DEVELOPING GREAT TEACHING

Lessons from the international reviews into effective professional development





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A review of the international research, commissioned by Teacher Development Trust with support from TES Global

Conducted by a team from Durham University, CUREE and the Institute of Education, UCL.









School of Education

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INTRODUCTION FROM THE CHAIR OF TRUSTEES

All teachers should have access to powerful professional development that helps them to thrive, and their students to succeed. To ensure this, we need a clear idea of what powerful teacher development looks like.

In September 2014 the Teacher Development Trust (TDT), with kind support from TES Global, commissioned Professors Rob Coe and Steve Higgins of Durham University, Philippa Cordingley of CUREE and Professor Toby Greany of the UCL Institute of Education to conduct a review of the international research into what constitutes effective professional development for teachers.

TDT is now proud and excited to publish a report on their findings. The expert team examined nearly a thousand international reviews into effective professional development, and selected and analysed those with the strongest evidence base. This robust methodology gives us a deeper understanding of what matters in teacher development and its findings will largely shape the work of TDT over the coming years.

The review provides a powerful consolidation of our existing understanding and it sheds new light on key components of effective professional development. From my time both as a headteacher and as the founding director of the National Science Learning Centre, I recognise much in the findings that I have learned from experience about such important elements as the balance between pedagogy

and subject knowledge, and the importance of embedding professional development within teachers' own working experience. I have gained new insights as well, and I am sure others will too.

The report's findings provide essential guidance for teachers, school leaders, CPD providers and policymakers. No one doubts the importance of professional development for teachers, but teachers' time is precious and we cannot afford to waste it on CPD that is below par.

The process of moving practice into line with the review's findings won't be easy and there are challenges for all. The launch of this report marks what we hope will be the start of a sustained and active campaign to develop our shared understanding of the review's findings and to embed them across all approaches to teachers' professional development. TDT looks forward to engaging with partners and practitioners to achieve this.

In education, it is students who matter in the end, and it is they who will benefit from this concerted effort.

John Holman

Sir John Holman Chair, Teacher Development Trust

WHY CONDUCT THIS REVIEW?

Previous research shows that powerful continuing professional development helps students succeed and teachers thrive. We believe that teaching is the most fundamentally important profession for our future generation, and that we need to harness the very best evidence about how to grow our teachers to help our children. However, not all teachers in England have access to the type of activities and processes most likely to impact positively on their practice and student outcomes.

In recent years, a number of consultations have reported that opportunities for teachers in England:

- are insufficiently evidence-based.
- do not focus sufficiently on specific pupil needs.
- are too inconsistent in quality.
- lag behind those experienced by colleagues elsewhere internationally.

Teachers, school leaders, CPD providers and policymakers need support to understand and improve the decision making, activities, and processes they use around teachers' professional development. For this reason, the Teacher Development Trust, in partnership with TES Global, commissioned a team from Durham University, CUREE and the Institute of Education, UCL to undertake a review of the international research around effective professional development.

This review has aimed to capture and distil approaches to and characteristics of effective professional development. Our aim is that this will help identify productive means of helping all stakeholders close the gaps in CPD provision.





Professor **Steve Higgins**



Philippa Cordingley



Professor **Toby Greany**



Professor Robert Coe



ABOUT THE RESEARCH TEAM





PROFESSOR **STEVE HIGGINS**

Steve Higgins is Professor of Education at Durham University. Before working in higher education he taught in primary schools in the North East where his interest in children¹s thinking and learning developed. His research interests include effective use of digital technologies for learning in schools, understanding how children's thinking and reasoning develops, and how teachers can be supported in developing the quality of teaching and learning in their classrooms. He is the lead author of the Sutton Trust-Educational Endowment Foundation Teaching and Learning Toolkit and he has an interest in understanding the effective use of research evidence for both policy and practice.

PHILIPPA CORDINGLEY

Philippa Cordingley, Chief Executive of the Centre for the Use of Research and Evidence in Education, is an internationally acknowledged expert in evaluation, research use and effective Continuing Professional Development and Learning (CPDL). Philippa leads the CUREE research and evaluation team. Recent projects include the Identification of characteristics of High Performing Schools for Teach First and a follow up study exploring the issues around gaining and sustaining momentum. She also leads CUREE's signature research service for evaluating the learning environment for teachers and learners in schools, SKEIN. She is founder and chair of the EPPI Centre Impact of CPD International Review Group, a member of the DfE Expert Group on CPDL and a member of the Leadership Group of Transforming Teaching project led by Harvard University.

PROFESSOR TOBY GREANY

Toby Greany is Professor of Leadership and Innovation and Head of the London Centre for Leadership in Learning, a department of the UCL Institute for Education. His research interests include system reform and system leadership, school leadership

and improvement and the nature and impact of evidence informed practice. Before joining the IOE, Toby was Director of Research and Policy at the National College for School Leadership for seven years. He has worked at the Design Council, the Campaign for Learning and the Cabinet Office. From 2005-2006 he was Special Advisor to the Education and Skills Select Committee. He has a Masters in Adult Education from Manchester University, has authored a number of books on schools and education and has taught in Brazil, China and the UK.



Robert Coe is Professor of Education and Director of the Centre for Evaluation and Monitoring (CEM), Durham University. Rob was previously a teacher of mathematics with experience in a range of secondary schools and colleges. His research focuses on ways of using evaluation and assessment to improve learning. Rob is a coauthor of the EEF's Teaching and Learning Toolkit and DIY Evaluation Guide. He is a member of Ofqual's Standards Advisory Group and was a member of the Sykes Review of Assessment. He has provided advice on assessment to government and opposition ministers and to the Education Select Committee.

DEVELOPING GREAT TEACHING: THE HEADLINE FINDINGS

The key finding of the review was that professional development opportunities that are carefully designed and have a strong focus on pupil outcomes have a significant impact on student achievement.

The review has also been able to add crucial nuance and detail to the components that constitute "careful design". The elements, as highlighted by the review and summarised in this document, include:

- The duration and rhythm of effective support.
- The consideration of participants' needs.
- Alignment of professional development processes, content and activities.
- The content of effective professional development.
- Activities associated with effective professional development.
- The role of external providers and specialists.
- Collaboration and peer learning.
- Leadership around professional development.



DEVELOPING GREAT TEACHING: A SUMMARY

This important review of reviews provides a rigorous update and overview of the lessons that can be taken from the international reviews into effective professional development. In this summary we explore some of the review's key findings, and extrapolate possible implications for teachers, school leaders, providers of professional development, policy makers and other groups.

DELIVERING EFFECTIVE PROFESSIONAL DEVELOPMENT

Schools and school leaders must focus on selecting and engaging with professional development opportunities that have been designed in line with effective delivery and content models.

The review highlighted several design features in the delivery of a professional development programme (appropriate duration; rhythm; designing for participants' needs; creating a shared sense of purpose; and alignment across various activities) that make it more likely it will have a lasting impact on teacher practice and student outcomes. There were particular findings relating to each design feature.

DURATION

According to the review, to be effective in producing profound, lasting change, professional development interventions had to be prolonged. The most effective professional development lasted at least 2 terms - more usually a year (or longer).

More limited change on very specific learning tasks could be achieved through shorter-term interventions, but to transform general practice, longer duration seems key.

However, longer duration in itself is not sufficient - the use of time in a longer term programme is key.

IMPLICATIONS

It is important to consider how schools and alliances can be incentivised to provide the sustained resources and commitment required for effective professional development. It is important to emphasise here that time on its own is not the answer – quality is just as important.

School leaders must ensure that staff are given time to engage with longer term programmes – to cover not only a programme's initial input but also subsequent in-class experimentation and collaboration with colleagues. Leaders must support an approach to professional development in which staff are encouraged to focus strategically and meaningfully on particular areas of learning and practice over time.

Where working to transform general practice, **external facilitators and CPD providers** should move away from a model of one-off, one-day support – and consider how to embed sessions within a longer programme of support and engagement.

RHYTHM

The review tells us it is important that professional development programmes create a "rhythm" of follow-up, consolidation and support activities. This process reinforces key messages sufficiently to have an impact on practice.

The specific frequency of activities varied across studies, but the key aim remained constant – teachers were able to grasp the rationale that underpinned the strategy being explored, and use this understanding to refine practices and support implementation.

IMPLICATIONS

Time here is key - school leaders must consider how staff are supported to engage in this rhythm and adapt workloads accordingly.

Providers must carefully design programmes to allow for frequent, meaningful engagement from participants. Programmes must be underpinned by strong evidence and a clear rationale; time must be taken to surface participants' own theories and align these with those of the programme. Providers should consider how they develop participants' skills to critically engage with this knowledge base, and balance this with opportunities to implement and apply to practice.





DESIGNING FOR PARTICIPANTS' NEEDS

The review shows us that content is also key to achieving impact on teachers' practice.

All reviews found that an essential element of successful professional development is generating buy-in: creating an overt relevance of the content to its participants - their day-to-day experiences with, and aspirations for, their pupils.

The reviews also noted the importance of programmes that provide differentiation: opportunities for recognising the differences between individual teachers and their starting points.

Similarly important were opportunities for individual teachers both to reveal and discuss their beliefs and to engage in peer learning and support.

IMPLICATIONS

Schools must consider how they support teachers' skills in identifying and understanding needs. We must develop the capacity for teachers to reflect on their classroom and students' learning, and map this onto areas of need for their own practice.

This can be supported by providers - who should take time to identify and understand the particular needs of participants and their students. They must create opportunities for participants to share these and understand the content in overt relation to these.

CREATING A SHARED SENSE OF PURPOSE

The review points out that achieving a shared sense of purpose during professional development is an important factor for success.

Whether teachers were conscripted or had volunteered to take part in an activity did not appear to be a highly significant factor - a positive professional learning environment, sufficient time, and a consistency with participants' wider context were all more important.

IMPLICATIONS

Within schools, this might suggest there should be less of a focus on splitting between voluntary and conscripted activities. Rather, CPD programmes should create a coherent and shared sense of purpose across staff, and demonstrate an explicit relation to their everyday experiences and context.

Providers should focus on providing course content that builds a sense of purpose. This can be done in a number of ways; examples found during the review included peer support, the use of evidence from experimenting with new approaches, and working on why things work, as well as what does and does not.

ALIGNMENT

The review indicates that effective programmes will feature a variety of activities to reinforce their messages and test ideas from different perspectives.

No single particular type of activity – or configurations of multiple activities – was shown to be universally effective or crucial to success. What matters is a logical thread between the various components of the programme, and creating opportunities for teacher learning that are consistent with the principles of the student learning being promoted.

IMPLICATIONS

For the providers of CPD, this will require important consideration around how best to reflect and model the approaches they share with teachers in the delivery models used.

Schools, meanwhile, should consider how in-school processes reflect and support the elements sought in external opportunities. School leaders should support staff to develop strategic approaches to professional development that allow for clear links across activities.

"Professional development opportunities that are carefully designed and have a strong focus on pupil outcomes have a significant impact on student achievement."

"Professional development programmes must consider both subject knowledge and subject-specific pedagogy in order to achieve their full potential." To produce profound, lasting change, the most effective professional development lasted at least 2 terms - more usually a year."

> "A didactic model in which facilitators simply tell teachers what to do does not lead to positive outcomes for participants or students."

THE CONTENT OF EFFECTIVE PROFESSIONAL DEVELOPMENT

For the first time the review highlights the equal importance of both pedagogic and subject knowledge. Professional development programmes must consider **both** subject knowledge and subject-specific pedagogy in order to achieve their full potential.

Findings from the strongest review went even further, showing that **professional development focussed on generic pedagogy is insufficient**, particularly in maths.

Effective professional development should be underpinned by a number of "key building blocks":

- Subject knowledge.
- Subject-specific pedagogy.
- Clarity around learner progression, starting points and next steps.
- Content and activities dedicated to helping teachers understand how pupils learn, both generally and in specific subject areas.

Programmes should also put forward:

- Alternative pedagogies for pupils with different needs.
- A focus on formative assessment, to allow teachers to see the impact of their learning and work on their pupils.

Input should allow for the consideration of participants' existing theories, beliefs and practice, and for opportunities to challenge these in a non-threatening way.

It is important that participants receive support to understand the rationale that underpins the practices being advocated.

The strongest review went further still, highlighting the importance of participants' critical engagement with course content; creating room for professional discretion; and providing repeated opportunities to encounter, understand, respond to and reflect on new approaches and related practices.





IMPLICATIONS

Professional development and learning should consider the importance of focussing on generic and subject-specific pedagogy. It is therefore important to consider how subject expertise can be developed alongside more generic aspects.

School leaders must ensure that whole school priorities address each of these areas. Consideration must be given as to how staff are supported and given time to apply general pedagogy to specific subject areas by using collaborative, problem solving approaches.

Providers should use careful course design to balance these elements and allow for equal engagement with a variety of factors. They should consider how course content allows for the development of participants' critical skills, and for discussion around the application of alternative pedagogies to different student needs and subject-specific areas.

ACTIVITIES ASSOCIATED WITH EFFECTIVE PROFESSIONAL DEVELOPMENT

All reviews in this overview noted certain activities, or types of activities, which featured in successful professional development strategies.

These included explicit discussions, following the initial input, about how to translate CPD content to the classroom.

Teachers in the successful courses also implemented what they had learned by experimenting in the classroom.

They engaged in the analysis of and reflection around the underpinning rationale, evidence and relevant assessment data. This reflection and analysis was important for bringing about and embedding changes in practice.

From the strongest review we learned that successful professional development programmes, including any out-of-school activities used, display alignment between their design, structure and the pedagogic processes being promoted.

IMPLICATIONS

For both **schools** and **providers**, consideration must be given to selecting and facilitating the types of activities linked to effective professional development.

A number of findings emphasise **the importance of the use of evidence**; both evidence from pupils' responses to teachers' developing understanding and practices, and the strength of the evidence and rationale underpinning the activity or programme.

We must consider how staff are supported to critically engage with evidence and evaluation. **Providers** and **school leaders** must use broader professional development processes to develop these skills across staff, and embed them within all professional development activities.

PROVIDERS OF PROFESSIONAL DEVELOPMENT

The review points out that external facilitation is a common factor in successful outcomes, working sometimes in tandem with internal specialists.

However, external input must offer support in a constructive, effective way. In the most successful professional development processes, external input provides multiple and diverse perspectives, and challenges orthodoxies within the school

Facilitators of the most successful programmes act as coaches and/or mentors to participants. They help teachers take on a degree of leadership around professional development, treating participants as peers and co-learners. Successful facilitators build a relationship with participants that allows them to share values, understanding, goals and beliefs with participants, while providing important challenge at the same time.

There is some evidence to suggest that effective facilitators are experts in more than one area: their expertise includes knowledge of specialist content, effective professional development processes evaluation and monitoring.

IMPLICATIONS

It is important to consider where and how appropriate external expertise can be deployed.

The skills and knowledge required by **facilitators of professional development** are particularly key – whether these facilitators are internal or external to schools. There is therefore a need to consider how these might be developed in a more effective way.

School leaders must set explicit and high expectations of professional development providers and facilitators – whether they are colleagues in school, from other schools, from HEIs, from professional networks, private providers or examination boards.

School leaders should discuss specific expectations about potential impact with participating teachers prior to participation.

They should interrogate providers (including internal facilitators) prior to signing up to/commissioning a CPD programme, to ascertain how they intend to:

- Support identification of teachers' and school leaders' starting points.
- Use content-specific formative assessment.
- Build time into any away-from-class or out-of-school activities, for planning changes to be made back in the classroom.
- Embed collaborative learning and the development of shared understanding and goals within the professional learning process.
- Demonstrate in-depth expertise in relation to teaching and learning, the curriculum content, and the process of professional learning process - and have ensured all three are aligned.
- Provide tools to help teachers and leaders engage critically with evidence about how pupils respond to changes they are making in their day to day work settings.

In the same way, any provider or facilitator must be able to demonstrate expert practice across these areas. They should ensure their expertise and understanding is rigorous and up-to-date and that sufficient time is given in any programme to build supportive, trusting relationships with participants. External facilitators might also consider how they support schools to embed effective coaching/mentoring processes more broadly, to mirror and sustain the relationships developed by an external provider.



SUPPORT FROM SPECIALISTS

The review also highlighted certain types of activities that, with specialist support, should lead to successful outcomes. Successful facilitators employed activities that aim to:

- Introduce new knowledge and skills to participants.
- Help participants access the theory and evidence underlying the relevant pedagogy, subject knowledge, and strategies.
- Help participants believe better outcomes are possible, particularly among schools where achievement has been depressed over time.
- Make the link between professional learning and pupil learning explicit through discussion of pupil progression and analysis of assessment data.
- Take account of different teachers' starting points and from the strongest review the emotional content of the learning.

Specialists should also support teachers through modelling, providing observation and feedback, and coaching. Again, it is important for facilitators and specialists to balance support and challenge while building relationships with participants.

The exact nature of effective specialist support can, however, vary depending on the subject specialism involved. In maths and science opportunities, for example, to be observed and receive feedback were not always prerequisites for successful professional development.

Finally, some evidence in the review suggested that effective specialists mobilised, encouraged and guided teacher peer support.

They might also offer remote support in a variety of media such as e-networking and provision of instructional and other materials.

IMPLICATIONS

CPD providers should focus on using activities that are able to explicitly link professional development to improvements in student outcomes. They should use a logical combination of activities that ties closely to the aims, the specific content area and the approaches being put forward.

Schools, meanwhile, should be supported to select and engage with providers whose services align with these recommendations, and set up internal processes to mirror and support the activities being used by external facilitators.





ENCOURAGING EFFECTIVE COLLABORATION

What makes collaboration effective is still contested.

All reviews analysed in this overview found that peer support, in which all participants have an opportunity to work together to try out and refine new approaches, was a common feature in effective professional development.

There is evidence to suggest that access to some form of collegial support for problem solving is essential.

However, the strongest review included in this overview found that while collaboration was necessary, it alone is not sufficient – it was linked to both positive and negative outcomes.

IMPLICATIONS

While **peer support and learning** is a fundamental ingredient of effective professional development, it is not sufficient in its own right.

Where using collaborative approaches, providers and schools should allow participants to engage in collegial problem solving approaches that are focussed on improving student outcomes. Both parties should also consider how to embed broader processes across a school, to sustain opportunities for collaborative engagement with content and co-planning to address specific pupil learning needs.

LEADERSHIP OF PROFESSIONAL DEVELOPMENT

Although leadership of professional development was not an explicit part of this review, some of the reviews it considered - including the strongest one - highlight the role of leaders in defining the opportunities that are available to staff and the support given to embed change.

In particular the strongest review concluded that: "Effective leaders did not leave the learning to their teachers – they became involved themselves".

School leaders had taken some form of personal involvement in most successful programmes.

The review identified four core roles for school leaders in effective professional development. These were adapted according to the school context and the nature of changes being implemented:

- Developing vision including helping teachers believe alternative outcomes are possible and creating coherence so teachers understand the relevance of CPD to wider priorities.
- Managing and organising including establishing priorities, resolving competing demands, sourcing appropriate expertise and ensuring appropriate opportunities to learn are in place.
- Leading professional learning including promoting a challenging learning culture, knowing what content and activities are likely to be of benefit, and promoting "evidence-informed, self-regulated learning".
- Developing the leadership of others including encouraging teachers to lead a particular aspect of pedagogy or of the curriculum.

IMPLICATIONS

Across the **system**, school leaders must be supported to develop the understanding and skills that will allow them to promote, manage and model effective professional development.

School leaders must distinguish between:

- professional development opportunities that are aimed at operational and procedural knowledge (e.g. how teachers use fire extinguishers or comply with legislation or MIS systems) where simple briefings and group discussion may suffice; and
- professional learning directly aimed at building on teachers' starting points to significantly enhance pupil learning - where the sustained and dynamically interacting mix of activities highlighted by this evidence will be required.

Providers of expertise and knowledge must ensure they engage directly with school leaders throughout the setup and roll out of a professional development programme. They should consider mechanisms to support leaders' understanding of effective professional development beyond the remit of a specific target area or programme – and offer guidance for modelling and encouraging this among staff.

Governing bodies, too, can offer valuable support and challenge, to encourage school leaders in their movement towards more strategic, effective decision making.

WHAT DOESN'T WORK

Finally, all reviews included in the review offered a number of clear statements about forms of professional development that do not lead to positive outcomes for participants or students. **These include:**

- A didactic model in which facilitators simply tell teachers what to do, or provide materials without giving participants opportunities to develop skills and inquire into their impact on pupil learning.
- Professional development which does not have a strong focus on aspirations for students and assessing the impact of changed teacher practices on pupil learning.

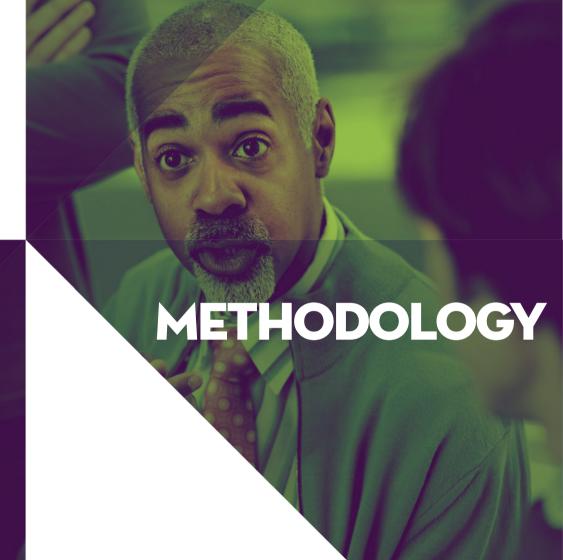
Where participants are not given structured, frequent opportunities to engage with, understand and reflect on the implications of new approaches and practices, neither extended time nor greater frequency of contact were sufficient to make substantial changes to teacher practice or improve student outcomes.

IMPLICATIONS

Where looking to transform practice, schools and providers should move away from the forms of professional development that are less likely to lead to positive outcomes for participants or students. Providers and schools should ensure that these professional development programmes and processes have a clear, strong focus on student outcomes, and prioritise the evaluation of impact on these.

Leaders of professional development - whether within school, or with an external partner - should reject one-off activities in which teachers remain passive where these are not accompanied by in-school activity for teachers to engage repeatedly and meaningfully with content and reflect on new approaches.





This summary gives a snapshot of the review's findings, which are further explored and elaborated on in the full review paper. All stakeholders are encouraged to read and engage with the full original findings, a version of which can be found at tdtrust.org/dgt.

The review began with a process described as "connoisseurial accumulation", using experts in the field to highlight known, relevant and valuable reviews. The search was conducted through a variety of digital academic resources including FirstSearch, JSTOR, Google Scholar and others. The search targeted reviews of CPD and teacher learning published since 2000 in English, though one Belgian extension of another resource was found and analysed. The initial search identified 947 "hits". These were filtered using a series of screening processes designed to exclude any reviews of which the evidence base was not deemed sufficiently strong for inclusion.

The remaining reviews were sub-categorised into four different groups:

- A single study which was strong in multiple areas and with research designs which were appropriate for causal inference across studies.
- 2. A further three studies which were robust but more focused on particular areas of practice.
- **3.** Another four studies less robust in terms of supporting evidence (showing only correlational and not causal connections), but tightly focused in the relevant areas and with systematic use of pre- and post-test data, making their claims reasonably persuasive.
- **4.** One additional review, included due to its claims being consistent with the broader evidence base, despite failing to support its claims with high quality data.

The reviews were then analysed separately and their findings split into a series of claims. These findings were compared and contrasted and weighted according to the strength of the evidence supporting them, before being grouped thematically.

The net effect of this process was to produce a series of claims which are ranked in terms of the strength of the evidence supporting them, grouped by a number of themes which should prove relevant to policymakers and facilitators, and which are (at the strongest level) equivalent in strength to the four padlocks used in the Sutton Trust-EEF Toolkit.



The Teacher Development Trust is the national charity with a mission to create effective professional development in schools and colleges.



Founded by teachers in 2012, we raise awareness of the vital importance of professional development and develop resources and partnerships to help teachers, school leaders and CPD providers transform their practice.

We work in three ways:

- Schools work with us through NTEN membership of the Teacher Development Trust Network. Through an enlightening peer audit, a wealth of resources, full-text access to educational research journals and a series of national conferences, we support schools to improve – and help each other improve – their internal approaches to developing their staff.
- The GoodCPDGuide is our 'Trip Advisor for CPD': a database of teacher-reviewed CPD with over 3,000 listings from more than 400 providers. We also offer ongoing advice and bespoke support to providers of professional development. We will soon be re-launching the GoodCPDGuide as the Teacher Development Trust Advisor.
- The Trust also works closely with policy makers, politicians, think tanks, and educational organisations across the spectrum. We publish guidance and comment pieces in education sector and national media, as well as having a large presence on social media.

The Teacher Development Trust has also been one of four founding members of the Claim Your College Coalition, which is leading the setup of a chartered College of Teaching.

For more information, visit www.tdtrust.org.





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