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Title

Structured Abstract
Purpose
This paper shares findings from a constructivist grounded theory study, exploring Trainee Teachers’ perceptions of their teaching and learning experienced during university-based teacher education programmes, specifically the theoretical components. Findings led to the development of a model of program design, pedagogy and teaching strategies that were successful in creating opportunities to build Professional Capital. This paper aims to share this model, highlighting the significance of Professional Capital amidst challenges in English Teacher Education, and to suggest implications for application of the model within broader workforce development.

Design/methodology/approach
Semi-structured interviews were conducted with eighteen trainee teachers from four English universities. To support the development of the theoretical framework, researchers employed inductive and iterative constant comparative methods aligned with constructivist grounded theory to sensitise concepts and codes, which were verified using theoretical sampling.

Findings
Informed by the findings of this study, a model is presented which highlights that participants developed human, social, and decisional capital during their academic programs helping them to widen their perceptions of what counts as educationally
important, beyond narrow performativity measures that are pervasive in a school system. By actively adopting a transformative pedagogy and employing constructivist approaches to curriculum design and delivery, optimal learning environments for learners to build their professional capital can be provided.

**Originality/value**

The findings highlight the significance of teacher trainees' active engagement with academic literature and theory, in terms of contributing to the development of their professional capital, resilience, and professional commitment.

**Practical implications**

These findings may prove valuable to Higher Education academics as a model when designing and delivering professional, student-centred programmes. There are also implications for policymakers seeking to redesign initial teacher education towards schools-led and practice-oriented approaches, who wish to consider the perceptions, values and motivations of trainee teachers.

*Keywords:* Professional Capital; programme design; initial teacher education; constructivist grounded theory; workforce development

**Paper type:** Research Paper
This paper seeks to make an original contribution to the understanding of the perspectives, feelings and experiences of trainee teachers studying for qualification in England; specifically, to establish their perceptions of components of the programme that support them to develop their professional attributes including their professional capital. This paper results from intensive empirical research undertaken as part of a doctoral project, that explored 18 trainee teachers' perceptions of their academic and theoretical components taught in four higher education institutions in England as they progressed towards qualification.

Research on trainee teacher perceptions is limited, with studies focussing on the difficulties in acquiring subject and pedagogical knowledge (Everington, 2016). Some research has explored the role of social capital in promoting belonging in the profession (Fox and Wilson, 2015), and another exploring teacher autonomy in professionalism (Rea and Parkinson, 1999). There is, however, a lack of in-depth studies gathering trainee teachers' perspectives on their learning experiences and on how education design affects professional development and growth.

This study reveals that trainee teachers aim to establish a holistic professionalism (Landry et al, 2009) by pursuing robust qualifications and theoretical knowledge, as well as opportunities to build their expertise and boost their self-efficacy. They also aim to actively shape relevant curricula, create and utilise their own pedagogic research, thus contributing to the goal of improving the educational experiences of their pupils. By seeking opportunities to build professional capital, trainee teachers broaden their views of what counts as educationally important beyond performativity measures that are prevalent in the education and teaching sectors.
Theoretical Perspectives

The significance of a culture of performativity emerged as an important concept within the context of this study. In a review of the teacher education, Donaldson (2011) made the point that:

‘The most successful education systems invest in developing their teachers as reflective, accomplished and enquiring professionals who are able, not simply to teach successfully in relation to current external expectations, but who have the capacity to engage fully with the complexities of education and to be key actors in shaping and leading educational change’. (p14)

For teachers to consider that they have the capacity to shape and lead educational change however, they must feel that they have the capacity and intellectual space to do so. Yet, cultures - performativ cultures - in schools can provide an uncompromising focus on performance measures such as exam performance and high-stakes inspection outcomes (Priestley, 2015). A focus on these performativity measures can reduce teachers perceptions of the space that they have to shape the educational landscape (Gleeson and Husbands, 2001), because such performativity measures are often accompanied by high levels of bureaucracy and onerous performance management systems (Evetts, 2011), which can ultimately erode trust (Bottery, 2003; Cole, 2019).

Internationally, there is broad agreement that professional development of trainee teachers should include at least two components: professional experiential learning, and transformation of knowledge into practice for improved pupil learning (James and McCormick, 2009). Yet, in many countries, policymakers are focussing on reforming their initial teacher education programmes by emphasising the performative and instrumental aspects of professional development. A strategy motivated by the desire to promote accountability while enhancing the efficiency and
effectiveness of their education systems (Perryman and Calvert, 2020). Clark (2016) links this shift with the emergent technicist approach to teaching, with teachers uncritically delivering national policy and curricula; Giroux and McLaren (1986) also outline that performative practices develop habits of ‘uncritical reception of received wisdom’, mirroring the concept of ‘restricted professionality’ (Hoyle and John, 1995); presenting the ‘teacher as craft worker’ (McNamara and Murray, 2013) or as a ‘deliverologist’ (Pring, 2012).

The high attrition rate in the English teacher workforce within five years of qualification is also a recurring issue across the teaching landscape (Sims and Allen, 2018; Burghes et al., 2009; Lynch et al., 2016). According to Perryman and Lightfoot’s (2020) research, there is a ‘discourse of disappointment’ that connects this to performativity and accountability issues that are frequently cited as reasons for leaving the profession. Trainee teachers want a more meaningful education experience to foster intrinsic motivation to remain in the profession. Research highlights the complex and interconnected nature of trainee teacher professional learning, and the impact of cognitive, emotional, and social aspects individually and collectively (Avalos, 2011; Liou and Canrinus, 2020). Recognising these facets is critical for a transformative educational experience, and given their importance, measuring the efficacy of professional learning and the extent to which opportunities for growth and development are designed and delivered is crucial. Subsequent findings can act as a catalyst for trainee teachers to develop professional attributes that can help to transform their professional development (Melesse and Belay, 2022).
While accountability remains a crucial professional attribute to develop in trainee teachers, there are alternative approaches to performativity measures. Giroux and McLaren (1986) suggest that by reclaiming intellectual space to engage democratically with pertinent educational issues, teachers and trainee teachers, can become agents of change and adopt a critical pedagogy that empowers them (Freire, 2018). By employing critical pedagogies that recognise professional traits of accountability and improvement but reframes them towards a socially conscious understanding, educators hold themselves accountable for fostering social justice, critical thinking, and empowerment while challenging oppressive systems. This culture of performativity may be contrasted with Hargreaves and Fullen's notion of Professional Capital (2012) framework and promoting 'internal accountability' for continuous improvement, self-development, and group responsibility (Fullen et al, 2015).

It is clear from the literature that the path to becoming an engaged professional with 'extended professionality' (Hoyle and John, 1995) runs counter to a performative pedagogy and restricted professionality which limits access to academic and theoretical learning opportunities by trainee teachers, who seek to engage with theory to extend their own professionality (Knight, 2015). In response, this research explores directly with trainee teachers what they consider to be important to extend their professionality, and how this can be best supported.

Professional Capital is a framework within the context of education that combines three types of capital; Human, Social and Decisional. Human capital (Bourdieu, 1986) is the economically valuable knowledge, skills and behaviours of individuals that is developed through education and training and a concept that highlights
investments in peoples’ education, leading to greater economic returns treated as a capital investment; Social capital in the context of teaching, extends beyond individual talent. It involves professionals fostering connections within diverse communities, understanding cultural contexts, and empathising with both children and adults. It emphasises collaborative relationships, shared values, moral commitment and accountability, to enhance educational practices, creating a supportive network for the continuing development of skills, knowledge and behaviours. Decisional capital in teaching is the core of professionalism, reflecting the agency of individuals to make discretionary judgments. It signifies an individual’s ability to exercise independent and informed decisions drawing on acquired skills, knowledge and values, without reliance on policy or hierarchy. Professionals with decisional capital demonstrate autonomy, critical and reflective thinking, and the competence to make judicious choices in challenging situations. It is in the combination of the three capitals as Professional Capital, that each concepts’ limitations are addresses.

This research was conducted against a backdrop of continually changing policies in Teacher Education in England, the most evident was the shift from university-led teacher education to a schools-led training arrangement (Whitty, 2014). The transition was not only a matter of implementing changes in practice and organisation, but also, as noted by Whitty et al. (2018) it involved a deliberate ideological shift, necessitating the re-evaluation of certain educational research methodologies and the devaluation of theoretical and academic aspects of teacher education, measures taken to accelerate the pace of the intended transformation (Murray and Mutton, 2015). This resulted the implementation of a government-designed and inspected ‘Core Content Framework’ (DfE, 2019), setting out a
government approved and sequenced evidence base (Hordern and Brooks, 2023; Vare et al, 2022).

The scope and impact of this state-regulated educational reform sits alongside the widespread implementation of performativity measures. While to many policymakers, performativity is an effective tool for bringing about change, holding teachers accountable, and identifying high-performing educators, it is also commonly linked to the erosion of academic professional freedom for both students and academics (Ball, 2012). A comparative assessment of academic freedoms by Karran et al. (2022) revealed that two substantive elements (freedom to teach and freedom to research) and three supportive components (autonomy, governance and tenure) have declined within the UK and EU Member States, but are significantly greater in the UK within the neoliberal university of the 21st Century, and as a result, academic freedoms have markedly declined allowing such performative initiatives as the ‘Core Content Framework’ to be implemented.

In response, academics face growing pressure to justify higher education. Ball's (2003, 2012) critique of performativity, league tables, and control in neoliberal educational governance, provides a critical lens for analysing educational policy trends in the UK and overseas (Goodley and Perryman, 2022), which, as this research reveals, can worry trainee teachers.

Given that the majority of trainee teachers in England follow a postgraduate, thirty-six-week programme to achieve qualification and status, the few studies of their experiences (Smith, 2005; Giannakaki et al, 2011; Hobson et al, 2006) indicate that there are two main areas of priority: acquiring the required level and range of subject
knowledge and translating it to practice (pedagogical content knowledge); and
building professional attributes.

**Research Questions**

From the stance that trainee teachers aspire to cultivate professional attributes within their teacher education programs, this paper centres on three primary research questions:

- What are trainee teachers' perceptions of their initial teacher education programmes?
- To what extent do trainee teachers construct professional attributes through the theoretical and academic components of their Initial Teacher Education?
- What pedagogical approaches and strategies do trainee teachers find most effective in developing their own professional capital?

These three research questions were addressed by gathering empirical data through semi-structured interviews. The ensuing analysis is presented in the findings section, where the implications are integrated into a theoretical model aimed at optimising the design of opportunities that embed professional capital within higher education programmes.

**Methodology**

**Researcher positionality and methodology**

In qualitative research, it is important to maintain transparency regarding an epistemological and ontological stance to ensure that the researcher's influence on the research outcomes is clear (Breuer, Mruck, and Roth, 2002). The lead researcher holds an academic position at an English University and has a professional background spanning over two decades in the development and delivery of teacher education programs for trainee teachers.
Given the limited research on trainee teacher perspectives and a strong belief in the value of student-centred pedagogy, it was important to use a methodology that positions student participants as 'experts' in this research (Forsberg, 2022). This approach prioritises their voices, centres their experiences, and grounds them in the emergent theory.

Constructivist grounded theory methodology was selected as the best fit with the research objectives, researchers' positionality, and the importance of the participant. The methodology acknowledges participants as experts (Schwandt, 1994), emphasising collaboration between experienced researchers and expert participants, in line with a relativist ontological standpoint that sees realities as shaped by social and experiential factors. It also adopts a subjectivist epistemological stance, wherein the researcher and participants actively engage in the interactive process of co-constructing meaning (Guba & Lincoln, 1994). Aligning with best-fit methodology, constructivist grounded theory research typically yields practical outcomes (Chun Tie et al., 2019), thereby supporting the research objective of improving services in the area under study.

Selection of Participants

Intensive semi-structured interviews were conducted with 18 trainee teachers recruited from two traditional and two modern Universities in England. Participant recruitment was accomplished through the use of pre-existing teacher education professional networks, employing a purposive sampling technique, a well-suited strategy for the selection of information-rich cases relating to the phenomenon under investigation (Palinkas and Horwitz et al., 2015).
Participants were purposively selected using the selection criteria below:

1. Trainee teachers studying on postgraduate teacher education programmes;
2. Trainee teachers participating in university-based programs at institutions other than the researcher’s own;
3. Participants who could reflect on their experiences as experts (Charmaz, 2014), therefore were in the final stages of their programmes of study.

The data collection method was semi-structured interviews which enabled co-construction and collaborative meaning-making in an auditable context. Interviews adhered to a University ethics panel-approved interview guide, that outlined the research objectives, informed consent, data usage and storage, withdrawal procedures and a debrief (BERA, 2004).

Each interview lasted for between 100 and 120 minutes and was digitally recorded and transcribed. Transcripts were returned to participants for member checking as an integral part of creating trustworthiness in the research (Creswell and Miller, 2000), but also as a valuable reflective experience for the participants (Candela, 2019).

**Data Analysis**

Once a transcript was returned after member checking, the data was initially transcribed and sequentially coded, line-by-line by the researcher, and then by the researcher’s supervisor. This approach attempted to assure consistency, confirm interrater reliability of coding, and generate articulate and adjudicated coding decisions (Guba and Lincoln, 1994). Codes were then split into smaller units of meaning. The process of Focused Coding then involved organising these codes by comparing and contrasting them (constant comparison) to identify patterns and relationships, creating subcategories. Next, theoretical coding connected subcategories and focused codes to the broader theoretical concepts and
frameworks guiding the research. This process culminated in the identification of core categories and the development of a theory grounded in participant data (Saldaña, 2014).

'Memoing' is a reflective tool used by constructivist grounded theorists after conducting an interview to record abstract thoughts, aid recall and make meaning from interactions with participants and data collected collaboratively. It serves as a reflective element, recognising the researcher's starting point and any influence on co-construction (Mills et al., 2006). Memos were coded and integrated into the developing theoretical concepts, which were subsequently tested and refined through theoretical sampling. Theoretical sampling was used to confront gaps in core categories and test the emerging theoretical concepts until theoretical saturation was reached, meaning that no new insights or concepts were generated.

Findings
Initial, then focussed coding led to the identification of 93 subcategories. The final stages of theoretical coding synthesised these subcategories into five core categories. Three core categories connected professional attributes thematically with the three domains of professional capital: human, social, and decisional capital. The remaining two core categories framed pedagogic approaches and teaching strategies that foster optimal professional capital growth, essentially representing strategies, program design, and delivery models for achieving optimal professional capital gain.

Human Capital
This dimension centres on the initial teacher trainees’ sense of investing directly in and consciously ‘working on the self, self-improvement that presupposes a personal
cost’ (Bourdieu, 1986, p. 83) and the conscious building of a professional identity. Through operating safely within their cohort group, trainee teachers’ cultivation of their professional identities could then be practiced and tried out during placements, to then return to their group with reflective stories of success or failure; acceptance or rejection (Fox and Wilson, 2015). Participant 3 discussed this as;

’a conscious auditing of what components and characteristics go into a successful teacher identity and how we need the spaces or chances to observe each other’s teaching practice [as student teachers] - to benchmark against, see what traits work, see what professional behaviours actually look like in others and then borrow them or adopt them…’

In the context of this research, human capital refers to the acquisition of knowledge, earning qualifications, building a professional identity, and taking into account the talent, skills, and abilities held by the trainee teacher. Participant 6 outlined the importance of earning a higher level qualification in this equation;

‘where many of my seniors in school only held a certificate in education; having worked at masters level gave me confidence and elevated my status - with myself, family and in placements. Confidence contributed to my identity as a person coming into their professionalism - any shred of status that you can find, you grab, to build your confidence, which you need, to be a good teacher’.

Building human capital necessitates a strong regard for professional development, as well as having examples and role models to aspire to, and the knowledge and confidence to seek the appropriate developmental path (Nolan and Molla, 2017).

Participants discussed the challenges in a sector with mixed views on the value of the academic in trainee teacher education (Dixon and Ward, 2015). While most participants favoured the academic aspects, they also emphasised the need to consider colleagues without access to the same human capital. For example, Participant 12 described interactions with experienced colleagues showing a range of sentiments from resentment to admiration regarding academic study’s value:
‘Learning styles came up over a coffee break, my mentor asked if I had any information because he hadn’t realised they were so disputed. I felt funny because I was laughing, you know, being a bit scathing…forgetting that they were heavily in use still…he said he guessed that this is what you must learn on the theory bits of training that he hadn’t got. I asked if he fancied it, being all casual – he said possibly because he saw how much more sophisticated teaching was getting and better for kids’.

All participants discussed their experience of being on the end of political behaviours in school placements, however, a small but substantively significant theme in six participants’ data was the acknowledgment of both understanding of political behaviours and also operating within them. All six participants whose data created this subcategory outlined the shape that political behaviours gave to their professional identity. Participant 4 stated that:

‘…your status as a trainee then newly qualified allows it to be all about yourself, self-interested and that’s fine – but not so when you move on, then it’s rightly got to be all about the kids and school; self-interested people are seen as selfish and promotion hungry. I kind of twigged this so made sure that I was openly being ambitious, researching and experimenting and making sure all the important people knew I was doing the Masters - that was part of that outward identity on show like a label. Now in my second year, I can already feel this change, but still have some space for this but I think it is being prolonged by the memories from formal learning group in my uni’.

Human capital in trainee teachers involves acquiring skills, behaviours, and knowledge to shape their professional identity (Beijaard, Meijer, and Verloop, 2004). Participants mentioned how building a professional identity is a conscious effort, with fellow trainees serving as a supportive and low-stakes testing ground, allowing peer comparisons and discussions about professional identities (also part of decisional capital). Peers influenced their agency, and some participants used their human capital to boost self-esteem and status when working on placement with more experienced colleagues (Ost, 2014).
Social Capital

The social capital of teachers refers specifically to ‘how the quality and quantity of interactions and social relationships amongst themselves and others affects their access to knowledge and information, their sense of expectation, obligation and trust, and how far they are likely to adhere to the same codes of behaviour’ (Hargreaves and Fullan, 2012, p. 90). In addition to shared codes of conduct, social capital enables a professional morality, a sense of right and wrong, to be shared within the field (Dika and Singh, 2002, p. 33), thus disapproval and wanting to effect change or improvements also develops, which contributes to ‘group solidarity and advancing the group position and preserving collectively owned capital’ (Coleman, 1988, p. 97).

Wenger’s concepts of Community of Practice (CoPs) (1999) emerged as a subcategory from participants’ data that referred to episodes of social learning; situations where learning took place linked to formally aligned groups, or networks consciously built where they discussed their academic and teaching practice and observed each other in context. Participants also shared their ideas about how such groups were formed, how they functioned, were disbanded, or developed. The majority attributed their important CoP with their academic cohort rather than a group in their practice or school setting. Membership of their academic CoP was described by Participant 5 as;

‘low stakes, giving us a chance to be totally open, trusting and also creative through group solving issues. We celebrated and marked when someone mastered a new skill or approach, surpassed or overcame issues, then during difficult times, referred back to this to remind of better times to come, to keep looking at the theories as a way to solve issues, to keep improving’.

Participants felt that they used their academic CoP to test the validity of the constant changes that they were facing in the profession or to solve common issues or
problems collectively. Additionally, participants spoke of their CoP as the site for the
discussion of milestone moments, thus mapping and reflecting on the learning
journey and marking transformation consciously. They were then able to move
forward strategically, consequently protecting themselves and each other’s wellbeing
and building resilience (Fox and Wilson, 2015).

Additionally, social capital points to the collective capacity to be disapproved if others
do not ‘come up to the wider professional expectations, duties, moral code or
standards of the group’ (Dika and Singh, 2002, p.: 35). The destabilising effect of a
trainee teacher coming across practice that is contrary to the high expectations of
the profession was clear from Participant 10, who described her actions and
reactions during such an incident;

’I voiced my opinion, I was ignored. It was like, stop making trouble, this is too
tricky and we need to brush it under the carpet. All the emotions of unfairness,
derminating etcetera rose up in me and I struggled … it was like this was in
total opposition to how teaching should be, what we have all discussed in uni,
and the professional conduct we had all picked apart if I didn’t have the vent
of studying these issues, I would have left school in protest’.

All participants described situations or scenarios where they felt they were better
informed about the scope of the relevant research than the person in authority,
because of the academic work they had engaged with and analysed. This participant
behaviour declared confidence to be critical, judicious, or conscious of their own
academic identity (Schaik et al., 2018) and they referenced their academic CoP in
building these traits.

Many of the schools that participants discussed (having built up experience during
placements), had adopted an ideology, theoretical framework, initiative, or pedagogic
style. Participants discussed these ideologies as prevalent and pervasive and not always aligned with their own understanding of the key concepts and educational ideas within the research literature or evidence base.

Participant 4 describes her recognition of the need for a teacher to adopt and adapt to constant change and that this would be impeded when a school had adopted a whole school theoretical approach;

‘I called it the cult of Kagan! It wasn’t that there was much wrong with the intentions of the approach – it was more that there was a mantra style from the management. Like, because it was research, they just took it to be true, but I think after I had explored research generally…I thought, don’t be wedded to one way, make your own decisions’.

Participants found that their academic studies gave them a critical voice through understanding research and theory to inform practice, all contributing to enhancing their professional identity (Schaik et al., 2018).

Decisional Capital

An essential attribute to develop extended professionality as described by Hargreaves and Fullen is the ‘ability to make discretionary judgements’ (2012, p. 93), and while they argue that this form of capital requires longevity in the profession to emerge, trainee teachers who were the participants in this study, spoke of the many opportunities to develop and reflect on their capacity to practice making quality judgements and decisions, particularly during their academic sessions, in their CoPs and while doing enquiry-based learning sessions or assessments. Participant 7 outlines their approach;

‘Having the skill or experiences to make the right choice or make good judgments was just assumed in placement, like an artist that just knows inherently how to draw. Actually, that’s rare and this skill can and should be taught by getting better through practice - there just wasn’t room for that in placement, it’s all too high stakes. At uni-based sessions we lowered the stakes, were motivated to test decisions, exercised our judgements, critically analysed them and made better ones again without the fallout of really making
a bad decision. It sounds like we weren’t making decisions at all but what we
were actually doing was reflecting on the process’. Academic modules provided participants with the opportunity for conscious, low-
stakes experimentation, discussions, probing/Socratic questioning of educational
policies, arriving at informed choices, practicing decision-making, critical analysis,
and essentially honing these skills before and then during practice.

Decisional capital encompasses teachers’ ability to exercise judgment, be self-
reflective, self-regulating, and proactive (Bray-Clark & Bates, 2003, p. 14). Self-
efficacy, a task-specific belief, empowers and enhances autonomy, fundamental for
activating professional agency.

Constructivist teaching strategies build Professional Capital

Participant accounts identified how learning opportunities were delivered and
structured, what conditions made the experiences engaging, and why they were
successful.

Characteristics of successful modes of learning, teaching and assessment discussed
by participants were; that learners were actively involved in co-creating the
curriculum; that the environment was democratic and based on critical reflection; that
activities were interactive and student-centred; that a qualified or credible leader
designed and facilitated the process of learning and modelled professional
behaviours and values; and that students were encouraged to be responsible,
autonomous, flexible, adaptable. The participants’ descriptions of the characteristics
listed above have a strong relationship with constructivist strategies of learning,
Many of the characteristics in this core category also demonstrate the use of expert language by participants which was in the main, unaltered in coding triage, in-vivo and thoroughly grounded in participant data (Saldaña, 2014). As experts, participants contributed to this core category with powerful practical suggestions for how successful academic programmes for teachers should be constructed in relation to the design, delivery and assessment.

**Pedagogy for Enhancing Professional Capital**

Prevalent subthemes included emotional learning, attitude shifts, empowerment, self-reflection, and growth into the role. Participants experienced profound shifts in personal and professional beliefs. Exploring how academic elements in teacher education programs contributed to 'reflective knowledge, multiple perspectives, and critical consciousness' (Ukpokodu, 2009) were combined under the core category of transformative pedagogy.

Transformative learning differs from learning that simply builds skill or knowledge, as it leads to a profound shift in an individual's worldview and fundamental changes in behaviour and social relations (Brookfield, 2000: 142). This shift arises from deep critical reflection that challenges existing beliefs. Transformative learning involves the whole person, including their cognition, emotions, values, and actions (Biesta and Miedema, 2002: 175).

All participants referred to the concept of having taken part in a learning journey that had been designed for transformative learning to take place. Participant 2 defines this as;
‘my programme leader believed in making students feel like they could change for the betterment of our pupils. We learned to identify what needed to alter to make us inclusive, address prejudices that were holding back authentic changes, challenge the system for what they were - changeable for the better’.

Transformative change can occur suddenly or through deep self-reflection (Cranton, 2002: 69). Participants found academic opportunities both catalysed transformative learning and served as a way to recognise these changes in their formal reflections or assessments.

Participant 11 describes this;

‘there was a moral core that helped us self-direct, self-regulate and self-reflect. It wasn’t always fun, but regularly profound. I am different, in the very beliefs that I now hold and can track that change through my studies’.

By synthesising all of the key themes to emerged from the study, it has been possible to generate a model to support the development of trainees’ professional capital.

A Model to Support the Development of Professional Capital in Trainee Teachers:

Participants recognised and valued the opportunities to build and earn professional capital that academic programmes delivered when shaped by expert educators to examine key debates, theory and research, and to create an environment to discuss and analyse these key ideas and concepts in detail. This is illustrated in Figure I.

* (see file: Figure I for Manuscript ID JPCC-04-2023-0028.R2)

Figure I. Model of how academic programmes can create opportunities to build Professional Capital
Details of the pedagogy and teaching strategies to optimise the building of professional capital in academic programmes are presented in Table I.

* (see file: Table 1 for Manuscript ID JPCC-04-2023-0028.R2)

Table 1. Participant perspectives on effective pedagogy and teaching strategies for enhancing professional capital in academic programs.

Implications
The model presented above is likely to be a useful framework with which to inform curriculum design, as it was within this model that trainee teachers discussed their own sense of intellectual empowerment as a result of developing knowledge of a wide range of educational issues, coupled with their confidence in how they might respond to these in their own professional capacity.

Curriculum designers and key stakeholders including school senior leaders, mentors, and university tutors have an important role within this model, as they collectively are best placed to help facilitate the proximate conditions that will allow trainee teachers to develop their professional capital, optimally. This includes preserving the intellectual space for trainee teachers to develop their capital when set against the wider educational policy landscape, that can pose challenges to this endeavour.

Nevertheless, within the spheres of influence of curriculum designers and those with an interest in teacher education, this study has provided evidence to support the notion that it is possible to implement and develop constructive and transformative approaches within teacher education curricula that go some way to developing and supporting trainee teachers’ perceptions of their professional capital.
Conclusion

This research aimed to explore trainee teachers’ perceptions of their educational journey leading to qualification and their utilisation of academic and theoretical components to develop professional attributes despite policies that may impede this. As the findings illustrate, trainee teachers valued building professional capital in the academic parts of their higher education programmes and discussed that this was done best when facilitated by transformative pedagogy and constructivist teaching, learning and assessment strategies.

This research may be viewed as a call to action, urging academics to adopt collaborative and constructivist research methodologies with trainee teachers, providing them with a platform for meaningful participation. It highlights the need for trainee teachers to have a voice in research that can inform educational policies based on their experiences.

Given their expressed desire to develop a holistic professionalism and apply it by critically analysing research evidence to inform their own pedagogical decisions, trainee teachers should be encouraged to continue reflecting on aspects of their training that contributed to the development of their notions of capital and professional empowerment. This analysis will be useful to contribute to curriculum design decisions. By recognising the value of professional capital to trainee teachers, policy makers could have an important role in ensuring that policies can help to accommodate the space required to build professional capital.
In my role as academic developer at an English University, I acknowledge and value the significance of professional capital for higher education students, particularly in an era marked by increased emphasis on employability and authentic, experiential learning within the UK higher education sector.

Integrating the outlined model of curriculum design into a programme of study for early-career academics has proven to be highly effective at aligning contemporary higher education pedagogies and balancing authentic academic practice with institutional imperatives and sector-wide policy challenges. There are clear benefits of adopting professional capital as a signature pedagogy (Shulman, 2005) for the education and preparation of education professionals.
References


Hoyle, E. and John, P. D. (1995) 'Professional knowledge and professional practice'.


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Figure I. Model of how academic programmes can create opportunities to build Professional Capital
(Source: Figure created by Author)
Table 1. Participant Perspectives on Effective Pedagogy and Teaching Strategies for Enhancing Professional Capital in Academic Programs.
(Source: Table created by Author)

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<tr>
<th>Original core category title</th>
<th>Elevated theoretical categories</th>
<th>Conceptual Model</th>
<th>Best fit pedagogy to impact on programme design</th>
<th>Best fit Pedagogic Strategies to build Professional Capital</th>
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| 1. Human and status dimensions designed to stimulate a professional identity, benefit from advantage of knowledge, aspire to lead | 1. Human Capital | | Transformative pedagogy: Innovative pedagogy that aims to empower learners to critically examine their contexts, beliefs, values, knowledge and attitudes with the goal of developing self-reflection, appreciation of equality, diversity, inclusion and critical thinking (Mezirow, 2009). The Transformative Pedagogue develops new and socially constructed knowledge in learners that challenges pre-conceived ideas. Often disorientating or challenging for the learner, it is crucial to support learners’ wellbeing while often painful epistemic change occurs (Cranton and King, 2003). | Constructivist Teaching, Learning and Assessment Strategies:  
- Enquiry based teaching design  
- Questioning (Blooms scaffolded)  
- Collaborative learning  
- Simulation / Mantle of the Expert  
- Peer-led / student-led teaching  
- Metacognition / independent learning skills and behaviours  
- Modelling professional values and behaviours  
- Experiential and authentic learning  
- Critical thinking  
- Reflection on Practice  
- Communities of practice  
- Inclusive practice / decolonising / unveiling status quo/grand narratives (critical pedagogy)  
- Assessment for learning  
- Authentic assessment  
- Peer assessment |
| 2. Social and community dimensions designed to promote professional development and surmount difficulties | 2. Social Capital | Teacher Professional Capital (Hargreaves and Fullan, 2012) | | |
| 3. Determination dimensions designed to develop informed autonomy and self-efficacy | 3. Decisional Capital | | | |

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