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The role of crossing boundaries in collaborative open learning in cross-institutional academic development

Chrissi Nerantzi*

Centre for Excellence in Learning and Teaching, Manchester Metropolitan University, Manchester, United Kingdom

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This paper reports findings relating to boundary-crossing experiences from a phenomenographic study which explored collaborative open learning in two cross-institutional academic development courses. Four of the 11 categories of description and their qualitatively different variations emerged through the analysis and provide new insights into how learners experienced boundary crossing, through modes of participation; time, places and space; culture and language; and diverse professional contexts. Implications and opportunities for academic development linked to boundary crossing are highlighted in this paper, which might also be of use, and relevant to, in other professional areas and disciplines in higher education.

Keywords: Open education; academic development; collaborative open learning; boundary crossing; phenomenography; cross-institutional courses

Context

Academic development is traditionally offered by academic developers for academic staff within a specific higher education institution (HEI) (Brown 2013). It needs to be acknowledged that there is already some diversity within this academic development provision, as it is often associated with cross-disciplinary learning. Research has shown that this has a positive impact on academic staff engagement and learning (Parsons *et al.* 2012). The benefits of developing cross-institutional collaborations among HEIs are supported by the literature (British Council 2015; European Commission 2013, 2015; HEFCE 2011). These benefits are seen as enablers for sharing resources and expertise, saving costs, connecting students and academic staff from different programmes and HEIs (Crawford 2009), and also as a means to increasing engagement in academic development through open and connected practices (Pawlyshyn *et al.* 2013). Nerantzi's (2017) phenomenographic study reports on the lived experience of collaborative open learning in cross-institutional academic development settings through which the 'selective' and 'immersive' collaboration engagement patterns and the cross-boundary collaborative open learning framework were constructed.

The study

This paper reports on findings around boundary crossing from a study about the lived collaborative open learning experience of academics and other open learners

*Corresponding author. Email: C.Nerantzi@mmu.ac.uk

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within the area of cross-institutional academic development (Nerantzi, 2017). Data were gathered from participants in two open courses: 'Flexible, Distance and Online Learning (FDOL132)' and 'Creativity for Learning in Higher Education (#creativeHE)' to shape a collective case study (Stake 1995) on how collaborative open learning was experienced. Using a collective case study approach as a data collection strategy facilitated the study of the authentic collaborative learning experience in two separate settings with differing collaborative learning features and enabled a deeper insight into the complexity of the experience in both.

Ethical approval was secured through the Ethics committee at Edinburgh Napier University with the identifier ENBS/2013-14/004. All participants in the two courses of this study were informed of the research project at the start of the open course in which they participated. The information sheet was sent, together with the consent form, *via* email to all course participants, and it confirmed the ethical approval that was secured for the project. Potential study participants were reassured of strict confidentiality, security of data storage and retaining anonymity. The option to withdraw from the research project at any time was also communicated to them. Individuals who expressed interest in the project and wanted to participate emailed a completed consent form to the researcher. The completed consent forms were stored on a password-protected personal computer. Data were only collected from individuals who provided their informed consent and who agreed to the data being used for research purposes, that is, as part of this project and any related publications.

The two courses had collaborative learning features built into the design and were organised and supported by a team of distributed facilitators from a range of institutions and organisations. Both courses were linked to credit-bearing provision in at least one participating institution and brought together formal and informal learners. The collaborative open learning feature was optional. In the context of this study, 'formal' is defined by individuals working towards academic credits, while 'informal' learning refers to engagement that does not aim at gaining academic credits but could be used, for example, for professional recognition. Different collaborative learning strategies were used in each course, including problem-based learning (PBL) and less-structured pedagogical approaches. Their commonality was that the collaborative learning groups were relatively diverse and small, with between four and eight participants, supported by facilitators.

Phenomenography (Marton 1981) was used to study the qualitatively different ways in which collaborative open learning was experienced and described by participants. A total of 22 individual semi-structured interviews were conducted remotely and later transcribed. Through a process of an iterative phenomenographic analysis, 11 categories of description emerged with their qualitatively different variations (see Appendix 1). These were organised in pools of meaning that represent broader linked meanings (Marton 1986): Pool 1: course; Pool 2: boundary crossing; and Pool 3: collaboration.

The categories of description were synthesised in an outcome space (see Appendix 2) that also shows possible logical relationships between the categories of description. The outcome space aided the construction of a framework for collaborative open learning in cross-institutional academic development (Nerantzi, 2018, also see Appendix 3).

The structure of this article follows the chronological order in which the phenomenographic study occurred. In phenomenography, the data are analysed before the literature is reviewed to ensure that the themes emerge through the findings

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(Ashworth and Lucas 1998, 2000), and for bracketing to reduce data contamination (Sin 2010). In this article, the findings linked to boundary crossing precede the literature review, which is woven into the discussions.

Findings

It was anticipated that the findings would illuminate the nature of cross-institutional collaboration as this was how the two courses of the study were set up. What is fascinating is that participants were stimulated by a much wider spectrum of cross-boundary learning enabled through the open ethos in these courses. These included learning with individuals from other countries and cultures, individuals from outside higher education, students, and the mobile and local opportunities to engage which are often forgotten when referring to open educational practices. Through the phenomenographic analysis, cross-boundary learning emerged from the data as a characteristic of collaborative open learning. How this was described by study participants, and how it has been defined in this study, is captured in the below categories of descriptions and their qualitatively different variations. These are brought together in Pool 2 of the findings.

Pool 2 consists of categories of description relating to the lived cross-boundary experiences as they were described by participants. Boundary crossing is defined as bringing together an unconventional mix of individuals, from different cultures, professional status, disciplines and practices, and sectors. Furthermore, crossing boundaries also relates to experiences associated with physical and virtual locations (place and space), as well as across time and geographical time zones.

The following four categories of description were formed that illuminate distinct ways of experiencing cross-boundary learning:

- Cross-boundary learning through modes of participation
- Cross-boundary learning through time, places and space
- Cross-boundary learning through culture and language
- Cross-boundary learning through diverse professional contexts

The categories emerged directly from the participants' responses as, for the most part, there were no prepared interview questions leading directly to the aspects of cross-boundary learning.

Category of description: cross-boundary learning through modes of participation

In this category of description, the focus is on 'cross-boundary learning through modes of participation' and particularly the mixing of formal and informal provision as experienced by participants.

Participants experienced 'cross-boundary learning through modes of participation' in the following three distinct, qualitatively different variations:

- As a valued mixed-mode learning experience
- As a valued informal learning experience
- As a valued opportunity for recognition

As a valued mixed-mode learning experience

Participants experienced 'cross-boundary learning through modes of participation' as a valued mixed-mode learning experience when describing the benefits from mixing informal and formal learners. While a distinction was made between these, there was no discrimination. On the contrary, participants felt that everybody had something valuable to contribute: a unique perspective. There was a concern or sensitivity described by informal learners about those who were working towards a qualification. Participant F10 notes:

> Some people will do these things for credits; some people will be doing it for fun, and other people are just doing it because they want the experience and they want to learn about that subject area. And I think sometimes the mix can help. Because everybody has something to add to the experience. Those of us like me who are doing it, who're doing it to learn about the things, and not doing it for credit, hopefully didn't damage anybody who was doing it for credit by not, perhaps, you know, reading as much as we should've done at the time, or we should've, perhaps, read a bit more. We didn't want to mess up their experience, and destroy their credit taking. But I don't think it affected anybody in the group. We just got on with it.

As a valued informal learning experience

Participants experienced 'cross-boundary learning through modes of participation' as a valued informal learning experience when they described how they valued this opportunity in relation to their own personal or professional motivations, curiosity and interest for self-development to enhance a specific aspect of their practice. Participant C6's response (below) captures this well and is characteristic of other similar experiences described. They highlight an altruistic motivation for engagement as the desire through which they might be able to support others in their learning.

> I wasn't looking for a qualification. I was more interested in, well, from a personal point of view, discovering what, how these things work and keeping abreast of new developments. Because although I'm retired, I think it's important that I keep on learning; I am a lifelong learner. So it was important from that point of view. There was another, more practical aspect. I felt I should know what was going on. So there was a personal desire to learn. That sort of professional or semi-professional. But at the same time maybe a third one as well, in that I've had a lot of experience – by the time you reach my age you've had a lot of experience both professionally and personally, and I thought maybe I could contribute and give a little help to others.

As a valued opportunity for recognition

Participants experienced 'cross-boundary learning through modes of participation' as a valued opportunity for recognition when those who were informal learners described how they could see the potential to receive recognition for their work completed in the course. Such an example comes from Participant F7:

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> I mean, if there will be a continuation or an extended FDOL, for example with CPD points, I will definitely do it. It didn't affect me because I wanted to learn how a live PBL works and I got that. But if I can get something out of it, it will be a bonus. […] All of us, at least the group – the members of the group that I know of, we did it because we want to improve professionally.

While Participant C7 identifies an existing opportunity to use the work completed for the course to gain professional recognition.

> What I enjoyed about the course the most was, to be honest, the stuff that I learnt, and putting that into practice and learning about new theories and new ways, and also the reflectiveness, because I'm doing my chartership at the moment as a chartered librarian and a big part of that is reflective writing. So that was really good because I was reading a lot of stuff on how to be a reflective teacher and I could use that in my chartership write ups as well, so that was really handy.

Category of description: cross-boundary learning through time, places and space

In this category, the focus is on how 'cross-boundary learning through time, places and space' was experienced by the participants. Interestingly, there was a reported value in local collaborations, and mobile learning as well as the idea of the course as a community.

Participants experienced 'cross-boundary learning through time, places and space' in the following two distinct qualitatively different variations:

- As a disconnected experience
- As a continuum

As a disconnected experience

Participants experienced 'cross-boundary learning through time, places and space' as a disconnected experience when describing how they felt disconnected from others due to difficulties they experienced. The disconnected experience seems to have made some participants feel lonely and more isolated.

Participant C11, for example, recognises the challenge of staying connected with others located in a different time zone, and their own responsibility and investment in connecting with others:

> I never really got connected to the group, part of the group. […] There were hangouts, but I'm really bad at hangouts. I always get the times wrong or I'm in the wrong part of the world, so I'm always on the other side of the planet for a lot of these things. […] I really think that the hangouts are valuable because you get the isolation from being online, particularly if you are the only, seemingly only, one on the whole continent, this particular continent, which doesn't happen very often, there is usually quite a lot people spread across North America. I just sort of, I missed the first couple and I just didn't do anything else about it.

As a continuum

Participants experienced 'cross-boundary learning through time, places and space' as a continuum when describing how they saw their engagement as something that provided opportunities for uninterrupted engagement, both with the course and others within and beyond the course.

Participant C1, for example, describes how mobile connectivity through their own smart device helped them stay connected and engage with others on the go. Their words reflect real excitement:

> When I was entering my email, I had lots and lots of emails, that informed me, for example, a member of the community posted this, or commented my post, or my thought, or in my portfolio. And that was a little bit, that caused me a little bit upset, because I felt that I had to keep up with the rest of the activities and the interactions, and I was saying 'Oh, I have to get in the community', and sometimes I had no time. So, when I was in the bus, or at the university I was given through my smartphone, and if I had, for example, five minutes free I was getting in the community and try to keep up with the material and the thoughts that were shared in it. But, there was an option in Google plus where I could de-activate those notifications, but I didn't want to do that. I, I think that I would lose my feedback, the flow of the information and thoughts. Something that I didn't want to do so. […] For example, if I had seen someone commenting on my post, and I was available at that time, I could go to the community, comment and I found this really interesting. It was the first learning situation which was not in a classroom, or in a university. I was in the bus and I was exchanging opinions, thoughts. It was very interesting.

Participants also described how they reached out to local established communities during the course noting how these formed part of their support networks and reduced the need to connect with others online in the course. Therefore, the continuum had different dimensions for participants also associated with place and spaces. Participant C7, for example noted:

'When I found online communities in the past a lot more useful for me before I started this job, so the job I had before this when I was one of only two librarians and the other librarian was my boss and she was a lot older and worked two days a week, so I was the only librarian really so I didn't have anyone to bounce off ideas from, so I spent a lot of time online and built up a really good network, which I think is what the Google community was trying to do but now in my new job at the university the team is really well established, they're very supportive, there are a lot of us and we've all got different backgrounds and so I've kind of let the online side slip a bit because my needs are being fulfilled by my work colleagues'.

Participant C4 highlights the opportunity for staying connected with others beyond the time frame of the course in the digital world.

> The fact that some of that group I know will carry it on, is great. I found myself thinking this is no time at all, I've only just got into it and it's finishing okay, now that's easy to see from this perspective, if at the beginning you said this course is going to be 20 weeks I would have gone, oh my god I can't manage that commitment. So somehow I think the magic word would be extension ability would be the thing that is important, if it looks too big from the outset

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> then that gets in the way and my disappointment was just that it was ending, but I'm not really disappointed because I'm not letting it end because that little group will keep talking.

Category of description: cross-boundary learning through culture and language

In this category of description, the focus is on how 'cross-boundary learning through culture and language' was experienced.

The courses created opportunities for cultural and linguistic mixing by bringing together individuals and groups from different countries and cultures. As a result, learning as a cross-boundary experience through culture and language was an interesting dimension experienced and described by participants.

Within the collective case study, English was used as the course language. Participants had different levels of confidence, expertise and fluency in English, were from different linguistic and cultural backgrounds, and experienced 'cross-boundary learning through culture and language' in the following two distinct ways:

- As a barrier
- As enrichment

As a barrier

Participants experienced 'cross-boundary learning through culture and language' as a barrier, with both English native speakers and participants who spoke English as a second or foreign language recognising that there was a language challenge. This had an impact on engagement within the culturally and linguistically rich environment. Participants recognised that it was harder for non-English native speakers to fully engage and that they possibly lacked confidence. Participant F2 says characteristically:

> I find it useful to learn from other people's experiences; the international nature. I think it's useful. I think it was useful to share those experiences, but I think sometimes the language barrier, like there was a lack of confidence from some members of the group, which was fine in some aspects, but meant that in discussions it felt like the UK people tended to take over. Not because they, you know, they wanted to, but I always got the impression it was like a lack of confidence and, to be honest, I would probably find it quite hard if I had to do it in a foreign language and keep up with the, the following a conversation, to be able to do that.

This is also noted by non- native English speaking participants. Participant C10 is such an example:

> I felt a little bit anxiety, because I have 1 year, 2 years my English I can understand very well but I don't use it. I had a long time to use my English. So the language was problem for me. But I find it a challenge to make it better. […] I didn't feel the confidence about my writing skills. So I read it and I read it again. I couldn't manage the time. I couldn't realise how many hours I could use for a specific section because I was trying to read and read again my texts.

> And I was losing a lot of time during this process. […] I didn't participate in a group because I didn't feel confident about the language and I feel, I felt a little bit the pressure. I wanted to have a little time to adjust in the community and it was in the last week I feel more confident to communicate; to react with others. But it was the last week.

These words come with a realisation that, within the groups, the demands for communication and interactions were increased and led to the participant choosing to learn outside a group. The fact that Participant C10 recognises that participants became more confident over time is particularly interesting, and is also reported by Participant C1, as shown below:

> We had to remember again our English. Not only in a written dimension, but in an oral one too. Something that was totally challenging. And, of course, the rest of our participants who were heroes to hear us, they supported us and never made any statement or insult, for example, I don't know. They were really encouraging and supportive.

As enrichment

Participants experienced 'cross-boundary learning through culture and language' as an enrichment when describing their excitement about working with other professionals from different countries and cultures. The findings suggest that participants felt that this opportunity enriched their experience more than just working with academic staff from other institutions.

The diversity among learners helped participants see themselves as professionals in a wider context beyond the boundaries of their own country or culture, which seemed exciting and useful, enabling them to learn together as peers, sharing experiences that were new to others and enriching their understanding and sharing practices. The following extract from participant F7 shows such feelings clearly:

> We were from two different countries in my group. I think that was more attractive for me rather than different institutions. I mean if everybody was from UK, maybe because I think, or I feel that I know the UK system and how it works, maybe it wouldn't have made any difference. I see how things are working in different countries. […] So when, they ask something, and I saw that it can work in a certain way because we have done it here in the UK I could tell them what we have done and then they can experiment. So from that point of view it felt good, of sharing information.

Category of description: cross-boundary learning through diverse professional contexts

In this category of description, the focus is on 'cross-boundary learning through diverse professional contexts'.

While the courses were primarily for higher education professionals who teach or support learning, they also attracted postgraduate students and individuals from outside higher education and varying professional contexts. This coming together of a diverse body of participants was possible due to the openness of the course and the

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lack of entry requirements. Participants experienced 'cross-boundary learning through diverse professional contexts' in the following two qualitatively different variations:

- As initial discomfort
- As a catalyst

As initial discomfort

Participants experienced 'cross-boundary learning through mixed professional contexts' as 'initial discomfort' when participants from sectors outside higher education, in particular, described how they initially felt uneasy working with staff from higher education.

These participants saw individuals from higher education as superior in an environment where hierarchies were flattened. The statement from participant F10 illustrates this and demonstrates how these initial feelings of discomfort disappeared when learners got to know each other and realised that they had a lot in common:

> I remember it was really strange, actually, in many ways. Because there were all these university lecturers, and staff, and there's me in a school thinking 'am I out of my depth here? Should I be involved in this process?' And all the problems we had as a group, of getting on to Google hangouts and people coming on at different times, but everybody was so welcoming that it didn't really matter that I was from a school background and everybody else was in a university setting. We all had the same issues to face and we all were exploring the same sorts of problems. I really enjoyed the process.

Further participants, who were postgraduate students, describe similar feelings of discomfort in relation to learning with individuals who teach in Higher Education (HE). However, they progressively used this discomfort as an opportunity for deeper engagement. Participant C1 says:

> The fact that we would be collaborating and cooperating with professors of Universities from abroad was rather challenging for me, as I had to try to generate more high-level activities, and try to share my thoughts, especially in another language, which was another aspect of this. In that way I found it really interesting.

As a catalyst

Participants experienced 'cross-boundary learning through diverse professional contexts' as a catalyst when describing experiencing the mixing of individuals from different professional sectors as refreshing and valuable for their development. Such mixing provided new perspectives and triggered creative ideas and exchanges that could be transferred to other contexts. Participant F2, who is a higher education professional, highlights:

> I find the learning, the thinking of different ideas, hearing how other people had dealt with it really useful. And 'cos we were from such different backgrounds, that's quite useful as well, 'cos obviously I'm a lecturer that is my

> primary role… […] But there was somebody else who was more from a school background rather than a university background, so it was bringing together lots of different ways of thinking about things. I did find it useful, because I think you need those; you need to think outside the box. [...] So, as a higher education lecturer, I have certain assumptions and sometimes you need to, sort of like, step back from those and that's where having those people from different experiences is useful. Because you're thinking more, you're not just using your HE assumptions you're thinking 'actually that might work in my situation, I'd never thought of that.' And I've had a go at some of the things, you know, that some of the things we talked about, some of them work – some of them don't. Some of them you think 'oh, that's not actually for me', so I think it is useful and I would worry, if we'd all been HE lecturers I wonder whether it would have been the same experience. That we wouldn't all just gone, 'Oh that doesn't work!'.

Discussion

The discussion of the findings relating to boundary crossing from the phenomenographic study follows. It has been arranged into people and modes synthesising the categories of description and their qualitatively different variations that emerges through the analysis.

People

Findings related to boundary crossing suggest that a highly diverse set of course participants was beneficial in promoting collaborative open learning through bringing together a wider range of perspectives and other-minded individuals. Such other-mindedness was perceived as a valuable opportunity for sharing a diverse range of experiences and practices to support each other, echoing findings by Morgan and Carey (2009) who found that non-native speakers develop language confidence when learning with individuals from different cultures. The findings from the current study corroborate such language confidence improvement and also show that learning conditions were created not just from but also with diverse peers and facilitators, novices and experts together, as noted in a cross-boundary study by Engeström, Engeström and Kärkkäinen (1995).

While the courses of this collective case study were open, they were also part of a formal academic development offered for credits in at least one of the collaborating institutions. These courses, therefore, presented cross-boundary engagement opportunities that could be characterised as *blurred* (Conole 2013). The modes of participation suggest that this blurring of formal and informal learning brought benefits to the participants. However, participants contemplated recognition and academic credits when informally involved in the courses. This suggests the importance recognition can play for academic staff when engaging in Continuing Professional Development (CPD) (Beetham 2015), as well as the need for academic developers to explore ways of recognising engagement in informal CPD as advocated by Bamber (2009).

Beyond bringing formal and informal learners together in the two courses of this study, having English as the course language meant that native speakers learnt alongside non-native speakers, presenting opportunities for cross-cultural communication and

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collaboration through digital technologies and social media. As a result, participants from different cultures and countries engaged in collaborative open learning together, collectively seeing the experience as both enrichment and a barrier. Perceived limitations for participation in collaborative open learning, due to a lack of language ability, were acknowledged, especially in the initial stages of each course. However, there are suggestions that some participants were able to resolve these issues by identifying opportunities for collaboration offline. Such language limitations, leading to reduced participation, have also been identified through other studies in online cross-cultural learning settings that involved undergraduate (Liyanagunawardena 2012) and graduate students (Gunawardena *et al.* 2001). The findings also point towards ways in which such challenges can be addressed to minimise exclusion from collaborative open learning. Supportive peers and facilitators, as well as social interactions and a sense of community, can smooth out these difficulties, boost confidence in language ability, increase cross-cultural awareness and communication, and enable collaborative open learning within diverse groups. These findings are consistent with the research by Ou (2012) and Mittelmeier *et al.* (2016) into cross-cultural online collaborative learning. While claiming that the main barrier to successful online collaborative learning is language, Ou also highlights the important role support plays in cross-cultural settings and the difference it can make to engagement in online collaborative learning.

Within the collective case study, academic staff were learning with students and facilitators as co-learners (Nerantzi 2017). Healey, Flint, and Harrington's (2014) proposed conceptual model for student and staff partnership to increase student engagement highlights the opportunity for co-learning of academic staff and students. This study suggests how co-learning was experienced by the participants who included academic staff, students, and members of the public, in the context of collaborative open learning within academic development. The proposal is that the student and staff partnership model by Healey, Flint, and Harrington (2014) may also be useful in fostering academic staff engagement in CPD and aiding the development of cross-boundary relationships.

Mode

The findings suggest that collaborative open learning in this study was experienced online and/or offline. The activities external to the course in which some participants engaged are present in the findings together with their mobile dimension. These activities suggest that some participants were reaching out and learnt collaboratively with others offline, often external to the course, using their own learning support network and structures. Beyond the offline dimension, mobile connectivity and the role mobile access to social media played in collaborative open learning suggests that engagement in learning was extended and learning itself turned into a seamless experience beyond online course participation. Such findings are consistent with the literature (Poore 2016; Traxler 2007) in which it is argued that networked mobile devices can create a bridge for learning and collaboration for open learners that connects the online and the offline. The offline dimension of open learning remains under-explored in the literature (Hall and Smyth 2016) despite open education having its roots in the physical world. Ideas, such as the *leaky institution* (Wall 2015), where digital technology can provide a bridge to connect the HEI, online, offline and local communities, indicate an opportunity for new practice for HEIs or a new type of HE.

The findings of this study also suggest that synchronous web conferencing technologies, especially social media video calling, can aid the process of relationship building and provide opportunities for synchronous collaborative open learning. Although perceived as predominantly beneficial, there were also associated challenges for synchronous communication due to availability and time zone constraints. These challenges were also present elsewhere in the study, especially in relation to the category described as 'cross-boundary learning through time, places and space'. Such challenges are also consistent with the literature (see Meloni 2010) and highlighted the participants' realisation that asynchronous engagement was generally a more flexible way to engage.

The cross-institutional academic development courses of this study with collaborative open learning characteristics were scheduled to be offered and facilitated within a predefined time frame. The findings around cross-boundary learning through time, places and space suggest that, while the courses had a predefined duration, collaborative open learning, and the courses more generally, were experienced by some participants as a continuum that stretched beyond the set deadline, due to their cross-boundary nature and therefore created a dynamic learning experience.

The findings from participants' experiences highlight an opportunity for continuous engagement beyond the duration of the course. Some participants saw the course as an opportunity to access a professional community which did not end at the conclusion of the course. For these participants, the course would seem to have been valuable for the ongoing development of their teaching practice and echoes the research of Parsons *et al.* (2012) which showed that longer cross-disciplinary academic development programmes within institutions, such as PgCerts, build community among academic staff and therefore have a greater impact on practice. This study suggests a desire by participants to be part of a wider community, to enhance teaching practice that is not only cross-disciplinary but also cross-boundary. This study also extends Crawford's (2009) work around academic staff reaching out to engage in external disciplinary communities and networks after the completion of an institutional PgCert, as well as Parsons *et al.*'s (2012) work around the formation of an often cross-disciplinary community within a PgCert. In particular, the study provides insight into how open cross-institutional academic development courses can play a role in creating opportunities for wider cross-disciplinary and cross-boundary communities to emerge, which in turn are attractive to academic staff. The suggestion here is that the idea of cross-boundary communities in informal settings (Perryman and Coughlan 2013, 2014) can also be considered when bringing together formal and informal learning in academic development, and particularly in cross-institutional courses.

Guidelines for implementation

Boundary-crossing learning opportunities can be enabled without extensive planning or resources to existing or new courses or programmes. Establishing, first, the potential benefits of boundary crossing for colleagues and/or students is recommended as it will help focus the generation of specific ideas and interventions that will be of value and relevance in a particular situation. Such foundation work could involve opening-up to, and connecting or co-designing with professional communities, employers, institutions and organisations learning activities and resources that stretch beyond institutional walls locally and more widely through using social

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and open media and smart devices. The framework for cross-boundary collaborative open learning (Nerantzi 2017) might provide further food for thought in this area.

Conclusions

The findings around boundary crossing suggest that collaborative open learning in the collective case study (FDOL132 and #creative HE) was experienced by participants as an opportunity to learn from, and with a diverse set of individuals, as formal or informal learners, including academic staff, students and the public. They experienced collaborative open learning that stretched seamlessly across online, offline and mobile spaces, thereby creating valuable opportunities for flexible engagement that seems to have had a motivational impact on engagement and opened participants' horizons.

The study suggests that applied cross-boundary collaborative open learning in academic development breaks free from traditional practices and models, becoming a new, open and public form of academic development, bringing together academic staff, students and the public. New opportunities are created for alternative ways to engage academic staff in professional development that may have a transformative impact on individuals and their practices.

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Appendices

Appendix 1. The categories of description and their qualitatively different variations.

Pool of meanings	Categories of description	Variations	Codes used in the outcome space
5.2 Pool 1 (Course)	Open learning as course organisation	Causing initial disorientation	C1.1
		Aiding participation	
	Open learning as an activity-based experience	Limiting engagement	C1.2
		Fostering engagement	
	Open learning as a facilitated experience	Lacking direction and instruction	C1.3
		Directive and controlling	
		Facilitative and supportive	
	Open learning as designed for collaboration	Constraining	C1.4
		Enabling	
		Empowering	
5.3 Pool 2 (Boundary crossing)	Cross-boundary learning through modes of participation	As a valued informal learning experience	C2.1
		As a valued mixed-mode learning experience	
		As a valued opportunity for recognition	
	Cross-boundary learning through time, places and space	As a disconnected experience	C2.2
		As a continuum	
	Cross-boundary learning through culture and language	As a barrier	C2.3
		As an enrichment	
	Cross-boundary learning through diverse professional contexts	As initial discomfort	C2.4
		As a catalyst	
5.4 Pool 3 (Collaboration)	Collaboration as engagement in learning	Selective	C3.1
		Immersive	
	Collaboration as a means to shared product creation	Product–process tension	C3.2
		Fulfilling	
	Collaboration as relationship building	Questioning the behaviour of others	C3.3
		Valuing the presence of others	

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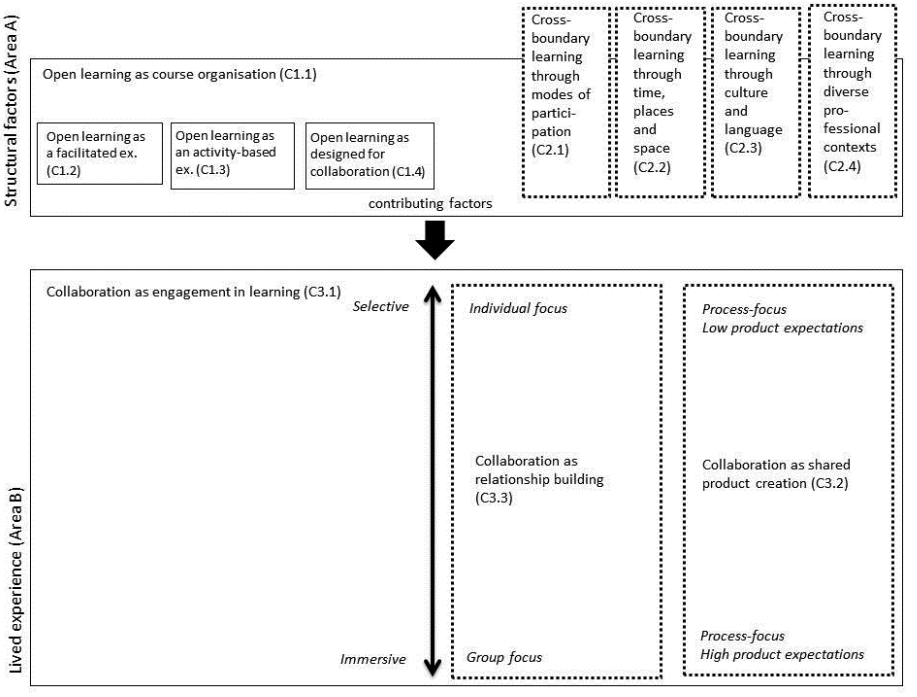
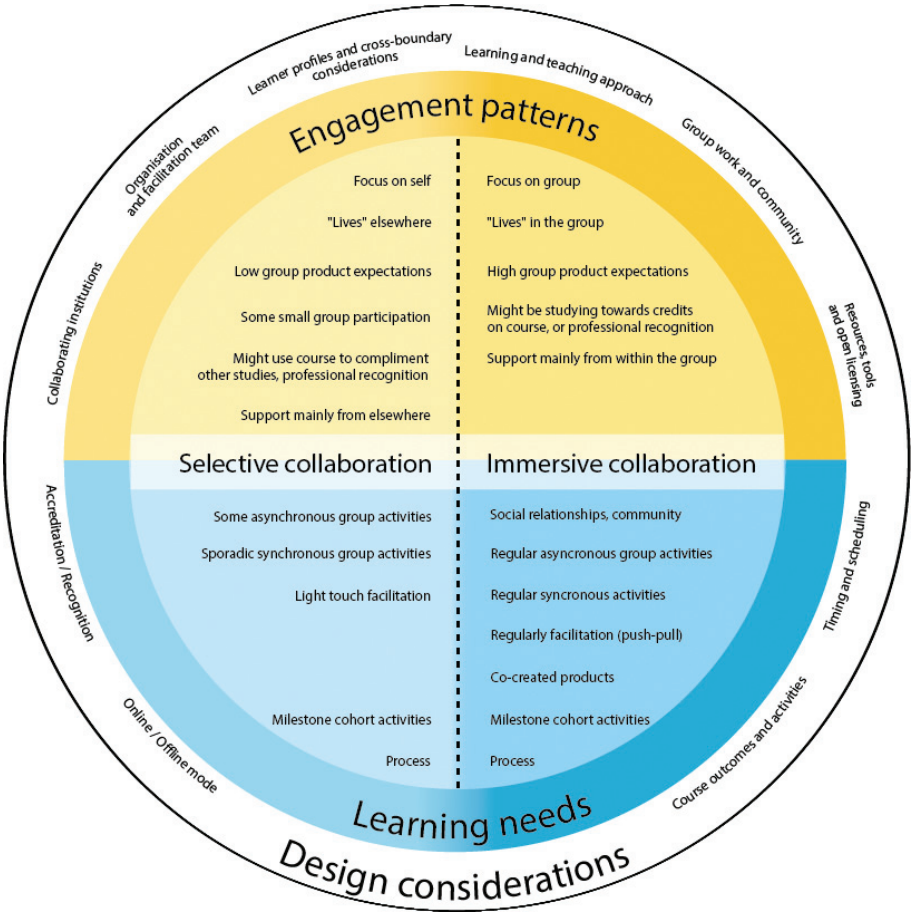


Appendix 2. The outcome space.



Appendix 3. Cross-institutional collaborative open learning framework (Nerantzi, 2018, 328).

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