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The ITTECF and educational research: the next version of a flawed vision?

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Abstract

In this article we discuss the view of educational research outlined in the Initial Teacher Training and Early Career Framework (ITTECF) document, published in 2024 by the UK Department for Education, in the context of debates about the relationship between educational knowledge and teacher education. Through an elementary bibliometric analysis of the changes made to the reference lists in the document since its predecessor documents (the Core Content Framework and the Early Career Framework), we show how the previous UK Conservative government sought to embed a scientistic approach to educational knowledge for teacher education in England, with research sponsored by the Education Endowment Foundation taking a leading role. Drawing on Foray and Hargreaves's work, we demonstrate that the ITTECF illustrates underlying assumptions that educational research needs to move towards a more science-in-technology mode of knowledge production that aims to enhance the quality of educational knowledge, while minimising more humanistic approaches. This is exposed as problematic, given

the necessarily values-rich, contextualised and holistic character of educational practice, and the centralising tendencies inherent in the production of the ITTECF and its preceding documents.

Keywords educational knowledge; initial teacher education; professional development

Introduction

The Initial Teacher Training and Early Career Framework (ITTECF) was published in January 2024 as a successor to the Early Career Framework (ECF) and the Initial Teacher Training (ITT) Core Content Framework (CCF), which emerged as key documents for the content and structure of initial teacher education (ITE) in England from 2019 onwards. While both ITT and ITE are used throughout this article, ITE is the authors' preferred acronym. However, ITT is frequently used within the teacher education sector in England, and particularly by many policymakers. These documents stemmed from a review of teacher education, undertaken in 2015 by Sir Andrew Carter (2015: 3), whose aim was to identify 'which core elements of high-quality ITT across phases and subject disciplines are key to equipping trainees with the required skills and knowledge to become outstanding teachers'. The Carter Review was critical of the practices of ITT providers and recommended a framework for ITE/ITT content, as an amendment to the (unchanged) Teacher Standards. In response, a framework of core content for initial teacher training, led by Stephen Munday, was published in July 2016, but it was not given mandatory status and was widely considered to have had little impact on the sector of teacher education providers. The recommendation for a framework of content was then taken up by a Department for Education (DfE) expert advisory group, who published the ECF in January 2019, and then retrofitted the CCF for ITT later that year (November 2019). Despite the Carter Review recommendation that the framework should be led by the sector, the advisory groups established for the ECF and the CCF, and for the subsequent ITTECF, were comprised of a hand-picked group of experts chosen by the DfE, rather than providers of teacher education (including universities and school-based providers) (see Hordern and Brooks, 2023, 2024).

In January 2021, the DfE announced a review of initial teacher education, known as the ITT Market Review, a controversial move across the teacher education sector. Part of the concerns raised about a wholesale review of provision was the proviso that one of the conditions of accreditation should be fidelity to the ITT Core Content Framework and correct referencing of the underpinning evidence. Feedback from the sector highlighted the many omissions of the framework, in particular around its generic nature and lack of attention to special educational needs and disabilities (SEND), among wider criticisms of the process of developing the framework (see DfE, 2024c; Ellis, 2023). The sector was assured that a review of both documents would take place, and a call for evidence was issued in March and April 2023; the outcomes of that review were published in January 2024, which included the ITTECF document (DfE, 2024a) and the response to the call for evidence (DfE, 2024c).

In this article, we examine the changes that have been made in the reference list of educational research underpinning the ITTECF, updating earlier work (Hordern and Brooks, 2023) and raising further questions about how educational research is understood in the process surrounding the framework development. With the use of VOSViewer software, we conducted an elementary bibliometric analysis to identify the changes made to the sources listed at the end of the ITTECF in comparison with predecessor documents, the CCF and ECF, showing how the ITTECF further embeds a scientistic approach to educational knowledge, and further foregrounds the role of the Educational Endowment Foundation (EEF) as a producer of what is assumed to be the best available educational evidence or research. We explore some previous work on educational knowledge production (Foray and Hargreaves, 2003) and demonstrate that the ITTECF illustrates underlying assumptions that educational research needs to move towards a more science-in-technology mode of knowledge production that leads to purportedly well-evidenced 'interventions' in teaching practice, while minimising more humanistic approaches. This is exposed as problematic, given the necessarily values-rich, contextualised and holistic character of educational practice.

Educational knowledge production and teacher education

In an article published over 20 years ago in the *London Review of Education*, Foray and Hargreaves (2003: 8) remarked that 'advances in human know-how have been spectacular in some sectors' (for example, medicine or information technology), but 'very limited' in others (such as education or management). In their article, the education sector is singled out for criticism for its 'relatively slow knowledge production and dissemination' (Foray and Hargreaves, 2003: 8). Drawing on Gibbons et al. (1994), Foray and Hargreaves (2003: 8–9) contrast two modes of knowledge production, the 'science in technology' mode (characterised by experimentation, invention and eventual codification) and the 'humanistic' mode (learning by doing, situated, tacit), which are often combined in professional work, not least in the 'people-centred professions'.

Foray and Hargreaves (2003: 9) also draw attention to 'knowledge spillovers', which, they claim, affect knowledge production and dissemination by enabling knowledge to become 'publicly accessible' and open to being 'absorbed by individuals or groups other than the originator'. These spillovers come about through two principal processes: 'competition', where agents within a sector are compelled to 'increase their own performance, through imitation or absorption of knowledge produced elsewhere, in order to avoid exclusion from the market', and 'co-operation', where incentives are created 'that can motivate people to reveal their knowledge to others freely' (Foray and Hargreaves, 2003: 9). Knowledge production and dissemination can progress and improve, the authors imply, through an increase in spillovers, and therefore sectors which lack competition and/or cooperation between their agents should consider how to increase these.

In Foray and Hargreaves (2003: 13), education is held up as characteristic of a primarily humanistic mode of knowledge production with 'weak spillovers', in which teachers are seen as 'artisans' operating independently, and often in isolation, with little incentive to share 'innovations' in their knowledge. They argue that education was in a 'non-competitive, pre-scientific state' until the end of the nineteenth century, and that it still remains partially unscientific in practice. They note that 'there is a deep rift between two fundamentally opposed epistemic cultures', with, on the one hand, 'those who believe it possible to treat medicine as a potential model for the advancement of knowledge in educational practices', and who advocate for the 'application of the RCT [randomised controlled trial] to education problems', and, on the other hand, 'those who … favour the epistemic culture of humanism' and, thus, 'best practice' is seen as 'based on depth and breadth of experience, of the individual practitioner as a unique case' (Foray and Hargreaves, 2003: 15).

The perception of the low quality of educational knowledge production and a disconnect between teacher education and high-quality research, as illustrated by Foray and Hargreaves (2003) and others more recently (for example, Gorard et al., 2020), is influential in the development of the CCF and the ECF, and now the ITTECF, as can be seen by the inclusion of a specified list of references at the end of these frameworks, said to represent the best available educational research or evidence (DfE, 2019, 2024a; Hordern and Brooks, 2023). This perception of a disconnect between the best available research and teacher education has also stimulated the development of What Works Centres (in the USA and the UK) and the influential role of the Educational Endowment Foundation in English educational research, which is said to have 'assured' the 'best available evidence' (DfE, 2024a: 4) for the ITTECF – as it did for the 'best available educational research' (DfE, 2019: 10) in previous documents. The ITTECF is said to be predicated on an organised body of high-quality research on which school leaders and teachers can rely, as opposed to the absence of guidance which, it is implied, characterised early forms of teacher education and professional development. The idea is to create a connected and 'shared body of knowledge and skills', which will become a cornerstone of teaching practice 'irrespective of subject or phase' (DfE, 2024a: 4), otherwise described as a 'core set of pedagogical knowledge and skills that is relevant for teachers throughout their careers' (DfE, 2024a: 6). As we learnt previously, 'the ITT Core Content Framework and the Early Career Framework (ECF)' are said to 'establish an entitlement to a 3 or more year structured package of support for future generations of teachers' (DfE, 2019: 3), and, in so doing, to transform the relationship between teachers and the 'best available' educational research.

However, the problem with the criticisms of educational knowledge and a disconnect with teaching that underlie assumptions about the best available evidence for the ITTECF in England is that there is a mischaracterisation of the humanistic mode of knowledge production in the context of the nuances of professional educational practice. The difficulty with Foray and Hargreaves's (2003: 8) argument is that they have portrayed humanistic approaches to professional practice as a situated 'learning by doing'

mode and purely experiential, backgrounding long-standing questions of judgement, values, virtues and ethics (and a deeper sense of educational practice) upon which much has been written in education (for example, Biesta, 2010; Noddings, 2003). Foray and Hargreaves's (2003) argument appears to come with an implicit assumption that humanistic approaches persist without a scholarly underpinning, rather than entertaining the possibility that educators might develop a more informed approach to practice through forms of systematic and specialised educational deliberation (see, for example, Deng, 2020; Englund, 2015) for which a notion of teacher agency is required (Priestley et al., 2012), and the values of teachers, students and society are ever-present. Something of an artisanal impression of teaching practice (even if that artisanal impression is partially misleading) may have the advantage of acknowledging the discretion that is needed for engagement with scholarship as an underpinning for good judgement – as long as that process of making judgements is not done in isolation, as discussions with experienced others within a school or wider network will often be highly beneficial. The artisanal model, necessarily coupled with scholarly critical reflection, also provides a template for enabling differences in subject disciplines, and for thinking carefully about the contexts in which children and communities live and learn.

A key point is that any knowledge spillovers (in terms of the best practice techniques, interventions or teaching strategies that Foray and Hargreaves [2003] refer to) are less central to the purpose and practice of teaching than might be assumed, and to exaggerate their importance pushes out the deliberative pedagogical processes that are in the best interests of children and young people (Englund, 2015). A second point is that any sense that the science-in-technology mode of knowledge production will (or should) somehow overtake the humanistic mode in professional practice more generally is problematic. Foray and Hargreaves (2003: 14) discuss the trajectory of medicine from the early nineteenth century to the present day, arguing that overall developments in science and technology have transformed medical practice, but that aspects of the humanistic model maintain, because of the contexts of the individual case and the nuanced problematics of diagnosis, inference and treatment (see Abbott, 1988), which acknowledge that individual (and group) characteristics need to be considered in processes of professional judgement. As noted above, in education, many would argue that teachers should be concerned with children and young people as whole persons, with generating 'intellectual enthusiasm' (Noddings, 2003), and with values and/or civic virtues (Peterson and Civil, 2022), and thus a linear model of diagnosis, inference and treatment (and the closure of the case) does not apply straightforwardly in the open and recursive context of educational practice (Biesta, 2010; Hordern, 2023). This is not to say that the spillovers of a science-in-technology mode in applied psychology are not potentially useful for critical reflection on educational practice – they may be – but the point is that different, more holistic, person-centred (thought and action) processes lie at the heart of education. Therefore, all claims to knowledge from applied psychology would need to be filtered and transformed (or recontextualised – Bernstein, 2000) to make sense in the context of educational practice.

The assumptions that underlie the ITTECF have therefore exaggerated the role of the science-in-technology mode for teaching. The idea that there is an 'evidence base' (DfE, 2024a: 4) for teaching that can be universally applied as a 'shared body of knowledge, irrespective of subject or phase', and that should trump all other claims to knowledge and good judgement, is problematic. The notion that this evidence base needs to be periodically 'updated' based on a regular 'call for evidence' (DfE, 2024a: 4) reflects the assumption that capturing spillovers and new innovations is crucially important (Foray and Hargreaves, 2003). However, this process of updating the evidence is assumed to take place within a system where what constitutes high-quality evidence is unquestionable, with the EEF appraising 'all changes to ensure they reflect the evidence base' (DfE, 2024a: 4) according to their views on appropriate methodologies and suitably credible studies (see EEF, 2024).

There is, however, an irony here. Even if the development of the ITTECF and previous frameworks herald a step towards affirming a more science-in-technology mode of knowledge production by ascribing certain types of scientistic educational research with the label 'best available', this does not necessarily mean that stronger spillovers (seen as beneficial for healthy knowledge production and dissemination) will arise. In fact, the narrowing of control over what counts as high-quality evidence in education (by the government in the shape of the DfE, or closely related bodies, such as the EEF) can be seen as potentially closing down forms of competition and perhaps also cooperation, by excluding many of those involved in educational knowledge production who may take a different view of the quality and relevance of educational knowledge for teaching. The centralised development of a framework such as the ITTECF encourages a narrowing of the mode of educational knowledge production – which will not lead to beneficial spillovers. The system is characterised by increasing exclusion of alternative

perspectives, not a development of dialogue and cooperation, limiting meaningful 'competition' to develop insights into educational issues. This further shutting out of alternative perspectives on teaching is demonstrated in the selection of new references for the ITTECF, as will be shown below.

What has changed with the ITTECF?

In comparison with the CCF and ECF, the ITTECF has extended the reference list from 139 references to 185, a notable increase. While it might be assumed that this equates to a straightforward addition of 46 references, a total of 15 references have also been removed from the previous list, while a number of earlier versions of publications have also been updated to more recent iterations (for example, of the Education Endowment Foundation Toolkit), meaning that the total number of additions or changes to previous references is in the region of 68 (with 61 additions in terms of completely new references). However, there is also the issue of duplicate references, with many sources appearing in the reference list of more than one section (as was also the case with the CCF/ECF). Across the entirety of the ITTECF, there are 34 references that appear more than once, with the EEF Toolkit appearing seven times, the EEF's *Improving Secondary Science* four times, Rosenshine's 'Principles of instruction' three times and Coe et al.'s *What Makes Great Teaching* three times.

It is interesting to note which references have been removed following the review process. The 15 references removed include 5 books and 3 book chapters, which may have been seen as less accessible to a wider audience or to have been superseded by more recent work. It is remarkable that a rationale has not been given for the removal of references, beyond issues around accessibility. The document accompanying the ITTECF merely says that 'the outcomes of the Call for Evidence have been considered alongside feedback from experts, including lessons learned from the first few years of CCF implementation and delivery of ECF-based induction' (DfE, 2024c: 6). While the later document detailing the response to the call for evidence (DfE, 2024d) provides something of an explanation for grounds for including new sources in the ITTECF, it does not discuss what would lead to a removal of a source.

References have been removed from the majority of the sections, with only Professional Behaviours keeping all of its previous references. Three references each have been removed from Classroom Practice and Managing Behaviour, two each from High Expectations, How Pupils Learn, Subject and Curriculum, and Assessment, and one from Adaptive Teaching. The removals provide an illustration of how the advisory group and EEF have approached the process of updating the reference list 'as the evidence base evolves' (DfE, 2024c: 3), but this does not appear to have entailed the removal of references from a particular period of educational knowledge production. The dates of the removed references range from 1999 to 2018, but the remaining reference list (in the ITTECF) ranges from 1986 (with Bandura's book *Social Foundations of Thought and Action: A social cognitive theory*) and 1989 (with Sadler's article on 'Formative assessment and the design of instructional systems'), to a source from 2023 (published by the EEF), and six published in 2022 (including a range of journal articles and the 2022 EEF Early Years Toolkit). It is therefore not clear how the advisory group and the EEF are interpreting the evolution of the 'evidence base'.

Certain sections of the ITTECF reference lists have been amended more than others in comparison with the CCF/ECF. The Subject and Curriculum section contains 27 additions and has had 2 references removed, and it now has 43 references in total, while How Pupils Learn has 9 additions (and 2 removals) and High Expectations has 8 additions (and 2 removals), and they now have 29 and 25 references respectively. These three sections account for 97 references in total, with the others – Classroom Practice (22), Managing Behaviour (21), Adaptive Teaching (16), Professional Behaviours (16) and Assessment (13) – accounting for the 88 remaining. Most of the sections have some additions in comparison with the CCF/ECF, but some sections now have fewer references: Classroom Practice now has 22, whereas previously it had 25 (there have been 3 removals and no additions), and Assessment has 13, whereas previously it had 14. Table 1 summarises changes to numbers of references across the sections of the CCF/ECF and ITTECF.

Using Scopus and VOSviewer, it is possible to conduct a further analysis of a selection of the additional sources in the ITTECF, following much of the process outlined in Hordern and Brooks (2023), and drawing on some of the guidance provided for VOSviewer use (Van Eck and Waltman, 2022). First, a search was performed on Scopus to identify which of the additional sources exist within the database, enabling the creation of a Scopus list. This list was then uploaded to VOSviewer for biblioanalysis or

elementary bibliometric analysis, so that an analysis of titles, abstracts, keywords and publication sources could be undertaken. A total of 32 of the additional sources were identified in Scopus (this includes 30 journal articles, 1 book chapter and 1 book), while 2 journal articles could not be found in Scopus. This leaves approximately 29 sources which were not identified as within Scopus (of which, more below).

Table 1. Numbers of references in the CCF/ECF and ITTECF by section

	CCF/ECF	ITTECF	Change
1. High Expectations	19	25	+6
2. How Pupils Learn	22	29	+7
3. Subject and Curriculum	18	43	+25
4. Classroom Practice	25	22	–3
5. Adaptive Teaching	12	16	+4
6. Assessment	14	13	–1
7. Managing Behaviour	17	21	+4
8. Professional Behaviours	12	16	+4
Total number of references	139	185	+46
References removed from CCF/ECF		15	
New references added to ITTECF		61	

With considerable similarity to the CCF/ECF, the ITTECF additional sources in Scopus are overwhelmingly taken from journals from the fields of psychology and educational psychology, accounting for over half (16) of the articles. Particularly prominent journals include *Educational Psychology Review* (4) and *Psychology Bulletin* (3). Around 12 of the Scopus sources are published in educational journals, including both specialist journals with a particular focus, such as *School Effectiveness and School Improvement* and more generalist journals, such as *Review of Educational Research*. There is also an article from an economics journal, and one from a sociology journal. This aligns strongly with the analysis of the CCF sources in Hordern and Brooks (2023).

An overview of words included in titles across the 32 sources found in Scopus (from the overall list of 61 additions) reveals that 15 terms appear more than twice across the titles of the 32 sources. Particularly popular terms found in the titles include: meta-analysis (9 times); student (5 times); review, achievement and evidence (4 times each); meta-analytic review, systematic review, learning and strategy (3 times each); and cognitive load, instruction, mathematics, effect, teacher and performance (2 times each). Similar terms arise when keywords are examined across the sources, with the most frequently found including: meta-analysis (6 times); human/humans and students/student (5 times each); achievement and learning (3 times each); and psychology, child, education, female, male, mathematics, testing effect, primary school, critical thinking, instructional practices, retrieval practice and teacher knowledge (all 2 times each). When looking at terms commonly found in the abstracts of the Scopus sources, the most frequent include: study (in 20 of the 32 abstracts) and effect (in 19 of the 32 abstracts). Other terms found in more than 5 of the abstracts include: meta-analysis (11 abstracts); and effect size, instruction and attention (each in 7 abstracts). Again, there is a strong alignment with the analysis of keywords and abstracts in the CCF undertaken in Hordern and Brooks (2023).

In terms of the additional sources in the ITTECF not found in Scopus, a considerable volume are from the Educational Endowment Foundation (or from research sponsored by the EEF), with many documents referenced in multiple sections. The additions include recent publications on cognitive science and managing behaviour, and a publication on using research evidence. The ITTECF document in its entirety now contains 37 references either authored by the EEF (31) or sponsored by them (6), and referenced to the EEF website, although it should be noted that, of those references, 7 are the EEF Teaching and Learning Toolkit, which appears in every section except How Pupils Learn, and there are other duplicates – in terms of references appearing across more than one section. If the updated EEF

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Teaching and Learning Toolkit is excluded, there are still 14 additional references authored by the EEF and 2 additional references to other reports sponsored by the EEF. So, in total, the EEF have doubled their contribution in terms of the reference list in the ITTECF. Just one of the previous EEF-authored references was removed – a document entitled *A Marked Improvement? A review of the evidence on written marking*, which had a substantive contribution from academics from the University of Oxford Department of Education as co-authors with EEF representatives.

The new EEF-authored document entitled *Using Research Evidence: A concise guide* (EEF, 2024), now included as a source for the Professional Behaviours section of the ITTECF, has the potential to become an influential reference point for busy educational professionals, including school leaders, teachers and teacher educators. Whatever its merits in terms of outlining how to evaluate empirical studies and mapping sources of 'evidence' across the education system, the concise guide lacks the necessary nuanced discussion of the sponsorship and authorship of empirical research (despite identifying this as an issue in terms of 'independence' [EEF, 2024: 6]), a discussion which arguably would raise questions about the role of the EEF itself. Furthermore, rather than guide readers to peer-reviewed academic discussion of the nature of educational research and the validity of claims, the 'support and resources' section of the document primarily signposts readers to the EEF's own publications (EEF, 2024: 8). A complex debate about the relationship between claims to knowledge, current evidence, professional expertise and good judgement in education is thus avoided via a short-circuit back into publications authorised by the EEF.

Much has been made of the changes to the framework to cover students with special educational needs and disabilities (SEND), and additions have been made to the 'Learn that' statements in the ITTECF to make reference to SEND (DfE, 2024c). This has been highlighted in the accompanying document, which states that 'significantly more content related to adaptive teaching and supporting pupils with SEND' has been included as part of the 'updates and enhancements' in the ITTECF (DfE, 2024c: 5–6). It is now the case that each of the nine sections relating to the Teacher Standards includes a statement made for trainees to learn about SEND and to be able to make provision for SEND in the classroom. However, there are relatively few additional sources added to the ITTECF in respect of SEND. One source is an 'evidence review' commissioned by the EEF in respect of SEND in mainstream schools (Cullen et al., 2020), and the other is a guidance report produced by the EEF full of recommendations for teachers in respect of SEND (EEF, 2020), while there are two other sources that seem to be centrally concerned with SEND issues. These inclusions were made in response to many criticisms that the original documents did not cover SEND sufficiently, but the additions highlight the importance of *considering SEND* and not much more.

Commentary

The ITTECF can be seen as a doubling down on the approach taken to the development of the CCF and the ECF. The preamble to the ITTECF asserts that 'The ITTECF, as with its predecessors, is based on the best available evidence from this country and around the world, assured by the Education Endowment Foundation (EEF)' (DfE, 2024a: 4), despite arguments which have clearly demonstrated that the CCF and ECF are not based on the best available educational research, take a problematic view of evidence in relation to educational practice, and that the EEF is not an appropriate body to unilaterally make judgements about the best available evidence (Hordern, 2023; Hordern and Brooks, 2023, 2024; UKRI/HEFCW/SFC/Department for the Economy for REF 2021, 2022).

The preamble to the ITTECF also asserts that the 'content of the framework has been updated based on a Call for Evidence in spring 2023' and 'feedback from a broad range of experts across the education sector' (DfE, 2024a: 4), and yet the analysis above of the changes to the sources in the ITTECF suggests that the updating has been closely aligned with previous assumptions about the appropriacy of evidence according to the EEF's methodologies (DfE, 2024d), and has neglected the criticisms and suggestions of experts across the education sector. In revising the ITTECF, the DfE and the EEF have excluded many of the suggestions of providers of teacher education and professional development, as evidenced not just in the changes made (as noted above), but also in the response to the evidence submitted as part of their call to the sector (DfE, 2024c). Of the 92 further sources suggested by respondents to the consultation, only 4 were included in the revised document (DfE, 2024d: 17).

The ITTECF also demonstrates a closer alignment with the output of the EEF, as EEF publications are foregrounded as representing an authoritative educational knowledge base. A clear illustration of this is the focus on documents commissioned or produced by the EEF in respect of SEND. This continues to mainstream a new science view of educational knowledge (see Furlong and Whitty, 2017; Hordern and Brooks, 2023), maintaining a focus on narrow methodologies and a limited engagement with wider educational research. As noted above, centralising the EEF as a supposed authority on educational research also potentially undermines some of Foray and Hargreaves's (2003) arguments in terms of the need for 'competition' in a science-as-technology educational knowledge base.

At the core of the assumptions within the ITTECF is a flawed perspective on teaching practice that tends towards the technical and instrumental while backgrounding the thinking and reflection required for professional judgements. The ITTECF highlights the importance of 'multiple opportunities to rehearse and refine particular approaches' (DfE, 2024a: 7), foregrounding a model of expertise based on repetition of the small steps until habituated. Such models are strongly influenced by the work of K. Anders Ericsson on human performance and expertise, and they have been championed by organisations such as Deans for Impact in the USA (Deans for Impact, 2016); they are incompatible with a more holistic view of educational practice (Hordern, 2023; Noddings, 2003). While there may be benefits in terms of teacher confidence in mastering some technical aspects of classroom management, the lack of a pathway towards more critically reflective professional judgement based on engagement with educational scholarship (see Winch et al., 2015) leaves the ITTECF as only offering a route to a form of technicism in teaching.

An argument for the frameworks, echoing Foray and Hargreaves (2003), would be that a humanistic approach to educational knowledge for teaching is insufficient and inappropriate for driving improvements in educational practice. What is needed, therefore, is an approach to developing and testing interventions for educational improvement that focuses on causal relations and measurable change (an approach that Biesta [2010] has exposed as flawed). However, as outlined above, the portrayal by Foray and Hargreaves (2003) of the humanistic mode is itself erroneous, as it misinterprets the character of educational practice, and, most importantly, its ethical and values-based dimensions. Without encouraging teachers to engage in some critical reflection on educational practice, the situated or craft dimensions lead to an impoverished and values-poor view of teaching (Hordern, 2023; Winch et al., 2015). The answer to the insufficiencies of a purely craft model is not to move towards the technicist approach that the ITTECF seeks to embed (with research separated from practice), but to revive a deeper, and more thorough and rigorous, humanistic and values-rich approach to teaching. As Hordern (2023) outlines, there are substantive educational research traditions that can assist with this, due to their acknowledgement of the real complexities of educational practice.

Conclusions

The ITTECF lacks credibility, as it clearly lacks support among the wider sector of teachers and teacher educators, as is demonstrated by the widespread criticism of the frameworks on which it is based (Ellis, 2023; Hordern and Brooks, 2023, 2024), and the determination of its authors to ignore the suggestions made by respondents to its call for evidence (DfE, 2024c). It is also very clear that the ITTECF, like the CCF and the ECF, is not predicated on the best available educational research, or even on the best evidence of what constitutes high-quality teaching (Hordern and Brooks, 2023; UKRI/HEFCW/SFC/Department for the Economy for REF 2021, 2022). A content framework cannot achieve credibility without a different process of engagement with the teaching profession and educational researchers, and a more nuanced and inclusive approach to educational knowledge which recognises the fundamentally humanistic and contextualised dimension of educational practice and professional judgement. As noted above, this does not mean a dismissal of all the causal explanations of applied psychology in educational contexts, but it does suggest that considerable scepticism needs to be applied to any suggestion emanating from these frameworks that teaching can be straitjacketed into a universal model that seems oblivious to broader educational purposes, the diverse social contexts in which education takes place, and the recursivity of educational practice.

The introduction of the CCF and ECF do not seem to have made any progress in stemming the tide of teachers leaving the profession in England, and there is no tangible basis for any claim that these frameworks have improved the quality of teaching in England's schools. Any assertions that

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the frameworks will improve teacher retention and/or the quality of teaching (for example, DfE, 2024c) cannot wish these into reality. As Brooks and Perryman (2024) have pointed out, the crisis in teacher recruitment and retention in England has worsened since the end of the Covid-19 pandemic (despite the implementation of the CCF/ECF). The most recent data, for 2024, indicate that targets for recruitment to teaching are still not being met in the majority of secondary subject areas (DfE, 2024b), and the recent House of Commons Education Committee *Teacher Recruitment, Training and Retention* report highlights evidence from the National Education Union in 2023, which noted a 'quarter of (early career) teachers leaving within three years', and 'fewer than 60%' of early career teachers 'still in the profession after 10 years' (HoCEC, 2024: 11). Meanwhile, the ECF is widely criticised for its 'repetition, lack of subject focus', and for the 'burden' it places on school staff (HoCEC, 2024: 39). Given the manifold flaws embedded in the ITTECF, the best option for the new UK government would seem to be a wholesale revision of the process of developing a content framework for teacher education in England, putting teacher educators, together with teachers and other educational researchers, at the centre of developing a type of framework that achieves a better grasp of the scholarly and humanistic basis for teaching practice, and that encourages meaningful engagement with educational research in teacher education (see Brooks et al., 2023).

Declarations and conflicts of interest

Research ethics statement

Not applicable to this article.

Consent for publication statement

Not applicable to this article.

Conflicts of interest statement

The authors declare no conflicts of interest with this work. All efforts to sufficiently anonymise the authors during peer review of this article have been made. The authors declare no further conflicts with this article.

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