I think I needed to be more visible in the discussion. I was there but hardly 'spoke'. The discussion was running very well. Just when I was thinking it was getting boring another thread developed. Actually I felt a bit unsure what to contribute and that's really about my own confidence and experience in online discussion.

The teacher had experience with teaching groups however, and recognised the roles that students took within the online group:

We had some students who minimally engaged and others who 'spoke up loud and often'. One student took the role of 'leader' at times, and reflecting questions to and fro; and another seemed to summarise every now and then.

However, despite being an experienced teacher, comments from the teacher indicated that students could have received better directions about the use of responding functions:

Students didn't use the reply function, but just posted a new message each time, generally speaking. But the topic as a whole still flowed, though it took different turns along the way.

Teaching in an online learning community requires a new set of technical and pedagogical skills and it is not uncommon for faculty not to have developed these (Billings, Vaughn, & Dell, 1998; Cragg, Humbert, & Doucette, 2004; Cravener, 1999). The teacher's reflections indicate that prior experience needs to be augmented by specific skills in online management and community building.

Technical support

Technical support can be both formal and informal. The University provides technical support for the online learning management system in multiple ways: online, email, phone and on-campus helpdesk. Informal ongoing support for students by peers and teacher occurred electronically using an online 'Coffee Group' discussion area for questions. The teacher commented on the peer supported provided:

It's wonderful seeing them help each other with hints. Someone kept getting timed out; so the answer was to write their response for the discussion in word, then paste it.

Further direct support from the teacher was provided by individual email and phone support. Students commented on requiring minimal help, saying, "access has been reliable - I have no problems whatsoever with linking to the learning site". Therefore the IT support appears to be adequate as shown by students referring to problems as hiccups, with comments such as, "any hiccups were easy to rectify".

However, despite the IT support provided, when asked for ideas on how the online discussion/learning could be improved, the suggestion of providing helpful hints was presented: "Technical hints and tips (e.g. the timing out thing)". Students identified frustration around technical issues: "Apart from being timed out (very frustrating) it was quite easy to navigate and times of frustration when the 30 min lockout deleted work". This relates to the online learning management system disconnecting users after being idle for 30 minutes. Students who were taking longer to compose their contribution to the online discussion found this frustrating and this was identified as a barrier to participating online.

Strategies for creating a learning community

Three key teaching strategies were used to create a sense of community amongst the diverse nurses. These were online introductions, on-campus introductions and assessed discussions.

Online introductions

Communities, whether face to face or online, are formed around issues of identity and shared values (Palloff & Pratt, 2003). Part of the strategy of establishing the identity of the community was to have both online and on-campus face to face introductions so students would get to know each other. On enrolment in the course students were sent a course outline, reading material and instructions on how to access the online learning management system. Students were asked to go online and briefly introduce themselves in about 50 words within an online discussion titled 'Introductions', before attending the on-campus workshop. The purpose of this was twofold: firstly to make sure students could and had a reason to access the online discussion, and secondly to begin to build community through meeting and learning something about each other.

Thirteen students (65%) completed their introduction before the on-campus workshop. Students who had not introduced themselves online completed this task during the on-campus workshop. Some, who had introduced themselves very briefly previously, chose to add to their introductions later. The introductions were accessible throughout the semester aiding students to recall their peers and to build a more complete picture of their professional profiles.

On-campus introductions

The course included a two day on-campus workshop within which an assessment, worth five percent, required the participants to introduce themselves during a five minute formal presentation to the group. The nurses were asked to share reflections on the development of their practice knowledge, how this had changed and progressed over the last five to ten years and where it could be in five years time. The brief presentation by each student was thought by the teacher to contribute to the success of the online discussion because:

...they KNEW each other and had developed respect for each other's personal learning journey before the online discussion. I think that was a factor in the online discussion being so successful. Despite their different clinical practice areas, throughout the country, they had developed into a group.

After the on-campus face to face introductions the remaining students showed no hesitation in completing their online introductions and even those who had completed their online introductions added to them. Research suggests students use self disclosure as an important way of building rapport within the online group (Moore & Kearsley, 1996).

Assessed discussions

Three assessed online discussions were included, one discussion each month for three months. Each discussion topic was available online at the beginning of the month, then it was closed at the end of the month and no further additions could be made. The content introduced in the on-campus component was supported by these online discussions. The rationale behind the assessed online discussions was to assist with pacing and encouraging students to keep up with the learning material. The questions were intended to build on knowledge, going from the individual through to the healthcare system and designed to also assist in preparation of the essay. Students were instructed to contribute a minimum of one response stating their position to the discussion topic and a second response, which critiqued the ongoing discussion. The discussion questions were broad and open to allow for development of answers and critical discussion. Considerable thought went into the discussions, as shown by the teacher's comments:

The suggested length to contribute for the discussion is 150 words. That's not a lot to write but also ensures students really engage with the material. A lot of effort and thought went into the discussion topics. They're broad, there's no right or wrong answer, and the answers and thinking should help students towards their assessments too. We thought about the why's and wherefores carefully.

Grading for each discussion was based on evidence of three components:

- regular contribution
- comment on the discussion topic and
- depth of critical thinking in relation to the discussion.

Marks for the three online discussions equated to fifteen percent of the overall grade. Each discussion was worth five percent and most students achieved well on the online discussion assessment with a range from 8.5% to 15% attained. The average across the three discussions was 13.23%. The teacher considered assessing discussion an essential strategy for ensuring participation.

I think making it compulsory was good – as marks (grades) show that the teacher values it. It makes it a significant part of the learning equation.

As described above, students were asked to contribute a minimum of twice to each online discussion so the expected contribution was 40 postings over the month. The first discussion started slowly on the 9th day of the month, and peaked at 19 contributions on the last day. A total of 61 contributions were made for the first assessed discussion. The second discussion had the most contributions overall (76) and had a fairly even spread over the month, yet still peaked on the final day for submissions. The third assessed discussion had less contributions overall (58) and while these were sporadic over the month, peaked over the last three days. This pattern of postings over the month is shown graphically in Figure 1.

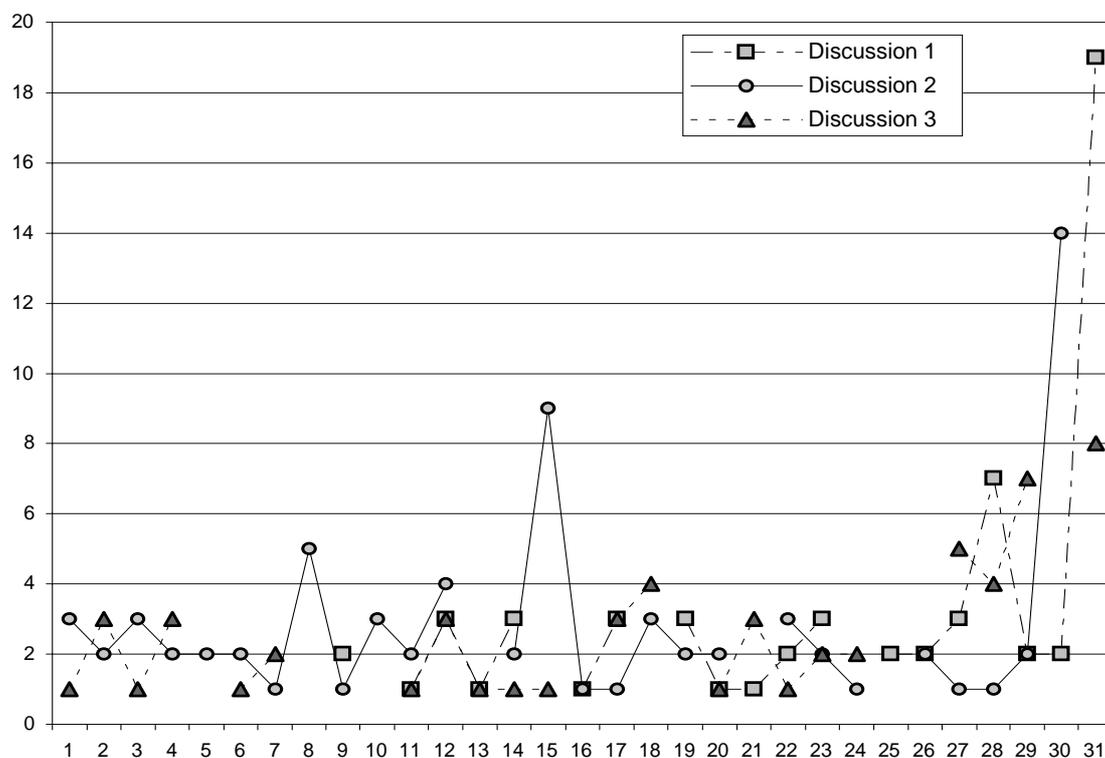


Figure 1: Rate of contribution by date

The postings from students were monitored and students who had not contributed by the last week of the month were sent a personal reminder email. Nine students were sent personal reminder emails for the first discussion, declining dramatically to three for the second discussion and two for the final discussion. Over the three discussions only one student did not contribute to one of the discussions. The teacher described the contribution rate and actions to encourage participation:

There were a couple of students who I needed to chase, people for whom life got too busy, but generally it went well. I sent personal emails and reminded them that there was a week to go. I tried to be non-confrontational and I think I called it a ‘nudge’. I mean they could choose not to bother and get 0 for that discussion. One, or maybe two people, I had a

separate chat with (email) and suggested they get on early in the discussion ...as that might seem easier than to add when it's already rolling along.

There was evidence of students lurking (Nonnecke & Preece, 2001), where they read others contributions, yet may not have responded. This was shown when individual postings had been accessed between 5 and over 60 times and a number of students indicated they had read messages without making contributions. However, participation in learning could still occur, for example:

I did access the discussion quite frequently without actually contributing so I could read other students contributions. This was a good way of stimulating my own thinking.

Another student identified herself as a listener rather than a contributor during discussions, whether face to face or online, saying: "I'm more of a listener when it comes to discussions – in this case I was a reader." The online nature of the discussions did not change her basic behaviour, but her preference for passive participation in the online environment required a change from listening to reading.

While some contest that assessment drives learning (Cox & Clark, 1998; Hedberg & Corrent-Agostinho, 2000), in this situation assessed discussion drove participation. Participation ensured students were exposed to multiple perspectives and provided students opportunities to share their experience and learning, thereby contributing to the development of a learning community.

Evidence of a learning community

The findings of this study include evidence that a learning community was created and this evidence is presented using the six characteristics outlined previously (Bielaczyc & Collins, 1999).

1. Value members with diverse expertise

The first characteristic, of value being attributed to the contributions of members with diverse areas of expertise, was demonstrated by the content of the assessed discussions, in the manner students responded to each other. The course also had two non-assessed online discussions; 'Introductions' and a social 'Coffee Group' discussion and this is where the more social interactions took place, which also had elements where valuing different members was evident. The ground was set for this by the on-campus and online introductions where the diversity of student's personal and professional journeys and clinical expertise were highlighted. Students knew and respected each other as a final comment from a student indicates:

On line ...the big long coffee... the (online) contact has been fun and a great way of expanding views on particular points re nursing / scholarship.

Feedback from the teacher about the online interaction included:

I've had some emails from students saying how much they liked it and how they appreciated the comments of their peers.

Comments from students such as *We are good thinkers!* and *We are a talented group* further show that students valued each other. The use of the 'we' illustrates a sense of belonging and of collective identity. The sense of belonging was helpful for motivating students to continue with the course, despite their other commitments.

2. Members benefit from multiple perspectives

The multiple perspectives of the postgraduate nurses reflected the complexity of the current health care system. There was clear evidence that students benefited from the exposure to multiple perspectives from others in the group, shown in these comments:

The contribution of peers was interesting reading as it is always good to hear other's perspectives.

...it's so easy to get locked into a particular corner in health care and not really appreciate what's going on elsewhere...thanx to all for sharing thoughts / info / knowledge and of course the passion of nursing ...all the scholarly best !!!

Reading others' views created interest and maintained involvement in the online discussion. As the course progressed evidence emerged of shared values and camaraderie amongst students. Respect for the perspectives of others and what that contributed to the learning community had an empowering and unifying effect on the postgraduate nurses best articulated by a student's comment:

Having such a talented and diverse bunch of participants has enriched so much for me - my thinking, my view points, attitudes, my understanding of Hospital, Community and Maori specific initiatives in nursing, and my belief that nursing is definitely on track for one day 'ruling the world' of health (something I believe in most emphatically).

The comments indicate that students identified the authenticity of the online discussions as realistically reflecting the health care scene.

3. Support for individual development

The encouragement and support provided by the group assisted each student to meet the learning outcomes and assessment points of the course. Support for individual development was shown most through the social 'Coffee Group' online discussion. Initially problems with online work occurred due to different Internet Service Providers, typing speeds and unfamiliarity with online discussion. Students helped each other using the online discussion for advice, encouragement and support and acknowledged the support they received from each other.

The teacher also commented on the sharing of information, resources and ideas, both within and beyond the course. For example interesting readings students came across were shared and suggestions about approaches to clinical issues were provided.

4. Advancing collective knowledge

The objective of advancing the collective knowledge base was enhanced by the three assessed online discussions. The discussions were found by students to be useful, informative and contributed to learning. Students described the online discussions as a "very informative way of communicating and learning". The topics for the discussion were a significant factor in advancing collective knowledge and students commented on the relevance of discussion topics to learning: "Good topics focussed on the course". This relates to the need for learning to be authentic, not only for practice, but also for the learning situation (Oliver & Herrington, 2003). However, as one student observed, individual preference for certain discussion topics was found:

This is a topic closer to my heart and I feel I can contribute more to this discussion.

The teacher recognised subgroups evolving within the student group, often around scopes of practice:

Yes I seem to have a group, or cohort of [name] and they are all over the country. You can tell on the discussion because they add a dimension to each topic, and they seem to keep it going. So yes they participate, and I think the group, cohort thing is probably good for them. Although I can also say that the [other] students have also joined their threads too.

5. Opportunities for sharing

A characteristic of a learning community is that it needs to provide opportunities for sharing what is learned and the assessed online discussions was the main medium for this. Jolliffe, Ritter and Stevens (2001, p. 42) state: "Computer-mediated communication is an important component of web-based learning, as it allows for both communication and collaborative learning, which in turn can lead to deeper processing of information and create a sense of learning community." Students confirmed this when sharing that the online discussion was "a great opportunity to learn from others".

Having five discussion forums provided a number of opportunities for sharing. Learning related to the course was shared through the assessed online discussions. Students' experience and skill with online discussion was shared using the informal "Coffee Group" discussion. Another aspect of sharing occurred with the introductions, as student's career paths, knowledge journeys and aspirations were revealed.

6. Collective effort

The course design did not include group problem solving situations. However, there was evidence of collective effort in problem solving some of the initial technical problems with accessing and posting to the online discussions. The three assessed discussion topics were designed to build on themes within the course and contributed to knowledge development that would facilitate completion of the essay assessment. The assessment mix encouraged collective effort while assisting development of ideas. The assessed discussions encouraged collective effort by requiring comment on the discussion topic and then critique of the ongoing discussion. The teacher remarked on evidence of students' collective learning through participation in the online discussion:

And there was depth there. Not from everyone....maybe I shouldn't have expected it from everyone. But there was definitely deep and reflective learning. You could sense them struggling with clinical issues, considering theory and how it related to their practice and posing solutions and new questions.

Conclusion

The course design included clear alignment between the learning outcomes and assessments. The four course assessment points worked together to develop the concepts within the course. Assessments for the course included a presentation, diary, essay and online discussions. The twenty students who completed the course all passed. Final grades ranged from C minus (52%) to A plus (93%), with a mean of B (73%). The course design and flexible nature, with two on-campus days supported by online discussion worked well to ensure participation of all students in a study environment that was initially unfamiliar. Using online and on-campus introductions allowed students to get to know each other. Their similarities and differences were revealed and respect developed. This respect for each other aided the sense of belonging and collective identity. The characteristics of a learning community were demonstrated. More exciting from an educator's perspective is the empowerment that became evident towards the end of the semester. It is fitting that a student has the final word in this paper, and this greeting to fellow students is one of the final postings for the course, which encapsulates the enrichment a learning community can create:

This is a big thank you to all you guys. This is my first online discussion group and I have enjoyed it so much. ...Good luck to you all in your future endeavours and when you become Nurse Practitioners, I'll be proud to say that I 'knew you when'. Thanks again and a very merry Xmas.

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