

Forty years of research on expert teachers

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looks at what we know and why it's important.

As teachers we don't always think of ourselves as experts. Yet I believe we should. Just as in all domains of professional practice, it takes years of experience, learning and quite a few mistakes to gain the necessary competences to keep our students learning and our line managers happy. As a researcher of expert teachers, I also believe we should embrace and celebrate expertise, not as the domain of a privileged few but as something that all teachers can achieve. In this article I provide an introduction to the field of teacher expertise research and summarise the findings of a metasummary I recently conducted into this diverse and insightful body of literature – the largest systematic review ever conducted on expert teacher research.

How to conceptualise quality in education?

Some of the oldest and most important questions in education relate to our understandings of 'good'

teachers – what they do in class, what makes them tick and how they are different from other teachers. Of course, we all have our own opinions about this – in order to teach or support teachers on a daily basis we need an implicit understanding of quality. But we don't always examine these assumptions in more detail to ask ourselves exactly what we mean when we talk about a 'good' teacher or 'good' teaching.

I used the word 'good' in scare quotes in the previous paragraph because this word, while frequently used in our daily conversations at work, is not really precise enough to provide a construct of quality that we can research, report on and discuss transparently so that key stakeholders understand what it is we mean. As a result, research into quality in education tends to adopt more specific measures, which, unfortunately, often tend either to oversimplify it into something that can be easily measured, or break it up and look at isolated features of quality rather than the whole – the teacher themselves. An example of the latter is when we mistakenly view experience alone as a sufficient measure of teacher quality. Unfortunately, it isn't, and I suspect we can all think of examples of highly experienced colleagues who aren't necessarily very good teachers (Day *et al.*, 2006). An example of the former is research into



‘teacher effectiveness’ – typically operationalised as the effect a teacher has on student learning, which is invariably measured through student exam achievement. While this is easily measurable, its relationship to the influence of an individual teacher is surprisingly complex (the so-called ‘value added’ impact in Darling-Hammond, 2012) because there are many, many factors that can and do influence student performance (UNESCO, 2017). We should also note that ‘effectiveness’ is a very limited understanding of teacher quality, one that overlooks so much of what we value in teachers, such as their ability to facilitate social and emotional learning or build positive learning communities, none of which are measured in exams.

Teacher expertise research

Unsurprisingly, researchers have searched for alternative measures of teacher quality over the years, and one that many of us believe is more appropriate and productive than effectiveness or experience alone is the notion of teacher expertise. Like other forms of professional expertise (e.g., in doctors or lawyers), the construct of teacher expertise typically recognises the importance of experience and qualifications, but also attempts to go beyond these to find individuals who have above-average professional competence. Since the 1980s, researchers all around the world have been attempting to find and study such expert teachers for the potential utility that this may have as a broader, more holistic measure of teacher quality. However, as David Berliner (2004) has noted, this has been challenging because teacher expertise is more extensive and complex than expertise in other

fields, such as playing chess or mastering a musical instrument.

In order to find expert teachers, researchers have adopted quite a wide range of selection criteria over the years, including nomination by school inspectors and teacher educators, identifying individuals who are leaders in their institution, or those who have higher professional qualifications, such as National Board certification in the USA, alongside their effect on learning. Because any one of these measures may potentially be unreliable, the research literature generally recommends the use of multiple criteria to identify participants for teacher expertise studies (Anderson, 2023; Palmer *et al.*, 2005).

Hundreds of such studies have been conducted to date in a wide range of national contexts (particularly the USA, but also in Europe and across Asia) and at different levels, from primary to secondary and tertiary education. These studies have focused on different aspects of teacher expertise, such as aspects of their knowledge, their cognition, their personalities and what they do as practitioners. Consistent with these diverse focuses, these studies have also used a wide range of methodologies, including qualitative (case study), quantitative (experimental designs) and mixed method approaches.

Building an expert teacher prototype

Probably as a result of this diversity in approaches and focuses, no researcher has ever previously attempted to bring this vast body of literature together through an empirically replicable systematic review. However, while I was completing my own PhD research on teacher expertise a few years ago, I began to think, firstly, that this is a shame – such a fruitful body of literature that has never been brought together and summarised appropriately – and secondly, that the methodological barriers are not insurmountable. I found a colleague, Gülden Taner, who agreed with me. In 2020 we began working together to conduct the first ever systematic review of teacher expertise research, now published and freely available online with the title *Building the Expert Teacher Prototype: A metasummary of teacher expertise studies in primary and secondary education*. (Anderson & Taner, 2023).

In order to bring this vast, diverse research literature together, we had to modify existing methodologies. While meta-analysis is typically used for quantitative studies and metasynthesis for qualitative ones, neither is capable of bringing together findings from both types of study. As a result, we adapted a methodology sometimes used in healthcare research, but almost unheard of in education – what Margarete

Sandelowski calls ‘metasummary’ (Sandelowski *et al.*, 2007) – and applied it to over 100 expert teacher studies from around the world.

When conducting a metasummary, research team members independently read and identify potential findings in studies on a specific topic (e.g., expert teachers); these findings are then compared and agreed upon. In our adapted version, we counted a finding as valid if both of us had coded that finding independently for a specific study. This led to what we called ‘agreement counts’ for each finding. Erring on the side of caution, we chose to present only those findings with an agreement count of five or more in our final paper. This led to a total of 73 findings (‘themes’) that make up what we called the expert teacher ‘prototype’. We borrowed this term from Sternberg and Horvath (1995) as a means to conceptualise the ‘family resemblances’ among expert teachers.

In our study, we chose to focus on primary and secondary education, where the majority of teacher expertise research has been conducted, and to look at all subjects in any national contexts since the beginning of teacher expertise research 40 years ago (Anderson & Taner, 2023).

What did we find?

Because of the diverse range of studies in our database, we were able for the first time to present a relatively holistic (albeit incomplete) description of expert teachers, one that included aspects of their knowledge, cognition, personalities and practices. We chose to present these in six domains (see Figure 1), which, while generally distinct, also overlapped to some extent; unsurprisingly, one domain, that of pedagogic practice (teaching) was found to be linked

in multiple ways to all others, hence this is presented at the centre of Figure 1. These domains can be seen as a framework of sorts to study and understand teaching quality. While many such frameworks already exist (the British Council CPD framework, 2015), the advantage of this one is that it derives directly and inductively from empirical research findings, rather than from the intuition of authors, which may be vulnerable to bias and selective reading of the research literature.

Findings in the six domains

Below I present several of the most salient findings in each of these domains. For more detailed discussion of each of these and the full list of 73 themes, please see the paper itself (Anderson & Taner, 2023).

Knowledge base

There is an extensive body of research investigating what is known as pedagogical content knowledge (PCK): the understanding that experienced teachers have concerning how to teach the content of their subject (Shulman, 1987). Unsurprisingly, our research confirms that this is central to the integrated knowledge base of expert teachers. However, we also found that expert teachers have an equally detailed body of knowledge about their learners which is no less central to their practices. It seems to underpin numerous findings in four of the remaining five domains (more than PCK), both directly and indirectly – discussed further below.

Cognitive processes

We found that expert teachers, like all experienced teachers, have an extensive range of automated cognitive processes that operate largely without thinking (e.g., eliciting answers from learners, noting key terminology on the board, etc.), thereby freeing up their cognitive resources for more important purposes, such as problem solving and major decision making. Expert teachers also have a high awareness of what’s happening in class, and are able to identify what matters within this information. Whether this be spotting learner misbehaviour before it gets out of hand, sensing a learner who may be having difficulty, or noticing a group that is off task, expert teachers are able to act swiftly and responsively, keeping the lesson on track without neglecting the emerging needs and challenges of the learners.

Beliefs

In the area of beliefs, we found significant variation, particularly between primary and secondary teachers. However, it was noticeable that almost all of the highest ranking beliefs involved the learners in some way. For example, expert teachers see

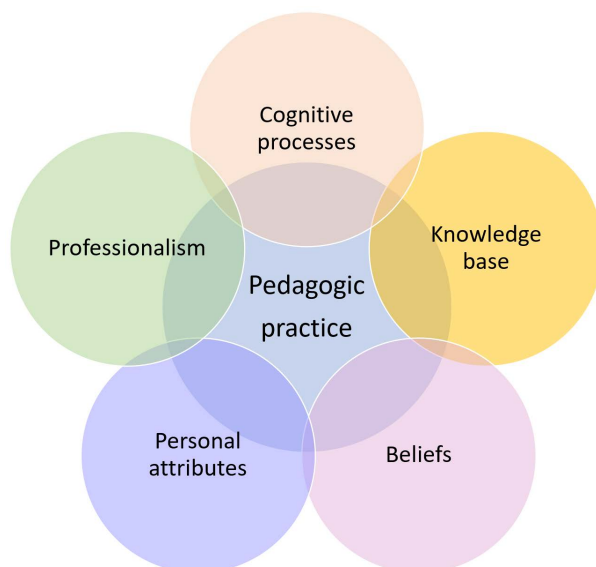


Figure 1: Six domains of teacher expertise

relationships with learners as being particularly important, they treat them as individuals with diverse needs and backgrounds, work hard to engage them in lessons and feel a strong sense of moral duty towards them, recognising their own role and responsibility in developing learners as future citizens.

Personal attributes

These beliefs linked closely to the personal attributes of expert teachers, with three particularly prominent in our findings. Expert teachers have a passion for their profession, they care deeply for their learners (a finding also prominent in teacher effectiveness research (Stronge, 2007) and they have a positive self-image that enables them to deal with adversity and challenge.

Professionalism

In the area of professionalism (this area focuses on their professional practice beyond the classroom), we found very strong evidence that expert teachers reflect both extensively and critically about their practice, sometimes challenging themselves by taking risks, innovating and experimenting. Expert teachers are also lifelong learners with a continuing interest in professional development, both their own and that of their colleagues, whom they frequently help, offer guidance to and share resources with, through diverse communities of practice.

Pedagogic practice

The above findings are, I hope, interesting and insightful. However, they only makes sense when brought together with the findings on the pedagogic practice of expert teachers. It is in this domain specifically where we begin to understand why learners, their needs, behaviour and challenges are key to expert teacher knowledge and beliefs. Among the most frequently identified classroom practices of expert teachers, we learn that they engage learners effectively, link new content to learners' prior knowledge and scaffold learning appropriately, continually assessing as they teach and making regular use of collaborative learning (e.g., pairwork and groupwork). However, the most frequent finding at both primary and secondary levels tells us that expert teachers are flexible, adaptive practitioners, responding to learning as it happens.

These findings strongly suggest that expert teachers are student-centred practitioners, and this is true to some extent. However, it is important to note that expert teachers aren't simply or solely student centred. While they build learning effectively around their learners, they are also able to progress appropriately through the curriculum, combining their adaptive expertise with an ability to meet lesson aims and provide the necessary structure through routines and regular procedures that many learners need, particularly at primary levels. In this sense, expert teachers have an admirable ability to balance

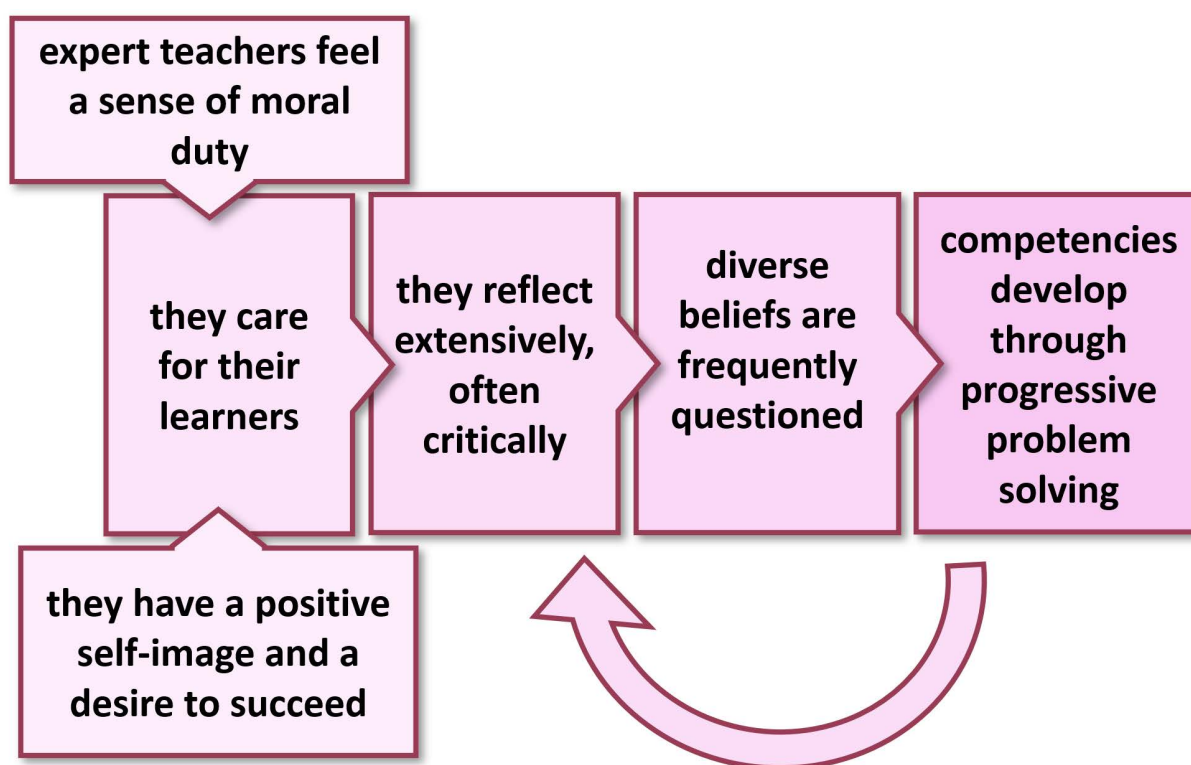


Figure 2: How core qualities of expert teachers may be related



between structure and freedom – they plan carefully, and then, in class, as Scrivener (2005:109) memorably observed, they ‘teach the learners, not the plan’.

What lies at the core of expert teachers?

While each of the many 73 themes that we identified was insightful in itself (and there are many more covered in the paper than those discussed briefly above), it is only when they are understood as a whole that we get a picture of the expert teacher prototype itself, and this tells us much more than one domain on its own, offering useful evidence to support Korthagen’s (2004) claim that at the core of ‘good teachers’ is a sense of mission that influences their identity, their beliefs, the competences that they develop, and ultimately their behaviour. Our study offers evidence as to exactly how this happens, revealing key moral, affective and motivational forces underpinning teacher expertise. Figure 2 offers one potential interpretation of the relationship between several of these elements, all prominent in our findings. Note the key role of reflection as a facilitating mechanism in this model.

While our study is insightful, it should, like all research, be read critically, with an awareness of its limitations. It should not be seen as a complete ‘checklist’ of appropriate teacher qualities – many of these may be missing from our initial prototype, which is, like all systematic reviews, dependent on what others have chosen to study. Also, there is a clear contextual bias towards the contexts of the global North, particularly the USA. I address this in more detail in my book *Teacher Expertise in the Global South: Theory, research and evidence* (Anderson, 2023), and identify key differences between northern and southern expertise.

Why is teacher expertise research important?

I hope that simply by presenting some of the findings of our research in this brief article, I have convinced you of the relevance and importance of studying the cognition and practices of expert teachers. These findings are likely to be useful in both pre-service and in-service teacher education, as well as for evaluating current instruments and systems for teacher quality appraisal. Yet I also believe that this research

is particularly valuable because, in an era when many are valuing that which they can most easily measure (e.g., PISA test scores), teacher expertise research attempts to measure that which we need to value most in our profession – everything that contributes to making us who we are as teachers.

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