Building communities of practice in distance learning courses for higher education teacher development

Stephanie Fuller
Queen Mary University of London

Abstract

A 'communities of practice' approach has been shown to be an effective way of supporting the development of educators within higher education (HE). It enables members of a group with common interests and experiences to learn from each other and to develop their professional practice together. Distance learning has become an increasingly important means of delivering professional development for teachers in HE, but to build and develop communities of practice in an online context can be a real challenge. This article explores the ways in which distance learning teacher development courses can effectively build communities of practice. It investigates participants' experiences of community on modules with different distance learning delivery modes. It finds that a community of practice was developed to an extent, but that this was established more successfully within synchronous delivery modules with webinars than in asynchronous modules. However, across all modes of delivery, the presence of peer feedback, peer learning and collaborative activities within the learning design was crucial for effective development of a community of practice.

Keywords:

Community of practice; distance learning; teacher development; peer feedback; webinar

Introduction

A 'communities of practice' approach has been shown to be an effective way of supporting teacher development within higher education (HE). It enables members of a group with common interests and experiences to learn from each other and to develop their professional practice together (Patton and Parker, 2017; Boud and Brew, 2013; Warhurst, 2008). There is also a growing body of research which demonstrates the benefits of using a model of communities of practice in distance learning education (Baran and Cagiltay, 2010; Boulton and Hramiak, 2012; Kirschner and Lai, 2007). Such communities have become increasingly embedded within distance learning in HE, a process which has been greatly accelerated by the COVID-19 pandemic. However, building and maintaining a sense of community can be a real challenge within a distance learning context (Rovai, 2000, 2002a). This article seeks to explore how online educational development courses for teachers in HE can effectively build communities of practice. If, in line with social constructivist approaches, we understand learning to be a social process (Brown *et al*., 1989; Vygotsky, 1978), then it is vital not only for student experience and social networks, but also for learning, and particularly so within a professional development context. Community itself is a learning tool and in previous studies has been found to be "*an intrinsic part of* [students'] *ability to learn online*" (Conrad, 2005, p.14).

This approach draws on Wenger's proposal that meaningful learning is a socially situated process. Wenger, McDermott and Snyder (2002) define communities of practice as:

"groups of people who share a concern, a set of problems or a passion about a topic, and who deepen their knowledge and expertise in this area by interacting on an ongoing basis… Over time, they develop a unique perspective on their topic as well as a body of common knowledge, practices, and approaches. They also develop personal relationships and established ways of interacting. They may even develop a common sense of identity. They become a community of practice." (op.cit., pp.4-5)

Online spaces can provide an excellent environment for the development of online communities and communities of practice and, equally, distance learning courses can be designed to try to engender and support these communities. While there is much literature establishing the theoretical underpinnings of online communities of practice, there remains a lack of detailed research into the practical features of successful examples of these communities and the ways in which they can be developed (Kirschner and Lai, 2007).

Research has previously been undertaken into online communities of practice within teacher education (special issue of *Technology, Pedagogy and Education* Vol 16, Issue 2, 2007[1]), though it has focused on compulsory education teacher training and, while there is research supporting the use of a communities of practice approach in developing HE teachers (Patton and Parker, 2017), this has not explored in detail such communities within an online or distance learning context. Nevertheless, since the rapid move to online delivery of HE teaching, the development of online communities has been at the forefront of efforts to support students through the COVID-19 pandemic (Brown and McCall (2021). This is the case both for HE teacher education programmes and for the courses that these teachers deliver to their own students. The present article will therefore investigate how effective communities of practice among HE teachers can be established in distance learning courses. Establishing effective practices within these courses is important both for participants' learning and experience and for that of their own students.

A small research project explored the experience of participants on an educational development programme at a United Kingdom (UK) Russell Group university. The course is a PGCert in Academic Practice (PGCAP), undertaken by new members of academic staff – some of whom are required to complete the programme for their probation – and other colleagues with a substantial teaching role who enrol on the programme voluntarily. Course participants come from all disciplines across the University and include NHS staff who teach on university programmes.

Participants in the project's survey were based at a variety of campuses and sites, both within the UK and overseas, and there were also a number of colleagues from external institutions. As all were completing the course alongside their job, there had to be enough flexibility to enable them to fit the programme around other responsibilities. A distance learning programme was therefore developed and offered alongside the traditional face-to-face offering on campus. This, coupled with the dispersed nature of the cohort, both in terms of discipline

---

[1] https://www.tandfonline.com/toc/rtpe20/16/2?nav=tocList

and location, meant that developing a community of practice approach was particularly useful for this population.

All participants who took distance learning modules on the programme were invited to take part in a survey and follow-up interviews were also held to explore respondents' views in more detail. The study sought to understand to what extent participants had felt part of a community on their modules, what kind of a community they experienced and what they felt were the key factors contributing to the building of community online. The primary research questions were:

- To what extent was a community of practice established in these distance learning modules?
- What impact did the mode of delivery (synchronous or asynchronous) have on participants' sense of community?
- What were the key factors in establishing successful communities of practice?

Literature review

Communities of practice for HE teacher development

A 'communities of practice' approach has been shown to be an effective way of supporting teacher development within HE (Patton and Parker, 2017; Boud and Brew, 2013; Warhurst, 2008). While Boud and Brew (2013) challenge the effectiveness of formal professional development courses for HE teachers because they are distant from the site of educators' practice, Warhurst (2008) finds that participation in such courses can enhance lecturers' understanding of learning and student outcomes. Remmik *et al*. (2011, p.189) argue that these courses provide a "*good opportunity to support the creation of communities of practice on teaching*" because the structure they provide supports the creation of networks with peers and the building of lasting collaborations.

Boschman *et al*. (2021) use the idea of "*significant conversations about teaching*" as a way of investigating the origins and formation of communities of practice among academics in HE. They argue that, for academics, communities of practice "*can create and sustain the enabling conditions that allow for the deep work of reflecting on why we teach, how and what we choose to teach, how we understand student learning, and how we learn about and expand our repertoire of teaching practices*" (*op.cit*., p.309). Such communities are vital for effective academic and teaching development, which for Boschman *et al*. was within the context of a cross-disciplinary community of teachers. For groups of new teachers in HE, these opportunities are even more crucial, to support them to develop their practice. Remmik *et al*. (2011, p.188) make the importance of communities of practice clear, as they argue that "*lecturers' workplace learning in communities plays a substantial role in their identity development and their practice*".

The importance of communities of practice for distance learning

The importance of community for effective professional distance learning has already been established within the literature. Boulton and Hramiak (2012, p.508) found that students, when on a teacher training course, participated in reflection as part of a community, they were "*capable of achieving more in terms of their development as reflective practitioners than if they had reflected in private.*" The students were asked to take part in writing reflective blogs and

the study found that, because these blogs were communal, read by all students, interlinked and connected between each other, the students could more effectively develop their practice. The study therefore found a clear link between effective learning and community and supports the need to explore community building in distance learning.

Conrad's 2005 study into a cohort-based programme explores the question of who should be responsible for creating an online community. The study argues that students progressively take more responsibility for the development and maintenance of community as a distance learning programme progresses. Conrad finds that an increased sense of community in the case of his students manifests as "*increased comfort in online discussions and postings* […] *more off-line time together and more and better collaboration on group projects*." (*op.cit*., p.7) There is a clear link between active participation in the course and enhanced engagement and collaboration and sense of community. Conrad argues that ability to learn effectively online is inextricably linked to the development of a sense of community among the cohort. This study suggests that, when students remain together as part of the same cohort throughout their programme, a sense of community naturally develops and strengthens over time. However, it does not explore ways in which community can be developed online within the context of a shorter period of study or single module.

Aside from the practical steps which can be taken to help develop community, there is a range of personal motivators and barriers which also have an influence on online community building. In a study of a distance learning professional development site for teachers, Baran and Cagiltay (2010) observed the following factors as key motivators for participation in the online community: personal factors included participants' being given more responsibility for leading elements of the online material, growing self-confidence as the course progressed, degrees of personal sociability, interest in the topic and altruism in terms of wanting to help fellow participants; inter-personal factors included wanting to gain a reputation, defending and debating ideas; environmental factors included the quality of tools and the design of the distance learning course (*op.cit*., p.84). Conversely, personal barriers included lack of time, giving the course low priority and not wanting to disagree with peers. Interpersonal barriers included fear of being criticised and environmental factors were information, communication and technology (ICT) skills, technical issues, internet access and course design (*op.cit*., p.87). This study is useful in beginning to identify ways by which we can design online learning in order to facilitate, in the best possible way, the participation of all students. However, while the study explores wider factors influencing participation in an online community, it does not consider the specific elements of learning design which can contribute to the establishment of an effective community of practice.

One such element which has been previously investigated in terms of building effective online communities is interactivity, which has been found to be a key factor in the effectiveness of online communities. Kent *et al*. (2016, p.116) find interactivity within distance learning to be a "*process of knowledge construction*", which is a "*socio-constructivist process in which learning results from the interactive exchange of information*" (*op.cit*., pp.116-7). While this research focuses on demonstrating a positive correlation between level of interactivity and attainment of learning outcomes, it also raises important questions about the relationship between interactivity and community. It suggests that, for communities to develop, there need to be opportunities for students to interact with each other and also to take part in interactive learning activities within the online environment. The authors also highlight the important role that the

teacher plays in determining the level of interactivity in distance learning teaching and learning, arguing that "[t]*he instructor's moderation mechanisms, discussion structuring and its adaptation to the designed learning outcomes of a course*" all serve to "*moderate*" interactivity (*op.cit*., pp.118-9). Therefore, the curriculum design and the tutor's role within the online learning environment can also have a significant effect on interactivity and the development of community.

Closely related to interactivity is the presence of opportunities for peer collaboration. This can take many forms, including synchronous discussions, asynchronous discussions, providing peer feedback, and group project work or assignments. It is, of course, key for enabling communities to develop among members of a group and is vital for distance learning students. In the peer learning literature, approaches for establishing effective peer learning online are explored (Boud, 2001; Vasquez-Colina *et al*., 2017). Within the distance learning context, Delahunty *et al*. (2012, p.260) argue that distance learning students need "*deliberately orchestrated, multiple opportunities to engage with others*" in order for them to have an effective learning experience. The integration of peer feedback, learning and collaboration opportunities may therefore be crucial to the effectiveness of distance learning courses and the development of communities therein.

Communities of practice

The concept of communities of practice was originally posited by Wenger in 1998, but grew out of earlier work on situated learning (Lave and Wenger, 1991) and has evolved over time since then (Arthur, 2016; Tummons, 2012). In *Communities of Practice* (1998), the idea of communities of practice is deployed as an analytical tool to explore and define how organic communities were successfully operating outside formal and hierarchical organisational structures. This work argued that such communities could not be deliberately created. Communities of practice were defined by three identified dimensions: "*mutual engagement, joint enterprise and shared repertoire*" (Wenger, 1998, p.152).

However, Wenger's later work moves towards exploring communities of practice as a "*design intention*" and explores how these communities can be purposefully built (2010, p.11). Communities of practice are defined more loosely as "*groups of people who share a concern, a set of problems, or a passion about a topic, and who deepen their knowledge and expertise in this area by interacting on an ongoing basis*" (Wenger, McDermott and Synder, 2002, p.4). There has been criticism of this move within the literature which argues that the idea of communities of practice has become more diluted and less coherent (Hughes *et al*. 2007; Vann and Bowker 2001). However, despite the change in focus, the idea of communities of practice still presents an interesting way of looking at both organisational structure and, more relevant here, professional development, which is non-hierarchical. Given the importance of peer learning and support for professional development, it remains crucial to try to find ways to foster this kind of community, particularly within distance learning.

The literature relating to 'online communities of practice' often uses the term interchangeably with others, such as 'networks', 'virtual learning communities' and 'community of inquiry'. Macia and García (2016, p.293) define the difference between communities of practice and networks as follows: "*commitment to participate in a community should be high and sustained whereas participation in a network can be spontaneous, unpredictable and serendipitous*". In practice, groups can operate as both communities of practice and networks, as argued in

Wenger, White and Smith (2009, p.11). For example, Ranieri *et al.* (2012) claim that both communities of practice and networks are needed to describe the relationships established through social network sites. Within different contexts, it may be the case that being online enables communities of practice to take different forms, with much larger groups and different levels of participation among members. Notably, online communities of practice enable the presence of 'lurkers' who observe and listen in but do not necessarily actively contribute to the community. However, these silent participants can still be of real benefit to communities as this form of "*peripheral participation is often a prior step to posting materials or getting more involved in community discussions*" (Macia and García, *op.cit.*, p. 301). Online communities of practice can take on a wider range of forms because of their online nature.

Methodology

This research surveyed all participants of distance learning modules which were taken as part of the educational development programmes at a UK Russell Group university between the academic years 2017-18 and 2019-20, inclusive. These programmes are professional development courses for new academics, clinicians who teach and PhD students who teach. Distance learning modules on the programme throughout this period took a variety of forms, with some using regular scheduled synchronous sessions (webinars) combined with asynchronous activities (online activities students complete independently in their own time) and others using purely asynchronous learning design.

Synchronous modules were designed using a flipped classroom model, with activities for participants to complete in their own time, both in preparation for webinars and as follow-up. Webinars had a focus on active learning and facilitation of sharing of practice and peer learning, to support the development of a community and to draw on participants' experiences and expertise. While pre-webinar preparation comprised largely individual activities – for example readings, videos or recorded presentations for review – post-webinar activities were again designed to support exchange of ideas, peer feedback and peer learning through forum activities, in which participants shared ideas and were asked to comment on each other's posts.

Asynchronous modules were designed to encourage interaction among participants through online forums. Alongside independent activities including readings, videos and presentations for review, participants were asked to share ideas to forums and to provide feedback to colleagues on their posts. The design laid strong focus on tutor feedback, in order to provide detailed and individual support to participants, and tutors gave individual feedback to participants on their forum posts.

A questionnaire, designed and emailed to all distance learning module participants, asked for reflection upon personal experiences of the distance learning modules. It contained a mixture of 5-point Likert scale answers and free-text answers. Following ethical approval by the University, participants were issued with an information sheet about the study and asked to confirm their agreement for their responses to be used anonymously. Participants were also asked if they would be willing to participate in follow-up interviews. If so, they were invited to respond to further questions and elaborate on their answers via online interviews and by email.

Given the exploratory nature of this study, quantitative and qualitative research methods were combined to give a detailed picture of participants' experience of distance learning and the

extent to which they felt a community of practice had been developed. Likert scale questions were used to categorise the data and generate statistics to support the qualitative analysis. The inclusion of Likert questions also enabled busy colleagues who did not have the time to dedicate to detailed free-text answers the opportunity to respond quickly to the questionnaire. Free-text answer questions enabled the generation of themes from responses and also the collection of participants' detailed experiences and suggestions. The list of questions follows. While these drew influence from Rovai's 'Classroom Community Scale', (Rovai, 2002b) the questions were much more limited in number and included more free-text answers to preserve brevity and encourage as many responses as possible.

Likert scale questions:

- I felt part of a community on this module.
- My learning experience was enhanced through interaction with other colleagues on the course.
- How important were webinars for creating a sense of community?
- How important were online asynchronous forums for creating a sense of community?

Free-text questions:

- Which elements of the module contributed to your sense of community?
- What more could the course team do to help foster a sense of group identity and to support learning as a social process in this module?
- Do you have any other comments on the extent to which you felt part of a community or cohort on this module?

Data was collected at the end of each of the two semesters during the period 2017-18 to 2019-20, in January following semester one and in May following semester two. The questionnaire was emailed to everyone who had been enrolled to a distance learning module semester and used a Google Form to collect data. The questionnaire was issued a total of 279 times, generating 51 responses (18% response rate).

Of the respondents, 32 were members of staff, 18 were colleagues at different institutions and 1 participant was a member of NHS staff teaching the University's students. This is representative of the range of participants on the educational development programmes during this period. Participants from external institutions took all modules via distance learning, though staff from the home institution could take a mixture of face-to-face and distance learning modules as part of their programme. 23 participants indicated they would be willing to take part in a follow-up interview; either synchronous or asynchronous interviews were conducted with 7 of them, following a set script of questions and discussion points designed to explore in more detail their experiences of their distance learning modules. The interview transcripts were combined with the qualitative information from the survey and used to provide more detailed insight into and exploration of the topics which were highlighted within survey responses.

Data analysis drew on the approach of Ely *et al*. (1997) to conduct an "*analytical and interpretative*" review of the data collected from the questionnaire and interviews (1997, p.

163). This process involved reading, re-reading, categorising and then identifying themes within the data. The data were also split into categories, in order to explore differences between participants studying in either synchronous and asynchronous modes.

Results

Mode of distance learning study and effect on perceptions of community

Responses for synchronous modules (i.e., those with a regular live webinar combined with asynchronous activities) totalled 38 (75%), representative of the fact that most of the distance learning modules over this period were delivered synchronously. Of this group, 74% agreed or strongly agreed that they felt part of a community, a higher proportion than that of the whole dataset (63%). 79% of the synchronous group agreed or strongly agreed that their learning was enhanced through peer interaction, which was again higher than the proportion for the entire group (75%). 76% found webinars to be important or very important for creating a sense of community and 39% thought the same of asynchronous activities.

In response to the free-text question about which elements of the course contributed to sense of community, answers from the synchronous group were themed around discussion, interaction and collaboration within webinars and asynchronous forums. The presence and style of teaching were also mentioned in several responses:

- *"I feel that the webinars are an innovative and convenient way to interact and learn as a group";*
- *"[being able to] see and speak to people who had offered feedback on my work – closing this loop helped me feel more involved and connected";*
- *"Sense of reciprocity in commenting on blog posts";*
- *"Ongoing conversations and progress";*
- *"All participants are encouraged to talk and share ideas";*
- *"The instructor's presence and style of teaching".*

For the asynchronous group (i.e., modules where there was no live webinar, only asynchronous activities, n=13, 25%), only 31% agreed or strongly agreed that they felt part of a community, a significant difference from the response of the synchronous group. However, 61% still felt that their learning had been enhanced through interacting with peers and 61% found asynchronous activities to be important or very important for building a sense of community. It is clear that those participants who could access a webinar had a much stronger perception of community; and, where webinars were present, asynchronous activities were seen to be much less important for building a community.

For the asynchronous group, the answers to the free-text question about what contributed to sense of community focused on existing relationships with colleagues, the role of forums and again the role of the tutor. For example:

- "I felt very alone on this module as it was asynchronous I couldn't have conversation in real time with other participants";
- "The design of the module could be modified to facilitate more asynchronous interaction";
- "Pre-existing relationship with another student, offline";

- "Knowing colleagues from previous face to face modules";
- "Hard to attain sense of community with only asynchronous activities";
- "Very inclusive teacher. Always positive and constructive feedback".

Compared to those on solely asynchronous modules, participants of synchronous courses clearly found their experience to be much more discursive, interactive and collaborative and they therefore perceived a much greater sense of community. However, those on asynchronous modules felt that asynchronous interaction with peers through forums was a significant way by which their learning was enhanced.

Internal and external participants

Data were collected on whether survey respondents were internal staff or colleagues working at other institutions. Despite the fact there were far fewer external colleagues on the programme, a very similar percentage of internal and external participants felt there was a sense of community on their course. More internal staff agreed that learning was enhanced through interaction with peers. However, a greater proportion of external colleagues found webinars and asynchronous activities to be important for community building and a greater proportion felt the experience of community on their distance learning module was similar to that they had experienced in face-to-face learning (table 1). It may be assumed that the presence of external colleagues on the programmes will to some extent have affected how well a community of practice developed. Although all participants had in common their role as teachers in HE, their membership of different institutional communities may have made building a community among the cohort more challenging.

Table 1. Comparison of responses from each group

	Entire data set	Synch	Asynch	Internal staff	External colleagues
% agree / strongly agree they experienced sense of community	63%	74%	31%	65%	63%
% agree / strongly agree learning enhanced through interaction with peers	75%	63%	61%	84%	58%
% agree / strongly agree community feel similar to face-to-face modules	22%	24%	15%	19%	26%
% found webinars important/very important for community	75%	76%	n/a	69%	84%
% found asynchronous activities important/very important for community	45%	39%	61%	41%	53%

What kind of community was experienced?

The answers to two free-text questions ('To what extent did you feel part of a community?' and 'Which elements of the course contributed to your sense of community?') in both cases provided useful information about the characteristics of the community that participants experienced. Answers to both questions were therefore combined, analysed and coded into themes. Table 2 below shows the number of answers which mentioned these themes (only themes appearing more than once are listed).

Table 2. Thematic ideas of community in response to questions 'to what extent did you feel part of a community' and 'which elements of the course contributed to your sense of community'.

Themes	Number of answers which mention theme – synchronous group (n=38)	Number answers which mention theme – asynchronous group (n=13)
Collaboration	14 (37%)	0
Relationships	11 (29%)	2 (16%)
Discussion	10 (26%)	1 (8%)
Feedback	6 (16%)	0
Group	6 (16%)	1 (8%)
Not a community	5 (13%)	5 (38%)
Responding	4 (11%)	1 (8%)
Inclusivity	2 (1%)	1 (8%)
Tutor support	2 (5%)	2 (16%)

For the synchronous group, the type of community they describe has strong elements of discussion, collaboration and a focus on relationships. The sense of a group is important and group activities such as peer feedback take a prominent role. The community is perceived to be built around relationships between participants. The idea of responding to each other was a strong theme, with the community creating a sense of reciprocity, and was also linked to regular communications back and forth between participants via the online forums. There was additionally a number of participants whose answers indicated clearly that they did not feel their module had created a sense of community. There were many fewer responses on which to draw for the asynchronous group, both because the numbers were lower and many respondents left these answers blank. However, by far the strongest theme for this group was that a sense of community was absent. Answers relating to this theme discussed loneliness, isolation and feeling distant. Of the other themes drawn from these responses, relationships and the support of the tutor were seen as important elements of community.

Within the follow-up interviews, similar themes emerge in terms of the kind of community which was experienced. Answers to the interview questions revealed a specific focus upon how community was built on discussion, webinars and exchanges on forums. The interview responses showed that these ideas are closely linked to participants' learning through and from each other and to the relationships built through this process:

- "I felt that [the module] encouraged a sense of community as there was discussion both during the live sessions as well as the asynchronous forums. We would comment and give feedback on each other's answers" [synchronous participant];

- "Listening in the webinars to other people's perspectives and experiences helped shape my own in a more rounded sense" [synchronous participant].

When asked if and why a community was important for their learning, respondents again highlighted the role of discussion, replying to each other and learning from each other:

- "It's very helpful for me to explain ideas to people and to hear them explain theirs" [synchronous participant];
- "I think it is important to have a sense of community, as it is important to hear what other people have to say about your teaching style and take their feedback on board in order to improve. Also it is important to see how other people practice teaching and decide for yourself which of their techniques you would like to adopt into your own teaching style" [synchronous participant].
- "I think it is very important, especially in this type of programme where peer experience is a major element. We can learn a lot from our peers, but might need to be pushed to do so over our busy schedules" [asynchronous participant].

There is certainly a clear understanding among participants of the importance of a community approach for professional educational development courses such as this. The interview responses begin to move towards a description of a community of practice here through the focus on learning from each other, observing and learning from others' practice, and exploring ideas through discussion and interaction with peers.

Specific factors influencing sense of community

We have already seen a clear divide in the extent to which participants felt part of a community of practice depending on whether the module design was synchronous or asynchronous, despite attempts to design interaction, collaboration and peer learning into all modules. The interviews also explored the specific elements of the design which had most contributed to participants' sense of community. From across the full range of the interviewees, some key similarities and themes emerged. Firstly, the benefit of the use of breakout rooms (separate online rooms within a webinar, where participants are split into smaller groups to complete activities) within the webinar environment was seen to be crucial for building relationships with, and learning from, peers on the course:

- "During the webinars, especially when working in breakout groups, we would chat a bit, and maybe not do all the aspects of work assigned...haha...but getting to know people a little more" [synchronous participant];
- "There was room for everyone to express their thoughts, especially in the breakout groups" [synchronous participant];
- "In terms of community sense, break out groups was important" [synchronous participant].

The interviewees also concurred on the importance of both seeing and hearing other participants during the webinars:

- "Connection is stronger when you see and interact with a face" [asynchronous participant];

- "If we all had our microphones on and were mostly looking at each other rather than slides, we would get some of the [social] cues" [synchronous participant];
- "It was helpful to see the faces of the people in our group during the webinar" [synchronous participant];
- "When students only communicate via chat [ie., via text only], this takes away from the sense of community" [synchronous participant].

The theme of feedback was repeated throughout the interviews, as in the questionnaire responses. Interviewees elaborated on this and it became clear that this idea of responding to each other, reciprocity and peer feedback is bound up with finding out about each other's teaching practice and learning from each other's experiences, ideas and approaches:

- "I really enjoyed the presentation aspect of the module, you got to see other faculty in a teaching moment" [synchronous participant];
- "By exchanging ideas and giving constructive feedback to each other, I feel we all learnt some valuable lessons" [asynchronous participant];
- "We had some good discussions in the forums where we would give constructive feedback to each other, hence building a sense of community" [synchronous participant];
- "When it comes to a course such as this, it is crucial that we are learning from each other" [asynchronous participant].

Enhancing sense of community

Questionnaire respondents were asked in what ways they thought the sense of community on their module could be enhanced. Suggestions included:

- More forums for interacting and sharing ideas;
- Making responding to posts in forums mandatory;
- Group work activities;
- Peer feedback;
- Presentations about teaching to learn more about each other's roles;
- Encouraging social online groups using WhatsApp or similar;
- Having consistent participants in webinars;
- Encouraging all participants to contribute to webinars;
- Encouraging participants to use audio and video in webinars;
- Making all webinar recordings available, even if there are multiple versions of each session;
- Having a one-off face-to-face session at the start of the module.

There are many excellent ideas here, and they again span the areas of forums and asynchronous interactivity, group work, learning from each other and peer feedback, social community building, enhancing community within webinars and combining the distance learning delivery with a face-to-face meeting.

Discussion and analysis

To what extent was a community of practice created?

Overall, just over half (63%) of participants in the study agreed or strongly agreed there was a sense of community on their course. This proportion was higher for those who studied synchronous modules (74%) and much lower for those who studied asynchronously (31%). The mode of study therefore had a significant impact on the extent to which participants experienced a sense of community, more so than other factors such as whether they were internal staff or external participants. This was despite attempts to design community building into all modules. Webinars were the most significant element of the course design in terms of community building for all groups of respondents.

Returning to the definition of communities of practice offered at the start of this article, the key elements of such as community are understood to be "*groups of people who share a concern*", who "*deepen their knowledge and expertise in this area by interacting on an ongoing basis*". Over time, they "*develop a unique perspective on their topic*", but also "*develop personal relationships*" and potentially "*a common sense of identity*" (Wenger *et al.*, 2002, p.4-5). Where participants felt they had experienced a community, the characteristics of the community they describe focus on elements of discussion, interaction, collaboration, peer feedback and peer learning. These processes fostered the development of relationships among the group. This experience certainly seems to be in line with key aspects of the definition of community of practice, specifically in terms of the shared concern and the development of knowledge and expertise through interaction. The interviews, too, placed a central focus on learning through peer feedback, whether via discussion forums or feedback on presentations. 75% of the whole dataset agreed or strongly agreed that their learning was enhanced through interaction with peers.

Other elements of a community of practice seem to have been less developed, particularly the establishment of personal relationships and a common identity. Although 'relationships' was one of the key themes arising within questionnaire responses, and interviews discussed the process of getting to know other participants, this may not have been wholly as a result of the online community of practice. Within text answers, respondents also discussed personal relationships in relation to colleagues they already knew personally outside the distance learning module. While elements of the distance learning course design seem to have helped support the development of relationships, this area was one where participants felt more could be done to develop community, as multiple respondents suggested ways of addressing this.

Key factors for establishing a successful community of practice in distance learning

This research has shown that participants on synchronous modules within a distance learning professional development programme experienced a much greater sense of community than those studying asynchronously. Webinars were the most important element of learning design for building a community of practice and asynchronous discussion forums did not seem to provide a similar sense of community. Webinars enabled direct discussion, interaction, peer learning, relationship building and shared construction of meaning. Within webinars, respondents highlighted two aspects which played a key role in community building: breakout groups and audio-visuals. Breakout groups are small online rooms within a webinar room which are used for small group discussions and group work. Incorporating breakout groups into teaching design gives participants space to work together and to have discussions away

from the large group and course tutor. This is clearly vital in enabling relationships to grow and for peer learning to take place.

Respondents also highlighted the use of both audio and video in webinars. They found that when webinar participants used only the chat text function, it was much harder to build relationships and therefore resulted in much less of a sense of community. The use of breakout rooms is also closely connected to this issue, as participants would often turn on their audio and video when in the smaller breakout group, even when they turned these off within the main room. Making use of audio and video in webinars mandatory is problematic, as participants may not have a strong enough internet connection or may not have a quiet or suitable space at home that they feel comfortable about for this purpose. Yet offering regular opportunities for breakout group work and encouraging all participants to share audio and video within the smaller groups, where they can connect and feel comfortable to do so, can be a useful strategy for community building.

The practical aspects of learning design discussed above (presence of webinars, breakout groups and audio-visuals) all serve to help facilitate discussion and collaboration and particularly enable peer feedback and peer learning to take place. This research has shown that peer feedback and peer learning are key factors in establishing a successful community across all the forms of distance learning discussed. Participants on all modules found peer feedback to be valuable for learning and saw it as an integral part of the community of practice in so far as one was established. This was the case for both synchronous peer feedback, for example, where participants gave presentations during webinars which were followed by discussion and feedback from peers, but also for asynchronous forums where participants were asked to post their work and give feedback to a colleague. Establishing this interactivity within the learning design is clearly important for community building and particularly so within a professional development programme such as this. Peer feedback and peer learning may be the key pedagogic approach to incorporate into distance learning course design in order to support the development of a community of practice.

Further areas to explore for enhancing sense of community

To explore in more detail the impact of peer feedback and peer learning as a course design strategy for the development of communities of practice in distance learning would be very useful. The study respondents also suggested a range of other interesting ways in which community might be further developed. Key suggestions were to develop more groupwork activities, which could involve participants working together within webinars and also asynchronously. Additionally, group presentations on particular topics could also generate peer feedback as another element of community enhancement.

Encouraging module cohorts to set up online social groups could also be a useful way of improving the personal relationship aspect of a community of practice. Such groups would have to be led by, and for, participants, but it may be appropriate for tutors to suggest to groups that this could be a useful way to keep in touch, share relevant resources and materials and discuss ideas outside of the formal module space. Many respondents wrote and spoke about the lack of informal social interaction with peers on distance learning compared to that within face-to-face teaching. Online social groups may help address this. Other areas which could be explored are opening the webinar room early or leaving it open after the session for participants to talk, or setting up a regular more informal, participant-led, synchronous slot for

more informal conversations. Designing introductory activities such as creating profiles, finding things out about each other and spending more time on icebreakers in webinars could also be beneficial.

Conclusions

This study sought to find out the extent to which participants of educational development distance learning modules experienced a community of practice. The results indicate that synchronous modules were much more successful at building communities than wholly asynchronous modules, despite efforts to design this feature into all modules. Holding scheduled synchronous webinars was the single most important factor determining sense of community. Also, within webinars, utilising breakout groups to enable small group work and discussion and encouraging use of audio and video by participants in these groups proved very successful. However, across all course formats, increasing opportunities for peer feedback, peer learning and collaboration is key and the practical considerations above serve to facilitate these peer interactions. Finally, in order to encourage further development of personal relationships and a common identity, measures could include: use of online social groups; building in more synchronous spaces for informal chat and discussion; and activities specifically designed to encourage members of the group to get to know one another more.

While there has been debate within the literature around whether communities of practice can indeed be designed and developed deliberately, this study has found that the type of community established via the design of distance learning modules does have many features of a successful community of practice. Within webinars, it was the opportunity for small group discussion and the use of audio and video that were highlighted as significant features of building a community: both enable immediate discussion, feedback, sharing of ideas and concerns, all helping to enable the beginnings of social connections and personal relationships. Webinars and use of breakout groups in particular help facilitate peer feedback and peer learning. Peer feedback and learning opportunities were also considered to be the most effective asynchronous element. This study therefore finds that this learning approach is one that should be further investigated and deployed in order to support community building.

HE is undergoing a period of intense change, prompted by the COVID-19 pandemic, but resulting in permanent shifts towards distance, online and blended learning. Since community plays a central role in learning, particularly for professional development courses, enhancing the development of communities of practice is an important way of developing participants' learning both within the course and beyond. If communities and relationships are successfully established within this programme, then this can provide a continuing form of professional peer learning and support throughout participants' careers and also support course participants to encourage the development of successful communities of practice within their own teaching.

Reference list

Arthur, L. (2016) 'Communities of Practice in Higher Education: Professional Learning in an Academic Career.' *International Journal for Academic Development*, 21(3), 230-241. Available at: https://www.tandfonline.com/doi/abs/10.1080/1360144X.2015.1127813?journalCode=rija20 (Accessed: 7 January 2022).

Baran, B. Cagiltay, K. (2010) 'Motivators and Barriers in the Development of Online Communities of Practice.' *Eurasian Journal of Educational Research*, 39, 79-96. Available at: https://ejer.com.tr/wp-content/uploads/2021/01/ejer_2010_issue_39.pdf (Accessed: 7 January 2022).

Bates, A.W. (2015) *Teaching in a Digital Age: Guidelines for Designing Teaching and Learning*. Vancouver: Tony Bates Associates Ltd. Available at: https://open.umn.edu/opentextbooks/textbooks/221 (Accessed 7 January 2022).

Boud, D. (2001) 'Making the Move to Peer Learning.' In: Boud, D., Cohen, R. and Sampson, J. (eds.), *Peer Learning in Higher Education: Learning From and With Each Other.* London: Routledge, 1-20. ISBN: 9780749436124

Boud, D. and Brew, A. (2013) 'Reconceptualising Academic Work as Professional Practice: Implications for Academic Development.' *International Journal for Academic Development*, 18(3), 208-221. Available at: https://www.tandfonline.com/doi/abs/10.1080/1360144X.2012.671771 (Accessed: 7 January 2022).

Boulton, H. and Hramiak, A. (2012) 'E-flection: the Development of Reflective Communities of Learning for Trainee Teachers Through the Use of Shared Online Web Logs.' *Reflective Practice*, 13(4), 503-515. Available at: https://www.tandfonline.com/doi/abs/10.1080/14623943.2012.670619 (Accessed: 7 January 2022).

Brown, B. and McCall, V. (2021) 'Community, Adaptability, and Good Judgement: Reflections on Creating Meaningful, Sustainable Pedagogy in Uncertain Times.' *Developing Academic Practice,* 2021 (January), 5-9. Available at: https://www.liverpooluniversitypress.co.uk/journals/article/60452 (Accessed: 7 January 2022).

Brown, J.S., Collins, A and Duguid, P. (1989) 'Situated Cognition and the Culture of Learning.' *Educational Researcher*, 18(1), 32-42. Available at: https://journals.sagepub.com/doi/10.3102/0013189X018001032 (Accessed: 7 January 2021).

Conrad, D. (2005) 'Building and Maintaining Community in Cohort-based Online Learning.' *Journal of Distance Education*. 20(1), 1-20. Available at: http://www.ijede.ca/index.php/jde/article/view/78 (Accessed: 7 January 2022).

Delahunty, J., Verenikina, I. and Jones, P. (2014) 'Socio-emotional Connections: Identity, Belonging and Learning in Online Interactions. A literature Review.' *Technology, Pedagogy and Education*, 23(2), 243-265. Available at: https://www.tandfonline.com/doi/full/10.1080/1475939X.2013.813405 (Accessed: 7 January 2022).

Ely, M., Vinz, R., Downing, M. and Anzul, M. (1997) *On Writing Qualitative Research: Living by Words*. London and Washington DC: The Falmer Press. ISBN: 9780750706032

Hughes, J., Newson, N. and Unwin, L. (eds.) (2007) *Communities of Practice: Critical Perspectives*. London and New York: Routledge. ISBN: 9780415364744

Kent. C., Laslo, E. and Rafaeli, S. (2016) 'Interactivity in Online Discussions and Learning Outcomes.' *Computers & Education*, 97,116-128. Available at: https://www.sciencedirect.com/science/article/abs/pii/S0360131516300537 (Accessed: 7 January 2022).

Kirschner, P. and Lai, K-W. (2007) 'Online Communities of Practice in Education.' *Technology, Pedagogy and Education*, 16 (2), 127-131. Available at: https://www.tandfonline.com/doi/abs/10.1080/14759390701406737 (Accessed: 7 January 2022).

Lave, J. and Wenger, E. (1991) *Situated Learning: Legitimate Peripheral Participation*. Cambridge: Cambridge University Press. ISBN: 9780521423748

Macià, M. and Garcia, I. (2016) 'Informal Online Communities and Networks as a Source of Teacher Professional Development: A Review.' *Teaching and Teacher Education*, 55, 291-307. Available at:

https://www.sciencedirect.com/science/article/abs/pii/S0742051X1630021X (Accessed: 7 January 2022).

Patton, K. and Parker, M. (2017) 'Teacher Education Communities of Practice: More than a Culture of Collaboration. *Teaching and Teacher Education*,' 67, 351-360. Available at: https://www.sciencedirect.com/science/article/abs/pii/S0742051X17309617 (Accessed: 7 January 2022).

Ranieri, M., Manca, S. and Fini, A. (2012) 'Why (and how) do Teachers Engage in Social Networks? An Exploratory Study of Professional use of Facebook and its Implications for Lifelong Learning.' *British Journal of Education Technology*, 43, 754-769. Available at: https://bera-journals.onlinelibrary.wiley.com/doi/10.1111/j.1467-8535.2012.01356.x (Accessed: 7 January 2022).

Remmik, M., Karm, M., Haamer, A. and Lepp, L. (2011) 'Early-career Academics' Learning in Academic Communities.' *International Journal for Academic Development,* 16(3), 187-199. Available at: https://www.tandfonline.com/doi/abs/10.1080/1360144X.2011.596702 (Accessed: 7 January 2022).

Rovai, A. (2000) 'Building and Sustaining Community in Asynchronous Learning Networks.' *Internet and Higher Education*, 3, 285-97. Available at: https://www.sciencedirect.com/science/article/abs/pii/S1096751601000379?via%3Dihub (Accessed: 7 January 2022).

Rovai, A. (2002a) 'Building Sense of Community at a Distance.' *International Review of Research in Open and Distance Learning*, 3(1), 1-16. Available at: http://www.irrodl.org/index.php/irrodl/article/view/79 (Accessed: 7 January 2022).

Rovai, A. (2002b) 'Development of an Instrument to Measure Classroom Community.' *The Internet and Higher Education*, 5, 197-211. Available at: https://www.sciencedirect.com/science/article/abs/pii/S1096751602001021 (Accessed: 7 January 2022).

Tummons, J. (2012) 'Theoretical Trajectories within Communities of Practice in Higher Education Research.' *Higher Education Research and Development*, 31, 299–310. Available at: https://www.tandfonline.com/doi/full/10.1080/07294360.2011.631516 (Accessed: 7 January 2022).

Vann, K. and Bowker, G.C. (2001) 'Instrumentalizing the Truth of Practice.' *Epistemology*, 15(3), 247-262. Available at: https://www.tandfonline.com/doi/abs/10.1080/02691720110076567 (Accessed: 7 January 2022).

Vygotsky, L.S. (1978) *Mind in society: The development of higher psychological processes.* Cambridge, MA: Harvard University Press. ISBN: 9780674576292

Warhurst, R. (2008) 'Cigars on the flight-deck: new lecturers' participatory learning within workplace communities of practice.' *Studies in Higher Education*, 33(4), 453-467. Available at: https://www.tandfonline.com/doi/abs/10.1080/03075070802211828 (Accessed: 7 January 2022).

Wenger, E. (1998) *Communities of Practice: Learning, Meaning and Identity*. Cambridge: Cambridge University Press. ISBN: 9780521663632

Wenger E. (2010) Communities of Practice and Social Learning Systems: the Career of a Concept. In: Blackmore C. (ed) *Social Learning Systems and Communities of Practice*. London: Springer. ISBN: 9781849961332

Wenger, E., McDermott, R.A. and Snyder, W. (2002) *Cultivating Communities of Practice: A Guide to Managing Knowledge*. Boston: Harvard Business School Press. ISBN: 9781578513307

Wenger, E., White, N. and Smith, J. (2009) *Digital Habitats: Stewarding Technology for Communities*. Portland: CPsquare. ISBN: 9780982503607