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How online Communities of Practice facilitate professional development among Further Education teachers: a mixed-methods case study

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ABSTRACT

Empirical research examining the efficacy of online communities within Further Education (FE) contexts remains limited. This article presents findings from a mixed-methods doctoral case study investigating how FE practitioners engage with professional development through PDNorth, an established online Community of Practice (CoP). Employing Boyer's scholarship model and Wenger's Community of Practice theory, data was collected through a survey ($n=20$) and semi-structured interviews ($n=7$) exploring four dimensions: the benefits of online CoPs for FE practitioners' professional development, engagement techniques, challenges, and the extent of engagement with Boyer's four domains of scholarship. Analysis revealed five themes: (1) student-focused, teacher-driven alternatives to top-down policies; (2) sustaining emotional resilience through community support; (3) cultivating connections and sense of community; (4) evolution of impacts over time; and (5) barriers to classroom application.

Findings demonstrate how CoPs facilitate professional development by developing teaching agency, emotional support, and collaborative knowledge construction while navigating institutional constraints. This aligns with policy priorities for teacher-driven alternatives to top-down policies and provides evidence on cost-effective workforce recruitment and retention in resource-constrained environments, with implications for policy, practice, and future research.

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Introduction

The Further Education (FE) sector faces persistent challenges of underfunding, policy turbulence, and limited recognition of its professional status (Augar 2019; Bolton and Hubble 2019; Randle and Brady 1997). These challenges directly impact professional development opportunities for practitioners, with many institutions struggling to provide consistent, high-quality continuing professional development (CPD) (Broad 2015; Orr

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2020). The Department for Education's 2025 Areas of Research Interest (ARI) explicitly recognise these constraints, identifying several key priorities: the need for 'more flexible, accessible approaches to professional development in the sector'; research into "alternative professional development opportunities characterised by flexibility, diversity of perspectives, collaborative knowledge-building, and spaces for emotional support and reflection; evidence on 'cost-effective ways to recruit and retrain workforces'; and support for 'student-focused, teacher driven alternatives to top-down policies' (Department for Education 2025), demonstrating the urgency of investigating innovative approaches that transcend institutional boundaries.

Professional development in this context encompasses structured and unstructured activities that support FE teachers in developing their knowledge, skills, and expertise to improve teaching practice and student outcomes (Day 1999). Within this broader landscape of professional development, this paper specifically focuses on the role of scholarship as a critical component of effective practice. Scholarship in education extends beyond traditional research activities to include the critical examination of teaching practices, knowledge integration across disciplines, and the application of research to practice (Boyer 1990). These scholarly activities represent distinctive yet interconnected forms of professional engagement that can enhance teaching quality. Understanding scholarship as part of professional development is particularly important for the FE sector, where teaching, reflection, and collaboration are often substituted for formal research activities. This study explicitly investigates how participation in online CoPs develops different dimensions of scholarships within FE practitioners' broader professional development journeys. While scholarship is often associated primarily with higher education, scholarship in FE contexts is equally significant but manifests differently due to distinct institutional priorities and resource constraints (Tummons 2018, 129). For FE practitioners, scholarship often involves critical examination of teaching practices, collaborative knowledge-building, and application of research to practice activities that enhance both professional identity and teaching quality.

Online Communities of Practice (CoPs) offer potential pathways for supporting scholarship and professional development in resource-constrained environments like FE. For busy FE teachers balancing heavy workloads with continuous professional development, online communities offer flexible and accessible opportunities for collaborative learning that traditional CPD approaches may not provide. However, the extent to which these communities facilitate different forms of professional development and enable engagement with Boyer's domain of scholarship remains underexplored, particularly in the unique context of FE, where institutional constraints and limited resources restrict traditional approaches to both

professional development and scholarly engagement (Lloyd and Jones 2018; Tummons, Orr, and Atkins 2013).

Traditional approaches to CPD in FE often follow what Kennedy (2005, 237) terms ‘transmissive’ models – disconnected training events focused on compliance rather than transformative professional development. This approach has intensified in recent years, emphasising standardisation and measurable outcomes. In contrast, online CoPs potentially offer alternative professional development opportunities characterised by flexibility, diversity of perspectives, collaborative knowledge-building, and spaces for emotional support and reflection (Lantz-Andersson, Lundin, and Selwyn 2018; Trust 2016). By investigating professional development through Boyer’s (1990) scholarship lens, this study contributes to understanding how online CoPs might develop deeper forms of engagement beyond compliance-focused CPD.

Despite the growing prominence of online Communities of Practice in education, there remains a significant gap in our understanding of how these virtual spaces function specifically within the FE context. Current policy documents specifically identify a gap, noting that ‘empirical research examining their efficacy within Further Education contexts remains limited’ and emphasises the need for evidence on ‘how online CoPs might develop deeper forms of engagement beyond compliance-focused CPD’ (Department for Education 2025, 5). The document report particularly highlights the importance of understanding ‘when, where how and for whom’ these approaches work best in addressing the unique professional challenges and institutional structures that characterise the FE sector (Department for Education 2025)

The study reported here addressed four key research questions:

- (1) How do online Communities of Practice benefit FE practitioners’ professional development?
- (2) What engagement techniques are effectively employed within these online communities?
- (3) What challenges do FE practitioners face when participating in online Communities of Practice?
- (4) To what extent do FE practitioners engage with Boyer’s four domains of scholarship through online communities of practice?

The research investigated PDNorth, an established online CoP for English, maths, and English for Speakers of other languages (ESOL) teachers, which engages in professional development activities. By combining a mixed method approach, combining survey data ($n = 20$) and in-depth interviews ($n = 7$), this research provides insights into the complex dynamics of online professional learning communities in FE. Our findings reveal how online

CoPs create spaces for professional learning that transcend institutional constraints, supporting different forms of scholarship through collaborative learning and knowledge exchange. This article contributes to both the theoretical understanding of online professional development and practical considerations for implementing effective Communities of Practice in the FE sector.

Theoretical framework

This study integrates two complementary theoretical frameworks to explore how FE practitioners experience professional development through engagement with scholarship within online communities. These are Boyer's (1990) scholarship model, which recognises discovery, integration, application, and teaching as valid scholarly activities and Wenger's (1998) Communities of Practice theory, which conceptualises learning as social participation in shared practices, highlighting the communal and relational natures of professional development. Together, these frameworks provide a valuable lens for understanding how participation in online communities enables FE practitioners to engage in different forms of scholarship as an integral part of their professional development.

Boyer's model of scholarship

Boyer's (1990) framework challenges traditional concepts of scholarship as solely research-based by proposing four interconnected domains: discovery, integration, application, and teaching. Scholarship discovery represents traditional research activities that generate new knowledge. Scholarship integration involves synthesising and interpreting existing knowledge across disciplines. Scholarship of application focuses on applying knowledge to address practical problems. Scholarship of teaching centres on pedagogical innovation and reflection.

This expanded view is particularly relevant to FE, where practitioners may engage in scholarly activities without formal research designations. For example, FE practitioners often work across multiple disciplines and vocational areas, making them uniquely positioned to engage in integrative scholarship. An English teacher might integrate digital literacy skills with traditional writing instruction, or a construction teacher may synthesise health and safety regulations with practical building techniques and environmental sustainability principles. Similarly, ESOL teachers frequently integrate language learning with employability skills, cultural awareness, and digital competencies to create holistic learning experiences for diverse student populations. Healey, Jenkins, and Lea (2014) argue that recognising diverse forms of intellectual engagement legitimises scholarly work that

many FE practitioners already undertake. Recent applications of Boyer's framework in education contexts (Tummons, Orr, and Atkins 2013) demonstrate its utility for conceptualising scholarship beyond traditional academic boundaries.

Wenger's Communities of Practice

Wenger's (1998) Communities of Practice (CoP) theory conceptualises learning as social participation in shared practices rather than individual acquisition of knowledge. A CoP is characterised by three key elements: mutual engagement (interactions building relationships), joint enterprise (shared understanding of community purpose), and shared repertoire (communal resources, language, and practices).

This perspective highlights that professional learning occurs through participation in communities with shared concerns, values, and activities. Lave and Wenger's (1991) concepts of legitimate peripheral participation (Lave and Wenger 1991) further explain how newcomers gradually move from peripheral to full participation as they develop relationships and expertise within the community.

Recent research has extended Wenger's framework to online contexts, examining how virtual communities can support professional development (Lantz-Andersson, Lundin, and Selwyn 2018; Trust, Krutka, and Paul Carpenter 2016). These studies highlight both the opportunities and challenges of online CoPs for teacher development, from expanded networking possibilities to issues of sustainability and meaningful engagement.

While previous studies have examined online communities in higher education contexts (Lantz-Andersson, Lundin, and Selwyn 2018; Trust, Krutka, and Paul Carpenter 2016), their findings may not fully translate to FE settings due to the sector's distinct professional identity, institutional structures, and regulatory frameworks that characterise the sector (Tummons 2022). This represents a significant gap in the literature that this study aims to address.

Integrating the frameworks in vocational Education

The integration of Boyer's (1990) scholarship model with Wenger's CoP theory provides a comprehensive framework for examining scholarly engagement in online communities (Boyer 1990; Wenger 1998). This integrated approach allows for the exploration of how different forms of scholarship emerge through community participation and how online CoPs might facilitate or constrain engagement with Boyer's domains.

Boyer's four domains of scholarship (Discovery, integration, application, and teaching) can be understood within the context of Wenger's concept of Communities of Practice. In the PDNorth online community, members engage in interactive discussions that build relationships (mutual engagement), develop a shared understanding of community purpose (joint enterprise), and create communal resources and practices (shared repertoire). Within the online social learning environment, there is potential for different forms of scholarship to manifest as community members collaborate and share knowledge and develop their practice.

This theoretical intersection is particularly valuable for understanding how FE practitioners may navigate scholarly engagement despite institutional constraints. As Tummons (2018, 129) argues, 'scholarship in FE contexts is frequently constrained by institutional structures and workload demands'. Online CoPs potentially offer an alternative space for scholarly engagement that overcomes these constraints, allowing practitioners to develop what Glassick (2000, 64) terms 'communities of scholars' outside traditional academic structures.

This theoretical integration is also relevant given the marginalised status of scholarship in FE (Orr 2020; Tummons 2018) and the need for more flexible and accessible approaches to professional development in the sector. The framework provides a means to understand how practitioners can engage in meaningful scholarly activities despite institutional constraints, while identifying specific mechanisms through which online communities can support different forms of professional development.

Methodology

This study employed a mixed-methods case study approach to investigate PDNorth, an established online community of practice for FE practitioners. The case study design allowed for an in-depth examination of a bounded system (Stake 1995), providing rich insights into participants' experiences while acknowledging the context-specific nature of the findings.

Research setting

PDNorth is an established online community of practice for English, Maths, and ESOL teachers working in further education across northern England, with approximately 800 members (<https://pdnorth.org.uk/>). Founded in 2017, the community operates through both synchronous online meetings and asynchronous collaboration via digital platforms. PDNorth was selected as a research setting due to its established history, active membership, and explicit focus on professional development.

Participants and sampling

Participants were recruited through purposive sampling via the PDNorth monthly newsletter, targeting active members of the community. Purposive sampling was selected to recruit FE practitioners with specific experience in professional development through online CoPs, enabling access to information-rich participants who could provide detailed insights into the PDNorth community (Robinson 2002). A gatekeeper approach was employed whereby the facilitator of PDNorth helped to distribute the invitation to participate through their established communication channels.

Survey respondents comprised a total of 20 participants with varying levels of engagement in the community. They were predominantly female ($n = 16$), aged 30–65 years ($n = 19$), with varying experience in FE: four participants had 1–3 years' experience, four had 3–6 years' experience, four had 10–15 years' experience, and eight had 15–25 years. The majority identified themselves as teaching practitioners ($n = 14$), while others held managerial roles. Seven participants were then purposively selected from the survey respondents for in-depth interviews, representing diverse backgrounds in terms of age, experience, and roles within the FE sector.

Participant demographics are summarised in Table 1. Pseudonyms are used to maintain confidentiality.

Data collection

Data were collected through two primary methods. An online survey ($n = 20$) captured demographic information, patterns of engagement with the community, perceived benefits, challenges, and examples of scholarly activities, using Likert-scale items to provide quantitative measures and insights. Semi-structured interviews ($n = 7$) explored practitioners' experiences in depth, focusing on their engagement with different forms of scholarship throughout the community. Interviews lasted 45–60 minutes and were conducted via video conferencing, recorded and transcribed for analysis. Data collection occurred between September 2021 and February 2022, capturing experiences during a period of significant transition in the FE sector following the COVID-19 pandemic.

Table 1. Profile of interview participants.

Participant	Age	Time engaged with PDNorth	Role	Length of time within FE
Anne Shirley	30–45	2–5 years	Teacher	15–25 years
Jo March	45–65	2–5 years	Line manager	15–25 years
Jane Eyre	30–45	2–5 years	Teacher	15–25 years
Katniss	45–65	Less than 1 month	Line manager	15–25 years
Offred	45–65	Less than 1 month	Teacher	15–25 years
Hermione	30–45	2–5 years	Teacher	10–15 years
Clarice	30–45	6 months–1 year	Teacher	3–6 years

Data analysis

Data analysis integrated reflexive thematic analysis of interviews with descriptive and non-parametric statistical analysis of survey responses. Given the small sample size ($n = 20$) and non-normal distribution of Likert scale data (Norman 2010), non-parametric tests were used for inferential statistics. Specifically, the Kruskal–Wallis H test compared age groups (30–45 vs. 45–65) and experience levels, while the Mann-Whitney U-test analysed gender differences. Non-parametric tests were selected because the sample size ($n = 20$) falls below the threshold ($n > 30$) recommended for parametric tests, Likert scale data are ordinal rather than interval measurements and several items showed unanimous agreement ($M = 5.00$, $SD = 0.00$), violating normality assumptions. These distribution-free tests are specifically designed for ordinal data and remain robust to non-normality, maintaining appropriate Type 1 error rates with small samples whilst accommodating unequal group sizes. The Mann-Whitney U-test demonstrates superior power with non-normal distributions compared to parametric alternatives (de Winter and Dodou 2010). Limitations include loss of some information about the magnitude of differences through ranking and focus on median rather than mean comparisons. However, these were outweighed by appropriateness for the data characteristics, with triangulations from qualitative interviews ($n = 7$) and descriptive statistics providing complementary insights.

The interview data were analysed using reflexive thematic analysis following Braun and Clarke's (2006, 2019) six-phase approach. This involved familiarisation with the data, generating initial codes, searching for themes, reviewing themes, defining and naming themes, and producing the analysis. The analysis integrated both inductive and deductive approaches, allowing themes to be developed from the data while also considering the theoretical frameworks of Boyer's (1990) and Wenger's (1998).

This integrated analytical approach facilitated the triangulation of findings and the comprehensive examination of how FE practitioners engage with online CoPs (Carter et al. 2014). Regular peer debriefing with research supervisors enhanced the trustworthiness of the analysis. The mixed methods design provided both breadth through survey data and depth through interviews, yielding a holistic understanding of how FE teachers engage in scholarly activities through the online CoP.

Ethical considerations

The research received ethical approval from Liverpool John Moores University Ethics Committee (Ref: 21/EDN/029). All participants received

detailed information about the research and provided written consent. Confidentiality was maintained using pseudonyms for all participants (such as Anne Shirley, Hermione, and Clarice), with all identifying information removed and data stored securely on the university's password-protected system. As a member of the FE community with over 25 years' experience in teaching and management roles, the researcher maintained reflexive awareness of potential biases throughout the research process. Regular supervision discussions helped maintain awareness of how this background might shape interpretations, while member checks with two participants validated preliminary findings.

Findings

The analysis revealed five key themes regarding FE practitioners' engagement with professional development through the PDNorth online community. These themes illustrate how CoPs can support different forms of professional learning while addressing challenges specific to the FE context.

Theme 1: student-focused, teacher-driven alternatives to top-down policies

The PDNorth CoP empowered teachers to develop approaches prioritising student needs despite institutional constraints. This theme emerged strongly in survey data and interview responses, demonstrating how the online community facilitated teacher agency and autonomy in navigating bureaucratic requirements.

Survey results showed unanimous agreement ($M = 5.00$, $SD = 0.00$) that 'belonging to PDNorth has benefitted me in evaluating my teaching practice', indicating the CoPs' role in strengthening teachers' critical assessment of their pedagogical approaches. This was reinforced by a high agreement ($M = 4.5$, $SD = 0.707$) that 'working together raised the level of expertise of the community members', suggesting how the CoP facilitated collaborative professional development and teacher empowerment. However, the survey data focused on teachers' professional development experiences rather than directly pertaining to student-focused outcomes. Nonetheless, this was evident in the interview data.

Anne Shirley (30–45 years old, 2–5 years with PDNorth, 15–25 years in FE) explained how discussions within the PDNorth CoP validated her professional approach: 'We discussed with each other the classes that we would like to do for our students to be something coming from them, what they wanted and what they needed ... And we just talked together about where we had space to kind of resist that push.'

This sentiment reflected a desire for greater professional autonomy in determining approaches that would best serve her students' needs.

Through her continued engagement with the community, Anne Shirley explained how discussions within the PDNorth CoP validated her professional approach,

We kind of want to be rebels; we want to be teachers who maybe take our students for a coffee and do something about developing connections rather than always following the learning objective.

This expression of ‘rebellion’ represented not a rejection of professional responsibility but rather a reassertion of professional judgement in determining appropriate pedagogical approaches based on student needs rather than solely bureaucratic requirements. As Anne Shirley explained: ‘The classes that we do for our students are something coming from them, what they wanted and needed. It keeps my energy going for things that I would like to change.’

These comments illustrate how the community created a space where teachers could collectively resist prescriptive policies while maintaining focus on student-centred practices.

The online format helped practitioners connect across institutional boundaries to build solidarity and share alternatives to top-down mandates. This cross-institutional connectivity enabled teachers to collectively develop resistance strategies and alternative pedagogical approaches that prioritised student needs over bureaucratic compliance. As Jo March noted about the supportive environment, ‘It gives you that reassurance that you are not alone,’ while Katniss described how she gathered insights from the CoP: ‘I’m using PDNorth to be able to look at the research . . . Look at what’s relevant to what we need to plan for the future.’ This shows how the online community provided both emotional support and practical resources that enabled practitioners from different institutions to develop alternative approaches. Anne Shirley provided a concrete example of how CoP discussions inspired her to implement experiential learning approaches:

So, in fact, thinking about my blog [to document student learning experiences] came from an autumn meet, where we heard somebody who was a cartoonist and talking about how easy it is to teach and that sort of inspired me to go away and try a few things.

Anne Shirley explained that this approach allowed her to connect curriculum content with students’ lives and experiences by encouraging students to reflect on their learning journey and share their personal connections to the material, thereby making abstract concepts more relatable and meaningful. This approach demonstrates how CoP-inspired approaches were intended to improve student engagement while still meeting learning objectives. The survey data showed a high agreement ($M = 4.5$, $SD = 0.707$) that ‘gaining new insights and hearing about other teachers’ experiences has made my

professional practice better', indicating the value teachers placed on peer learning within the CoP. Through the CoP, teachers could exchange strategies for adapting their methods and materials to shifting conditions and students' needs. This collaborative knowledge exchange aligns with Wenger's (1998) concept of shared repertoire, where community members develop communal resources while also supporting Boyer's (1990) scholarship of teaching through critical examination of pedagogical practices.

Theme 2: sustaining emotional resilience through community support

The non-judgmental environment of the CoP provided crucial emotional support during challenging times, helping FE teachers maintain their well-being and motivation. Both quantitative and qualitative data strongly supported this finding.

One participant, Hermione (30–45 years old, 2–5 years with PDNorth, experienced teacher with 10–15 years in FE), described emotional moments within the CoP:

There's been quite a few of us that have been tearful in those spaces, but then by the end we've all felt like 'I'm so glad that we came'.

This comment highlighted the cathartic and supportive nature of the community, creating a safe space where teachers could process challenging emotions related to their professional experiences. The emotional dimension of this support was further evidenced by survey results that showed high agreement ($M = 4.5$, $SD = 0.707$) that 'supporting others new to teaching and sharing ideas has re-energised my own teaching,' demonstrating how peer support contributed to professional vitality and a sense of self-efficacy, which would contribute to emotional resilience.

Hermione noted that:

People have kind of shared things, quite emotive things that maybe they've not even shared with any other colleagues in that space.

This emotional support was particularly important during periods of educational reform and policy changes, which are frequent in the vocational education sector. Jo March (45–65 years old, 2–5 years with PDNorth, 15–25 years in FE) felt '*reassurance that you are not alone*,' suggesting that the CoP helped mitigate the isolation that many practitioners experience amid turbulent change. This emotional dimension aligns with Wenger's (1998) concept of mutual engagement, where relationships built through the community sustain members through challenging contexts while also supporting Boyer's (1990) scholarship of integration by helping teachers contextualise their experiences within broader educational changes.

Theme 3: cultivating connections and community

The CoP developed meaningful professional relationships despite geographical distance, creating a strong sense of professional community that transcended institutional boundaries. This theme was strongly supported by both quantitative and qualitative data, demonstrating how online interactions developed genuine connections between practitioners. Survey results showed unanimous agreement ($M = 5.00$, $SD = 0.00$) that participants felt ‘comfortable engaging with the community online events’, indicating strong feelings of connection and belonging within the online space. This comfort with online engagement suggests that meaningful professional relationships have developed despite the virtual format. Participants also showed unanimous agreement ($M = 5.00$, $SD = 0.00$) that ‘online discussions with community colleagues have helped me to think more deeply about my subject. While this finding primarily demonstrates intellectual engagement, it also reflects the quality of relationships within the community, as participants felt sufficiently connected and trusted their colleagues enough to engage in meaningful professional dialogue that enhanced their subject knowledge through shared expertise and collaborative reflection.

In interviews, participants consistently described the community’s welcoming, supportive atmosphere, emphasising how quickly genuine connections formed: Jane (30–45 years old, 2–5 years with PDNorth, 15–25 years in FE) noted: ‘[It felt] *really, really comfortable. So welcoming, very warm, very friendly. Straight right from the off. Absolutely so supportive and friendly, warm, open and collaborative.*’ This description emphasised the immediate sense of belonging participants experienced, indicating that the online CoP successfully created an inclusive environment from members’ first interactions. The speed and authenticity of these connections were particularly significant given the virtual format, suggesting that the community had developed effective mechanisms for relationship building that overcame the potential barriers of online communication. The online format enhanced accessibility, allowing teachers to connect across institutional and geographical boundaries in ways that would not have been possible through traditional face-to-face professional development. As Clarice (30–45 years old, 6 months–1 year with PDNorth, 3–6 years’ experience teaching in FE) observed: ‘*I couldn’t have met people from Manchester . . . But they were only one click away.*’ This comment illustrates how the online CoP removed geographical barriers to professional networking, enabling teachers to access diverse perspectives and expertise from practitioners across different institutions and regions. This geographic reach was crucial in addressing the professional isolation often experienced in FE, where practitioners may be the only specialists in their subject area within their institution.

The quantitative data further support this theme, with high ratings for ‘collaborating with FE/HE institutions’ ($M = 5.00$, $SD = 0.00$), demonstrating how the CoP facilitated cross-institutional connections that enhanced members’ professional networks.

This sense of community aligned with Wenger’s (1998) concept of mutual engagement, with participants developing relationships and shared practices through regular interaction. These findings show how the CoP enabled what Boyer (1990) describes as the scholarship of integration, demonstrated through participants actively synthesising knowledge across different contexts and perspectives. As Clarice noted about the case studies: “All the case studies that I looked at were almost like teaching me what I could improve, “while Anne Shirley described how CoP discussions helped her integrate new approaches: ‘It allowed me to learn from others and provided a lot of interesting ideas floating around.’ These examples show how teachers combined diverse approaches from multiple sources within the CoP to improve their practice.

Theme 4: Evolution of impacts over time

The analysis revealed that participation patterns and benefits evolved as members became more established in the community, a finding supported by both survey data and interview responses. Survey data showed significant differences based on correlations between the time engaged with the CoP for ‘enjoying online events’ ($H(3) = 7.852$, $p = .049$) and ‘collaborating on research with colleagues’ ($H(3) = 8.735$, $p = .033$), with longer-term members reporting significantly higher engagement than those who had joined the community more recently.

The interview data also showed a progression in how members engaged with the CoP over time. This progression followed a clear pattern: New members initially focused on resource gathering and consumption, observing discussions and accessing shared materials. As they became more established, members increasingly contributed to discussions and shared their resources and experiences. Long-term members often took on mentoring roles, supporting newer participants and initiating collaborative projects (Lave and Wenger 1991; Wenger 1998). As Clarice’s experience within the CoP evolved, she described how her confidence grew:

I became so confident in my instinct, I basically, I think in our meetings we came to realise that teaching was something very natural and learners are letting you know what’s working and what’s not working.

This statement demonstrates how sustained participation in the CoP transformed not just her teaching practices but her fundamental professional identity and confidence. This evolution aligns with Wenger's concept of legitimate peripheral participation, where newcomers gradually move from the periphery to full participation as they gain confidence and develop relationships within the community. This trajectory reflects an increasingly sophisticated engagement with Boyer's scholarship domains, as members progressed from consuming knowledge (integration) to critical examination of teaching practices (teaching) and eventually to collaborative knowledge creation (discovery).

Theme 5: barriers to classroom application

Despite the benefits of the online CoP demonstrated in the previous themes, both data sources identify significant challenges in translating insights into classroom practice. Survey data showed moderate scores ($M = 3.5$, $SD = 0.707$) for '*The feedback from PDNorth community has informed my teaching in such a way that it has improved student outcomes*', indicating difficulties in implementation, despite positive perceptions of the CoP. Institutional constraints and lack of support emerged as key barriers to implementing new approaches developed through CoP.

Time constraints emerged as a primary barrier to both engagement and implementation. Survey data showed moderate agreement with '*I do not get the time to engage with others within the PDNorth community*' ($M = 3.00$, $SD = 1.414$). This reflected the challenge of balancing CoP participation with heavy workloads that participants described in interviews.

Institutional constraints also limited practitioners' ability to implement new approaches developed through the CoP. Anne Shirley noted the constraints many participants faced: 'There is little space to diverge from mandated learning objectives'. Other participants described encountering rigid institutional policies and procedures that limited their discretion to implement contextualised, responsive learning approaches developed through CoP discussions.

The survey evidenced minimal discussion of professional development insights gained through CoP participation when members returned to their local institutions. This indicated limited transfer of CoP learning into institutional teaching contexts, despite the active knowledge exchange occurring within the community itself.

Discussion

In response to the first research question regarding the benefits of online CoPs for FE practitioners' professional development, the findings

demonstrate that PDNorth provided significant benefits across multiple dimensions. These findings align with strategic priorities of supporting ‘student-focused, teacher-driven alternatives to top-down policies’ (Department for Education 2025). The community enabled teachers to develop student-centred approaches that challenged institutional constraints, empowering teachers to exercise professional judgement in determining appropriate pedagogical strategies. This aligns with Kennedy’s (2014) argument that effective professional development should support teacher agency rather than compliance, enabling what she terms ‘transformative’ approaches to CPD.

The CoP offered crucial emotional support during challenging times, helping FE teachers maintain their well-being and motivation amid the pressures of educational reform and policy change. This emotional dimension of professional development is often overlooked in traditional CPD models, yet it emerged as a significant benefit of the online CoP. As Day (2017) argued, teachers’ emotional well-being is central to their effectiveness and resilience, particularly in contexts of rapid change and uncertainty.

The CoP facilitated the development of meaningful professional relationships across institutional and geographical boundaries, addressing the professional isolation often experienced in vocational education. This finding supports Wenger’s (1998) emphasis on the social nature of learning, with participants developing shared practices and identities through mutual engagement in the community.

These benefits suggest that online CoPs offer a valuable alternative to traditional CPD models in vocational education. By providing flexible, accessible opportunities for collaborative learning and emotional support, they address many limitations of traditional approaches identified by Broad (2015), including time constraints, geographical barriers, and the disconnect between CPD and practice.

Addressing a second research question about engagement techniques, the study revealed diverse engagement techniques and methods used by vocational teachers within the online CoP. These included participation in online events and discussions, sharing resources and experiences, collaborating on projects, and engaging with community publications and resources.

Significantly, the findings show an evolution in engagement over time, with new members initially focusing on resource gathering and observation before gradually taking on more active roles in the community. This progression aligns with Lave and Wenger’s (1991) concept of ‘legitimate peripheral participation’, suggesting that online CoPs can provide structured pathways for teachers to develop their engagement and participation with opportunities that can accommodate different preferences and needs.

For the third research question concerning challenges, despite the benefits of the online CoP, the study identifies significant challenges in translating insights into classroom practice. Institutional constraints, time limitations, resource constraints, and lack of support emerged as key barriers to implementing new approaches developed through the CoP.

These challenges reflect broader issues in the vocational education sector, including funding pressures, policy turbulence, and managerial approaches to quality (O'Leary and Wood 2019; Tummons 2022). They highlight the gap between the transformative potential of the CoP and the realities of institutional contexts, suggesting the need for greater alignment between professional development and institutional structures.

The findings also reveal challenges specific to online CoPs that limited their effectiveness. While the online format enhanced accessibility for many participants, enabling cross-institutional connections as demonstrated in theme 3, significant barriers to implementation emerged, particularly the institutional constraints identified in theme 5 that prevented practitioners from applying CoP insights into their teaching contexts.

Regarding the fourth research question about engagement with Boyer's scholarship domains, the study reveals varying levels of engagement across Boyer's four scholarship domains, with strong engagement in integration and teaching, moderate engagement in application and limited engagement in discovery. This pattern reflects the unique context and constraints of FE, where teaching and application are often prioritised over traditional research activities.

The strong engagement in integration and teaching aligns with the core focus of the CoP on supporting teaching practice in FE. Participants actively engaged in making connections across disciplines and contexts (integration) and critically examining their teaching practices (teaching). These forms of scholarship are directly relevant to the daily work of FE teachers and were well supported by the collaborative learning environment of the CoP. This was evident in high agreement with statements like 'online discussions with community colleagues have helped me to think more deeply about my subject' ($M = 5.00$, $SD = 0.00$) and Hermione's comments: 'Being able to actually share and listen ... It was just nice to hear different people's ideas and how they are addressing the same problems in different contexts.'

The moderate engagement in the application reflects the challenges in implementing insights in practice, as discussed earlier. While participants valued the knowledge gained through the CoP, they faced significant barriers in applying this knowledge in their institutional contexts, as reflected in moderate scores for items like 'the feedback from PDNorth community has informed my teaching in such a way that it has improved my student outcomes' ($M = 3.50$, $SD = 0.707$). This suggests that supporting the scholarship of application may require not only collaborative learning

opportunities but also strategies for navigating institutional constraints and securing implementation support.

The limited engagement in discovery highlights gaps in FE scholarly activity. Traditional research was minimally represented in the CoP, with participants citing time limitations and lack of institutional support as barriers. This aligns with Tummons' (2018) observations that scholarship in FE is often constrained by institutional pressures and limited resources, leading to a focus on teaching and application rather than traditional research activities. Despite this limitation, some members did engage in small-scale classroom inquiries.

The integration of Boyer's scholarship model with Wenger's CoP theory provides a novel theoretical framework for understanding professional development in FE. This integrated framework demonstrates how participation in a CoP supports different forms of scholarship, while also identifying areas where additional support may be needed.

Our findings suggest that the elements of CoPs (mutual engagement, joint enterprise and shared repertoire) can effectively support the scholarship of integration and teaching, providing spaces for FE teachers to share knowledge, critically examine their practices and develop new approaches collaboratively. The mutual engagement of participants in the PDNorth CoP facilitated the integration of knowledge across different contexts and disciplines, while the shared repertoire of resources and practices supported the scholarship of teaching.

However, the limited engagement in the scholarship of discovery suggests that additional structures and supports may be needed to promote research activities within CoPs. Similarly, the moderate engagement in the application highlights the need for strategies to help FE teachers navigate institutional constraints in implementing new approaches in their practice.

This integrated framework contributes to the theoretical understanding of professional development in FE by highlighting the complex relationship between collaborative learning, scholarly engagement, and institutional contexts. This suggests that effective professional development must address not only the acquisition of knowledge and skills but also the development of professional identity, agency, and resilience within specific institutional and policy contexts.

Implications for practice and policy

For institutional leaders, the findings suggest the importance of recognising and supporting teacher participation in online CoPs as a valuable form of professional development that complements traditional CPD approaches (O'Leary and Wood 2019). Drawing on current policy priorities, institutions might consider several strategic approaches. First, institutions could create

dedicated time allocations to address engagement barriers to CoP participation, recognising that the moderate survey scores for time constraints ($M = 3.00$, $SD = 1.414$) identified in theme 5 represent a significant institutional challenge rather than individual failing. Secondly, developing cross-institutional partnerships could help reduce professional isolation, evidenced in theme 2, where participants valued the reassurance that ‘you are not alone.’ Thirdly, institutions might implement support structures to help practitioners translate insights into practice, directly addressing the implementation challenges identified in theme 5, where participants faced ‘little space to diverge from mandated learning objectives’. Finally, establishing recognition systems that value online participation as legitimate scholarly activity could validate the forms of integration and teaching scholarship demonstrated in the findings while encouraging broader engagement with professional learning communities.

For policymakers, this research highlights the importance of teacher-led professional development that transcends institutional boundaries. At a time when FE policy increasingly emphasises teacher quality (Department of Education 2021), supporting sustainable online CoPs could provide cost-effective ways to enhance professional development across the sector.

Limitations and future research

This study has several limitations that suggest directions for future research aligned with current policy priorities. In a single-case study, the findings may not be generalised to all online CoPs or FE contexts. Additionally, while purposive sampling was employed to recruit FE practitioners with specific experience with online CoPs, participants ultimately self-selected into both the community and the research study, which may overrepresent practitioners who found the community beneficial. Longitudinal studies could further explore how participation in online communities impacts classroom practice over time, while broader surveys might capture the experiences of those less actively engaged.

Conclusion

This study demonstrates how online CoPs offer a valuable space for FE practitioners to engage in scholarly activities that might otherwise be inaccessible due to institutional constraints. The PDNorth community exemplifies how FE teachers can develop student-centred practices, build emotional resilience, and engage in different forms of scholarship through online collaboration.

The integration of Boyer's scholarship model with Wenger's CoP theory provides a novel theoretical framework for understanding professional development in vocational education. Our findings suggest that CoP elements (mutual engagement, joint enterprise, and shared repertoire) effectively support scholarship in integration and teaching, enabling FE teachers to share knowledge, critically examine practice, and develop new approaches collaboratively. However, limited engagement in scholarship discovery indicates that additional structures are needed to promote research activities within CoPs, while moderate engagement in application highlights the need for strategies to help teachers navigate institutional constraints when implementing new approaches.

Online communities of practice offer promising opportunities for supporting scholarly engagement in the FE sector despite persistent structural challenges. By creating spaces where teachers can collaborate beyond institutional boundaries, these communities facilitate forms of scholarship that directly benefit both practitioners and their students. This research contributes to understanding how digital professional development communities can address persistent challenges in FE professional development while supporting teacher agency and collaborative knowledge construction in resource-constrained environments.

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