



UCL



Workload, Wellbeing, and Retention: Do NPQs Make a Difference?

Interim Research Report #4

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Professor Qing Gu

UCL Centre for Educational Leadership

Dr Kathy Seymour

Seymour Research Ltd

Dr Xin Shao

Dr Sofia Eleftheriadou

UCL Centre for Educational Leadership

Professor Kenneth Leithwood

University of Toronto, Honorary Professor at UCL Centre for Educational Leadership

This report arises from the [UCL Centre for Educational Leadership](#) led study *The impact of the Early Career Framework (ECF) and National Professional Qualification (NPQ) programmes on the work engagement, wellbeing and retention of teachers and school leaders*.

Interim Research Report #2: [Early Career Teachers' and Mentors' Reported Experiences with the ECF Programme](#)

Interim Research Report #3: [Developing and Retaining Talented Mentors](#).

With Thanks to:

- **UCL ECF NPQ Research Team:** Joanne Calladine-Evans, Stephen Calladine-Evans, Andy Hodgkinson, and Mark Quinn
- **Delivery Partners:** Jen Fiddaman (Oxfordshire Teaching School Hub) and Ruth Smith (East London Teaching School Hub)

We are also immensely grateful to all the teachers and school leaders who have supported our research by responding to our surveys and sharing their experiences and insights with us at interviews.

Executive Summary

Research is an integral part of the UCL-led National Professional Qualification (NPQ) programmes. This is the **fourth** report in a series of research publications from the UCL Centre for Educational Leadership-led longitudinal study *The Impact of the Early Career Framework and NPQ Programmes on the Work Engagement, Wellbeing and Retention of Teachers and School Leaders*.

The purpose of this mixed methods study, which includes surveys of individual participants and case studies of 20 primary and secondary schools, is to assess the extent to which (and the ways in which) teachers' and school leaders' learning experiences on respective NPQ Senior Leadership (NPQSL), NPQ Headship (NPQH), and Specialist NPQ programmes influence their workload, wellbeing, and decisions to stay in teaching, move schools, or leave the profession.

Over 260 school leaders responded to the NPQSL-H survey and 342 participants responded to the Specialist NPQ survey, representing a response rate of 19% and 16% respectively. At the *individual level*, the demographic profiles of the acquired sample of respondents were broadly representative of the national NPQ population in terms of gender, age and ethnicity, giving us confidence about the validity of the research findings. At the *school level*, the contextual profiles of respondents' schools also broadly reflect the national school population in terms of free school meals (FSM) bands and Ofsted ratings, although schools rated 'Outstanding' by Ofsted and those serving socioeconomically most advantaged communities were slightly overrepresented.

Key Messages¹

Key Message 1 (Hearts-and-Minds Retention): Most NPQ participants in this research remained enthusiastic about their leadership roles and felt that their jobs inspire them.

A high proportion of respondents to both surveys (**92%** for NPQ SL-H and **93%** for Specialist NPQs) reported that they intended to remain in the profession the following year. Furthermore, around **80%** of respondents in both surveys expressed strong enthusiasm for their leadership roles and felt that their jobs inspire them.

Key Message 2 (Perceptions of Workload): Workload is not the same as working hours. It is better understood when the volume and complexity of the work and how it contributes to the professionalism of teachers and school leaders are both considered.

Around half of the respondents to the NPQSL-H survey found their workload volume and complexity was *hard* to manage. However, despite this challenge, the majority (88%) also reported that their workload was *meaningful* and *rewarding*. The latter finding reveals the vocational nature of the teaching profession, suggesting that working hours alone are insufficient to measure how teachers and school leaders feel about their workload. Solutions to workload concerns must address both the **volume** of the *load* (i.e., manageability of the work) and the professional **value** of the work to teachers and pupils.

Key Message 3 (Perceptions of Workload): The culture and working conditions of the school organisation count for a great deal in how teachers and school leaders perceive their workload.

Results of the NPQSL-H survey revealed significant between-school variation in school leaders' perceptions of their workload manageability. Those who felt that professional learning and development opportunities rarely conflicted with their work schedules were less likely to describe their workload as *frustrating* or *annoying*.

¹ The analysis of the NPQSL-H survey and the Specialist NPQ survey is still ongoing. This interim report brings together evidence from completed analyses to date. Discussions on *workload* draw heavily on evidence from the NPQSL-H survey whilst the *wellbeing* section builds on evidence from the Specialist NPQ survey.

Key Message 4 (Leadership Wellbeing): Leadership wellbeing is an umbrella term, comprising four dimensions, each one explaining a particular feature of how school leaders judge the quality of their working lives: i) belonging in school (*social* dimension); ii) job satisfaction (*cognitive* dimension); iii) passion and engagement at work (*affective* dimension); iv) purpose and capability to lead well (*psychological* dimension).

School leaders' perceptions of their wellbeing reflect their level of confidence (self-efficacy) about making a difference, as well as their beliefs about the social and organisational conditions of their workplaces. The school organisation that develops their efficacy and capabilities, individually and collectively, is integral in enabling them to remain committed and enthusiastic about what they do.

Key Message 5 (Programme Satisfaction): The vast majority of surveyed and interviewed school leaders reported positive learning experiences with their Specialist NPQ programmes. Participants valued the *research-informed* content of the Specialist NPQs. Planning and conducting the enquiry-oriented *implementation project* enabled them to *apply* leadership learning in context, reflect on changes in practice, and identify the contribution their leadership makes to school improvement.

Key Message 6 (Impact on Retention Decisions): School leaders in the Specialist NPQ programmes reported improvement in their self-efficacy and resilience as leaders. However, such improvement was dependent on the nature of leadership in their schools. NPQs can make a difference to retention *if* participants' learning is supported by their schools' leadership.

Learnings and Reflections

Evidence shows that the positive impact of NPQ learning is not achieved in isolation from the environments in which teachers and school leaders work, and thus points to a major source of the retention solution: the school organisation. Results supporting this observation may not appear new, but they reinforce important knowledge about teacher development and retention, nevertheless. Two *big* ideas arise from the research to date.

First, **the NPQ training itself is not the game changer**. School leaders themselves need to understand that their leadership practices are likely to have the largest effects on both teacher learning and retention. Long-term commitments by school leaders to actively shape conditions in their schools in support of such learning improve not only that learning, but retention outcomes as well. Second, the school organisation provides the **structural mechanisms** that connect policy with retention outcomes. Most factors that influence professional learning and retention outcomes are found within the school organisation.

In summary, schools, school systems, and policy initiatives that invest in leadership support, collaboration, and development opportunities are more likely to retain enthusiastic and committed teachers and school leaders. NPQ programmes can be a powerful part of this strategy, but only if they are embedded in a broader school culture that values and supports teacher growth and wellbeing (as defined in this research). As schools continue to face retention pressures, it is imperative that they are supported to have the capacity and resources to prioritise and nurture wellbeing as a central driver of professional effectiveness and long-term workforce sustainability.

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1.0 Introduction

About the research study

The UCL Centre for Educational Leadership is conducting a longitudinal study (2022-2026) that is integral to the UCL-led National Professional Qualification² (NPQ) programmes³. This research explores the long-term impact of these programmes on retention and aims to inform school and system leaders on how to better retain high-quality teachers and school leaders.

This mixed methods research, involving annual surveys and case studies of 20 schools, addresses a gap in understanding of how individual and school-level factors, together with the NPQ programmes, influence teachers' and leaders' professional development and decisions about retention. It explores how experiences on the programmes shape participants' self-efficacy, wellbeing, and decisions about staying in the same school, moving schools, or leaving the profession.

Improved teacher retention was a fundamental goal of the DfE's policy on the Early Career Framework (ECF) and NPQ programmes⁴ and a strand of the research project therefore aimed to examine what factors might contribute to retention decisions and what role NPQ learning might have. Earlier reports (for example, Gu, et al, 2023⁵) on this research project have provided insights into the relationships between teacher dispositions, wellbeing and retention decisions.

About this report

This report examines **how leadership wellbeing may be understood**, the importance of **wellbeing in relation to retention**, and the extent to which, and how **NPQ learning contributes to wellbeing and retention** in schools.

All participants who were close to complete the following two types of NPQ programmes were invited to participate in this research and complete their respective surveys between 2022-24:

- **Leadership NPQs:** NPQ Senior Leadership (NPQSL) and NPQ Headship (NPQH)
- **Specialist NPQs:** NPQ Leading Teaching (NPQLT); NPQ Leading Teacher Development (NPQLTD); NPQ Leading Behaviour and Culture (NPQLBC)

Of the approximately 1,390 school leaders in NPQH and NPQSL, over **260** responded to the NPQSL-H survey, representing a response rate of **19%**. A total of **342** school leaders responded to the Specialist NPQ survey, representing a response rate of **16%**.

Respondents represented a range of roles in their schools including teachers, middle leaders, senior leaders and headteachers. The profiles of respondents to both NPQH-SL and Specialist

² NPQs are Department for Education (DfE) accredited professional development qualifications for teachers and school leaders. Specialist programmes covered by the research reported here are: Leading Teaching, Leading Teacher Development and Leading Behaviour and Culture. There are also leadership NPQs such as the NPQ for Senior Leadership and the NPQ for Headship, and while participants on the leadership programmes are included in the overall research project, they are not the subject of this report.

³ Further information on the research project is available here: <https://www.ucl.ac.uk/ioe/departments-and-centres/ucl-centre-educational-leadership/research/research-work-engagement-wellbeing-and-retention-teachers-and-school-leaders-england>

⁴ See the Teacher Recruitment and Retention Strategy published in 2019 (<https://www.gov.uk/government/publications/teacher-recruitment-and-retention-strategy>)

⁵ Gu, Qing; Eleftheriadou, Sofia; Baines, Lisa (2023) The impact of the Early Career Framework (ECF) programme on the work engagement, wellbeing and retention of teachers: a longitudinal study, 2021-2026. Interim Research Report 2: Early career teachers' and mentors' reported experiences with the ECF programme. UCL Centre for Educational Leadership: London, UK. Available at: https://discovery.ucl.ac.uk/id/eprint/10177976/1/ECF%20Research%20Report%20%232_Full%20Report.pdf [Accessed 1 April 2025]

NPQ surveys were broadly representative of the national profiles of NPQ participants in terms of gender, age and ethnicity.

Characteristics of the schools represented in the survey data were broadly in line with national figures in terms of Ofsted outcomes, although 'outstanding' schools were slightly over-represented in the sample at 22% compared to 13% nationally. Schools were also largely representative in terms of proportions of pupils in each Free School Meals band, with the exception of the lower FSM Band (0-8% eligible for FSM): 21% of schools in the survey were in this category, compared to 13% nationally. Although the national figures had a high percentage of 'no data' schools (10%), which was not evident among survey schools, the other FSM bands were broadly representative of the national picture. Appendix 1 provides further detail on the sample achieved for the two surveys.

Drawing on evidence from the surveys and case study interviews, this report aims to explain what **workload** and **wellbeing** have meant to NPQ participants in the research, and whether and how the school organisation and NPQ learning have contributed to their experiences. Structural equation modelling (SEM) was used in the survey analyses to explore how school leadership practices, professional learning on the Specialist NPQ programmes, and perceptions of wellbeing *interact* to influence participants' retention decisions.

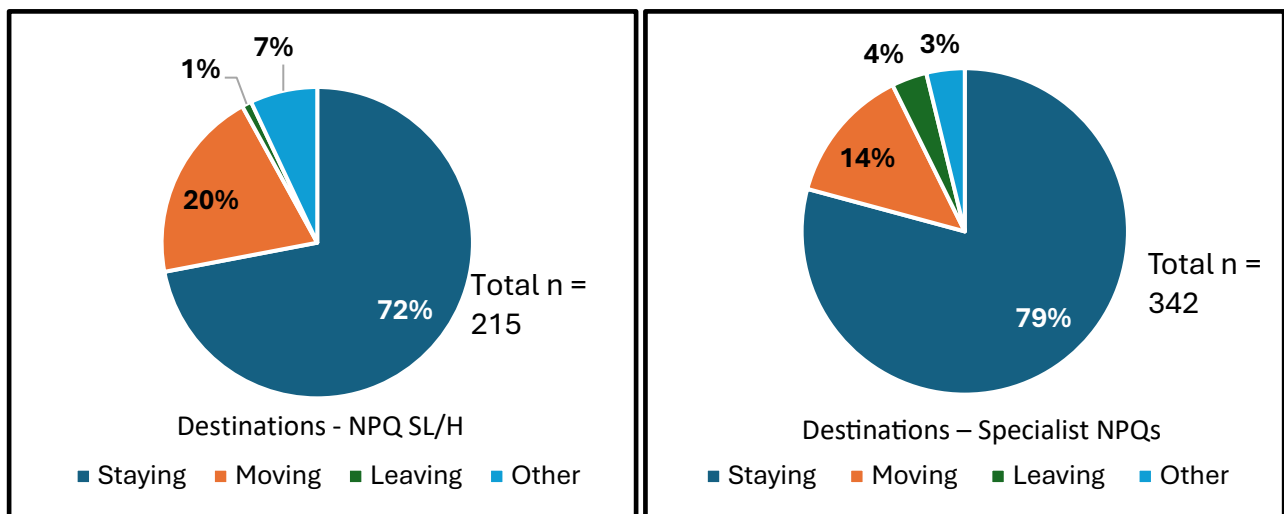
2.0 Key Findings

2.1 Retaining the “hearts and minds” of teachers and school leaders

Key message 1: Most NPQ participants in this research remained enthusiastic about their leadership roles and felt that their jobs inspire them.

The physical retention of teachers and leaders. The vast majority of the respondents of the Specialist NPQs survey (**93%**) and the NPQSL-H survey (**92%**) reported that they intended to remain in teaching the following year (Figure 1).

Figure 1. Intended Retention Destinations for Respondents of the NPQSL-H survey and the Specialist NPQs survey⁶



The heart-and-mind retention. The fundamental and worthy goal of retention policies should not just be to keep teachers and leaders in schools. It should be to retain, in particular, those teachers and leaders who are committed, enthusiastic, passionate, and capable of inspiring student learning and achievement. The encouraging message from this research is that most survey respondents expressed strong enthusiasm for the leadership job.

More than 80% of school leaders responded to the NPQSL-H survey reported that they are enthusiastic about the leadership job and felt that their jobs inspire them – with 52% and 43% respectively finding this ‘very true.’

Similarly, 81% school leaders responded to the Specialist NPQs survey reported that they are enthusiastic about their job and 85% of them felt that their job inspires them, with 45% and 43% finding this ‘very true.’

⁶ Decisions reported in the ‘Other’ category include ‘not sure/have not decided’, ‘moving to a different country’, ‘developing my consultancy work’, and ‘planning to teach in an university’.

2.2 Workload: addressing the meaningfulness of the ‘work’ and the manageability of the ‘load’

Key message 2: The meaning of *workload* encompasses more than the number of hours that teachers work. Regarding workload volume and complexity, around half of the respondents to the NPQSL-H survey found it *hard* to manage. However, despite this challenge, most also felt that their workload was *meaningful* and *rewarding*, an indication of the fundamentally vocational nature of the teaching profession.

Teacher workload is often measured as ‘time spent on tasks’. For example, the DfE’s *Teacher Workload Survey 2019*⁷ used self-reported data during a specific reference week to measure hours spent on different tasks. However, there are other dimensions beyond this metric. In their synthesis of research on teacher workload, Creagh et al. (2023) highlight the distinct concepts of workload in terms of the amount of time spent on work in a given period (usually self-reported), and work intensification which is associated with the complexity and demands of the tasks carried out⁸.

The DfE’s independent workload review group (2016) suggested “three Ms” – characteristics of workload that should be addressed by workload reduction strategies: **meaningful** (i.e. meeting teachers’ professional needs and improving their practices), **manageable** (i.e. improving the time-effectiveness of planning), and **motivational** (i.e. motivating teachers to improve the quality of teaching and learning)⁹.

Evidence from this research confirms that leaders’ and teachers’ perceptions of their workload are influenced by the **vocational nature of the work** (which explains why many teachers and leaders want to stay in the profession) and the **volume and complexity of the work** that needs to be managed.

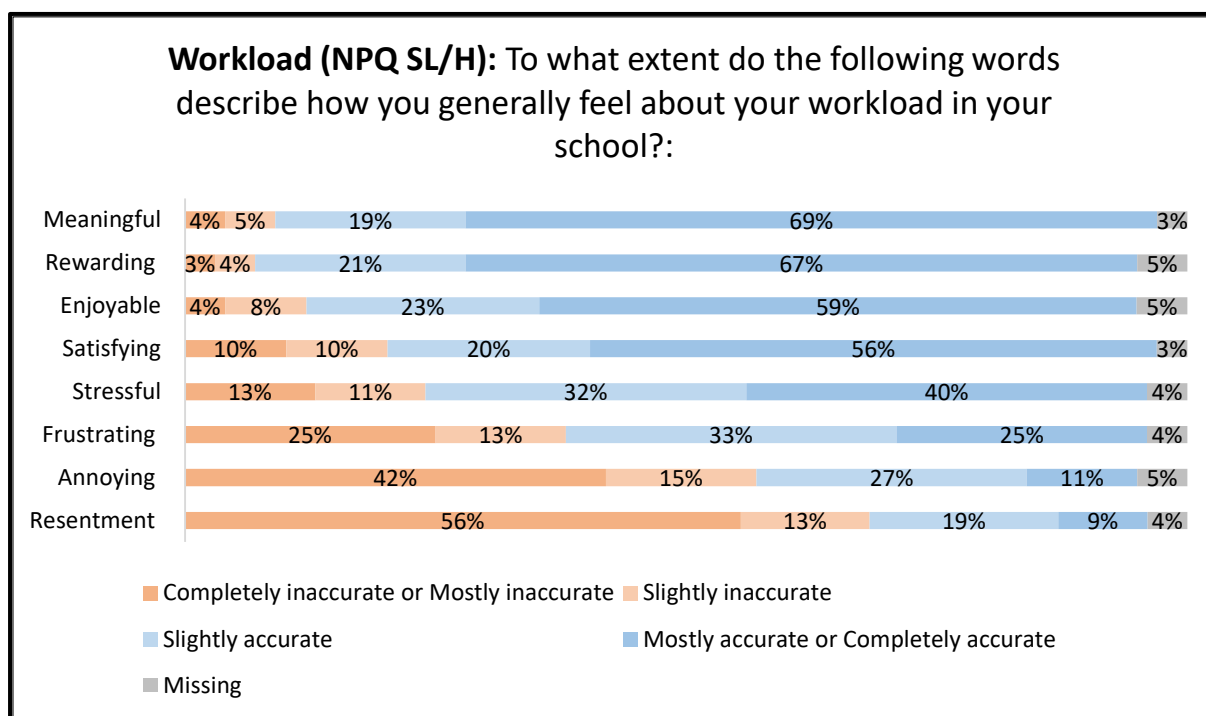
As Figure 2 shows, the majority of the school leaders (**88%**) who responded to the NPQSL-H survey felt that their workload is *meaningful* and *rewarding*, with close to 70% reporting that this was completely or mostly accurate. Around 82% of survey participants indicated that their workload was *enjoyable* (59% said this was completely or mostly accurate), and 76% felt it was *satisfying* (completely or mostly as accurate description for 56% of participants).

⁷ Department for Education (2019). *Teacher Workload Survey 2019: Research report*. London: DfE. Available at: <https://www.gov.uk/government/publications/teacher-workload-survey-2019> [Accessed 4 Apr. 2025].

⁸ Creagh, S., Thompson, G., Mockler, N., Stacey, M., & Hogan, A. (2023). Workload, work intensification and time poverty for teachers and school leaders: a systematic research synthesis. *Educational Review*, 77(2), 661–680. <https://doi.org/10.1080/00131911.2023.2196607> [Accessed 4 Apr. 2025]

⁹ Independent Teacher Workload Review Group (2016) *Eliminating unnecessary workload around marking*. London: Department for Education.

Figure 2: Survey participants' descriptions of their workload



However, when asked about workload manageability in their school, 51% described it as *hard* and 10% as *unrealistic* (Figure 3).

“ I say [workload can be] rewarding in the sense of, [...] the work that I put in, the way that it benefits and the children – that's rewarding. [...] But I do find sometimes it can be stressful when we're asked to do other jobs. And this is where my bugbear was last year, that [I was] asked to do other things that don't necessarily impact the children, that I thought I left the children and that's what I enjoy the most. ”

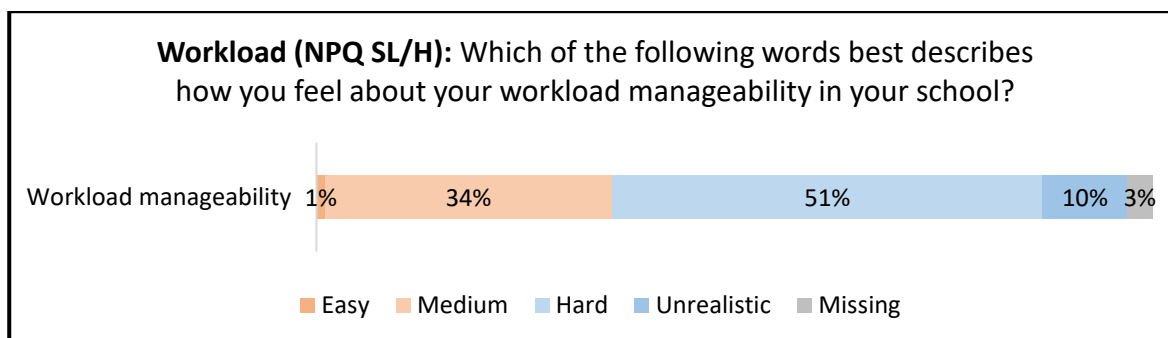
(Case study interview participant – NPQ specialist programme)

“ [I'd describe my workload as] meaningful and rewarding, but I'd also say stressful. I think that if I'm choosing to make the thing part of my workload, I have done that because I know it's got meaning to it and therefore there will be a reward at some point from it. So I feel like I've got a bit of control over that about what I choose to do, to an extent, most of the time. ”

(Case study interview participant – NPQ Headship programme)

In light of such evidence, policy strategies to improve workload conditions in schools must go beyond addressing the manageability of the volume and complexity of the work only. Schools must also consider how to **create opportunities of learning and cultures of collaboration** that enable teachers and leaders to improve their individual and collective capacity to not only do their jobs well, but also to do their jobs more efficiently so that they can better enjoy the inner rewards that the teaching profession can provide.

Figure 3: Survey participants' descriptions of the manageability of their workload



2.3 Addressing workload: how schools matter

Key message 3: School leaders' perceptions of workload reflect their schools' working cultures and conditions. There is clear evidence of between-school variation in how survey respondents felt about their workload, suggesting that the NPQ programme alone is not solely responsible for teachers' negative emotions towards the manageability of workload.

The importance of the role of the school culture and other organisational conditions on perceptions of workload are illustrated in Figures 4 and 5. These figures show survey participants' feelings about workload – in terms of it being 'frustrating' in Figure 4 and 'annoying' in Figure 5 – against their levels of agreement that *professional learning and development opportunities rarely conflicted with their work schedule in school*. The charts show that participants who felt that professional learning and development opportunities rarely conflicted with their work schedule were less likely to describe their workload as frustrating or annoying. This suggests that the NPQ programme, as part of school leaders' professional training and development opportunity, **does not necessarily create negative feelings about workload manageability**. Rather, this is likely to be due to the **culture and other conditions within the school**, such as leadership trust and support, communication and flexibility.

“ [The headteacher has] got a very good coaching style. I feel that we don't expect our staff to stay here until six o'clock. So we're quite flexible. [...] I feel like communication is good. I find it very easy to talk to [the headteacher], [at a] professional and personal level as well. And that's how I feel valued because I know that he appreciates what I do. I feel like I do get enough time; there's a work-life balance there. I feel like [headteacher] has allowed me to work from home because with my job, I am allowed to work from home. I can because there's so much paperwork involved. ”

(Case study interview participant – NPQ Headship programme)

“ I feel very supported being at this school [...]. They motivated me to do NPQML, NPQSL. I go into CPD [and doing] different courses [...], so I think the school really invests in all teachers and support staff. So from that point of view, I think leadership and being able to develop in my personal career, it has been a great. ”

(Case study interview participant – NPQ Senior Leadership programme)

Figure 4: Survey participants' perceptions of workload as 'frustrating' and attitude towards professional develop opportunities conflicting with their work schedule

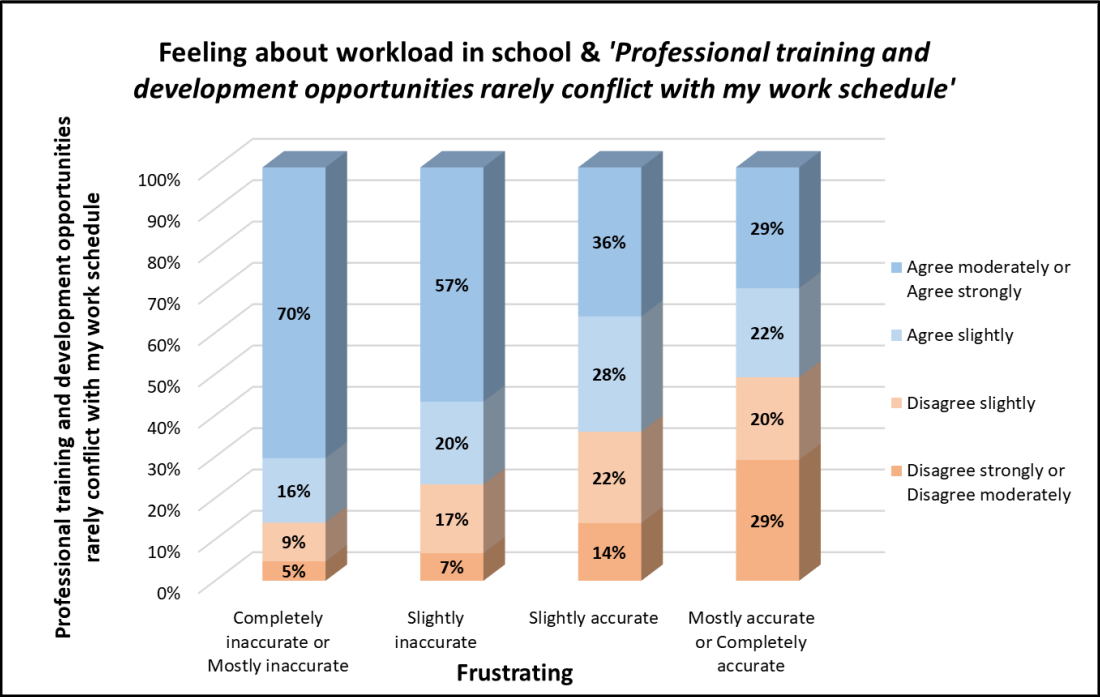
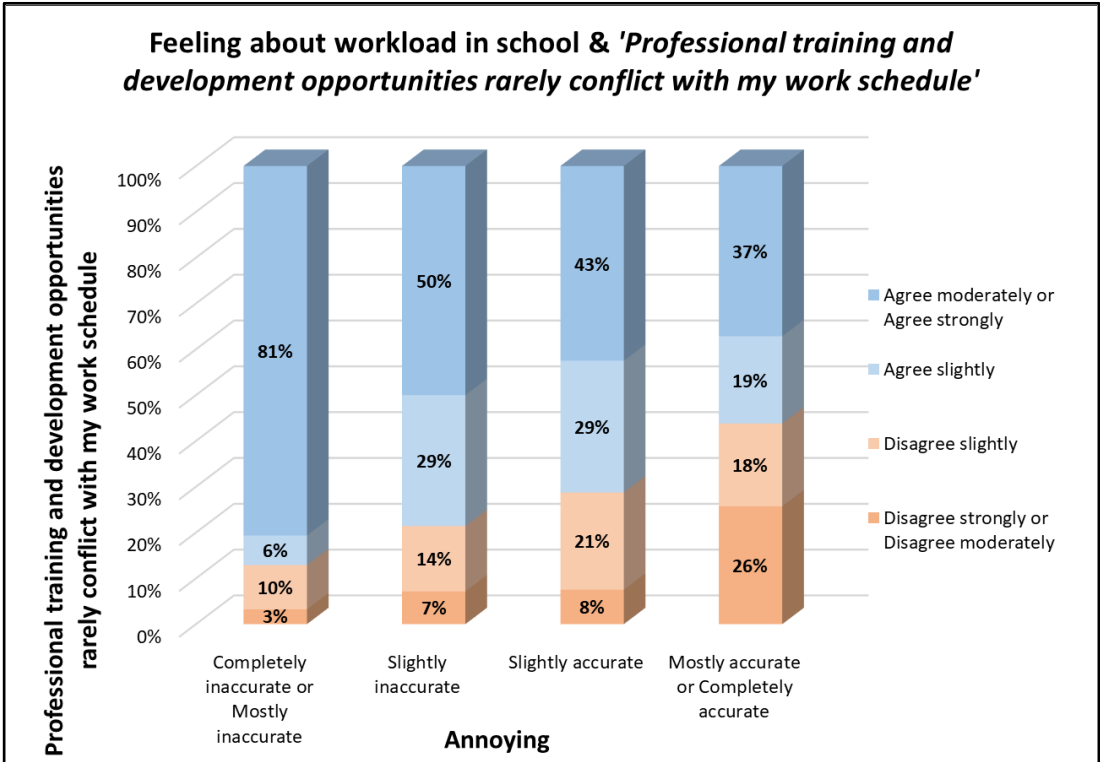


Figure 5: Survey participants' perceptions of workload as 'annoying' and attitude towards professional develop opportunities conflicting with their work schedule



2.4 Understanding leadership wellbeing: an umbrella term

Key message 4: Efforts to support leadership wellbeing must address the four closely related components (or dimensions) of wellbeing: i) leaders' sense of **belonging** in school (social dimension), ii) **job satisfaction** (cognitive dimension), iii) **passion and engagement at work** (affective dimension), and iv) **purpose and capability to teach well** (psychological functioning dimension). Wellbeing is an umbrella disposition influencing judgements that school leaders make about the quality of their work and lives in school.

2.4.1 Understanding wellbeing as an umbrella term

Interest in teachers' and school leaders' wellbeing is not new. Research shows that how teachers feel about their lives and the quality of their day-to-day experience in school (i.e. their subjective wellbeing) can have profound implications for their practices, their retention decisions, and most importantly, the learning and achievement of their pupils (OECD, 2017¹⁰; Pyhältö, Soini, & Pietarinen, 2010¹¹).

The OECD (2013¹²) defines subjective wellbeing as “good mental states, including all of the various evaluations, positive and negative, that people make of their lives and the affective reactions of people to their experiences.” (2013, p.10). Research suggests that it is best to be perceived as ‘a broad category of phenomena’ (Diener et al., 1999: 277¹³) which encompasses three key dimensions: *life evaluation* (how people reflect on their life overall or specific aspects), *affect* (day-to-day feelings / emotions), and *eudaimonia or psychological functioning* (meaning or purpose in life, goal orientation, competence and autonomy). Thus, any effort to support the wellbeing of teachers and school leader must understand that **wellbeing is an umbrella term** for the different valuations people make regarding their lives, the events that happen to them, and the environments in which they work and live (Diener et al., 2006¹⁴).

Building on this, the *Everybody Thriving* report by the Education Policy Alliance (2024) offers a more education-specific lens, conceptualising wellbeing as a **systemic, multidimensional state** that must be actively nurtured within school communities. The report emphasises the role of psychological safety, supportive relationships, professional autonomy, and a culture of belonging in shaping both student and staff wellbeing. It advocates for advancing wellbeing through school culture, leadership practice, and national policy, framing it as a **prerequisite for effective teaching and learning**.

2.4.2 Four dimensions of leadership wellbeing

The conceptualisation of leadership wellbeing in our research builds on but extends the existing knowledge about wellbeing. Our analysis of the Specialist NPQ survey affirms that **leadership wellbeing is a composite construct**, comprising the following four dimensions. Each dimension is *distinct* with a set of indicators to explain a particular feature of wellbeing (Figure 6). Importantly,

¹⁰ OECD (2017). *PISA 2015 Results: Students' Well-being*. Paris: OECD Publishing.

¹¹ Pyhältö, K., Soini, T., & Pietarinen, J. (2010). Pupils' pedagogical well-being in comprehensive school – significant positive and negative school experiences of Finnish ninth graders. *European Journal of Psychology of Education*, 25 (2): 207-221.

¹² OECD (2013). *OECD Guidelines on Measuring Subjective Well-being*. Paris: OECD Publishing. Available at: <https://doi.org/10.1787/9789264191655-en> [Accessed 4 Apr. 2025].

¹³ Diener, E., Suh, E.M., Lucas, R.E., & Smith, H.L. (1999). Subjective well-being: Three decades of progress. *Psychological Bulletin*, 125 (2), 276-302.

¹⁴ Diener, E., Lucas, R.E., & Scollon, C.N. (2006). Beyond the hedonic treadmill: Revising the adaptation theory of well-being. *American Psychologist*, 61 (4), 305-314.

as Figure 7 shows using our survey evidence, these four dimensions are also *closely related* – so that, together, they paint a composite picture of what wellbeing means to school leaders.

- **Belonging in school (social/relational):** reflected in perceptions of care, quality of social relationships, and mutual respect in school communities.
- **Purpose and capability as a school leader (psychological functioning):** reflected in participants' sense of purpose and their perceived capability to do their job well
- **Job satisfaction in the teaching profession (cognitive):** evidenced by overall satisfaction with work as a school leader
- **Passion and engagement as a school leader (affective):** including the emotional nature of the leadership work

Figure 6: The composition of four dimensions of leadership wellbeing

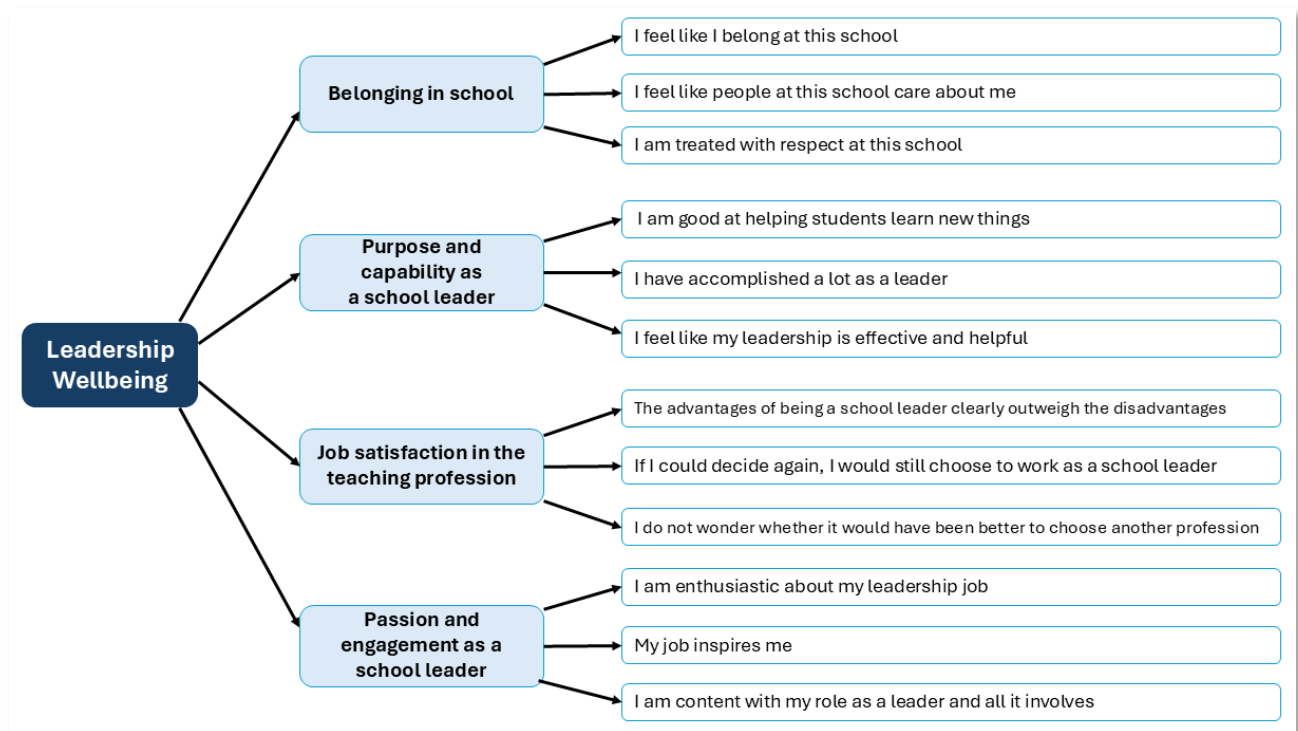
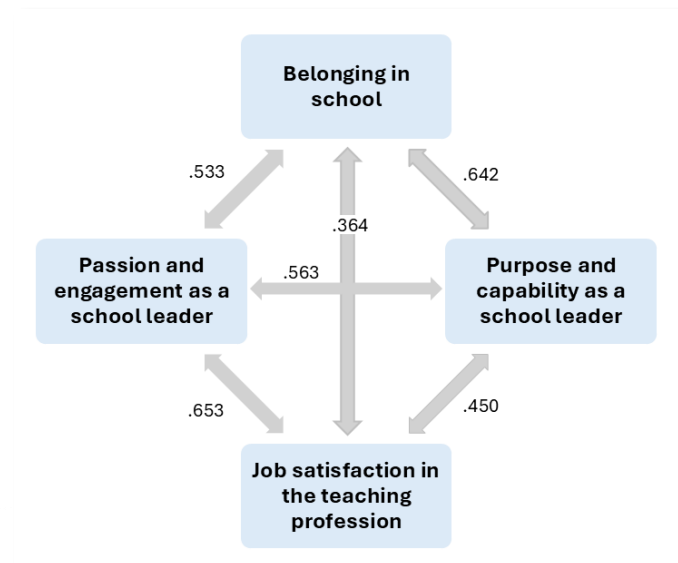


Figure 7: Correlations between the four dimensions of leadership wellbeing



Note on Figure 7. The figure shows the strength of the correlation: the higher number indicates the stronger association. The four dimensions of leadership wellbeing are highly correlated with each other.

Together, these dimensions provide a robust, context-sensitive conception of school leaders' perceptions of their wellbeing. We have learned that leadership wellbeing entails much more than emotions and happiness.

First, school leaders' judgement about the quality of their wellbeing at work reveals a belief that they can make a difference to the learning and achievement of the children.

Second, the perceived quality of their wellbeing is closely related to the quality of the culture and other conditions in their workplace.

Third, their wellbeing is supported and nurtured in their workplace and is therefore an **organisational phenomenon**. As evidence in the following section shows, the school organisation that develops school leaders' efficacy and capabilities – individually and collectively – is integral in enabling them to remain committed and enthusiastic about what they do. The vision and quality of school leadership holds the key to achieving this organisational phenomenon successfully.

2.5 Wellbeing and retention: does NPQ learning make a difference?

2.5.1 Learning experiences with Specialist NPQ programmes

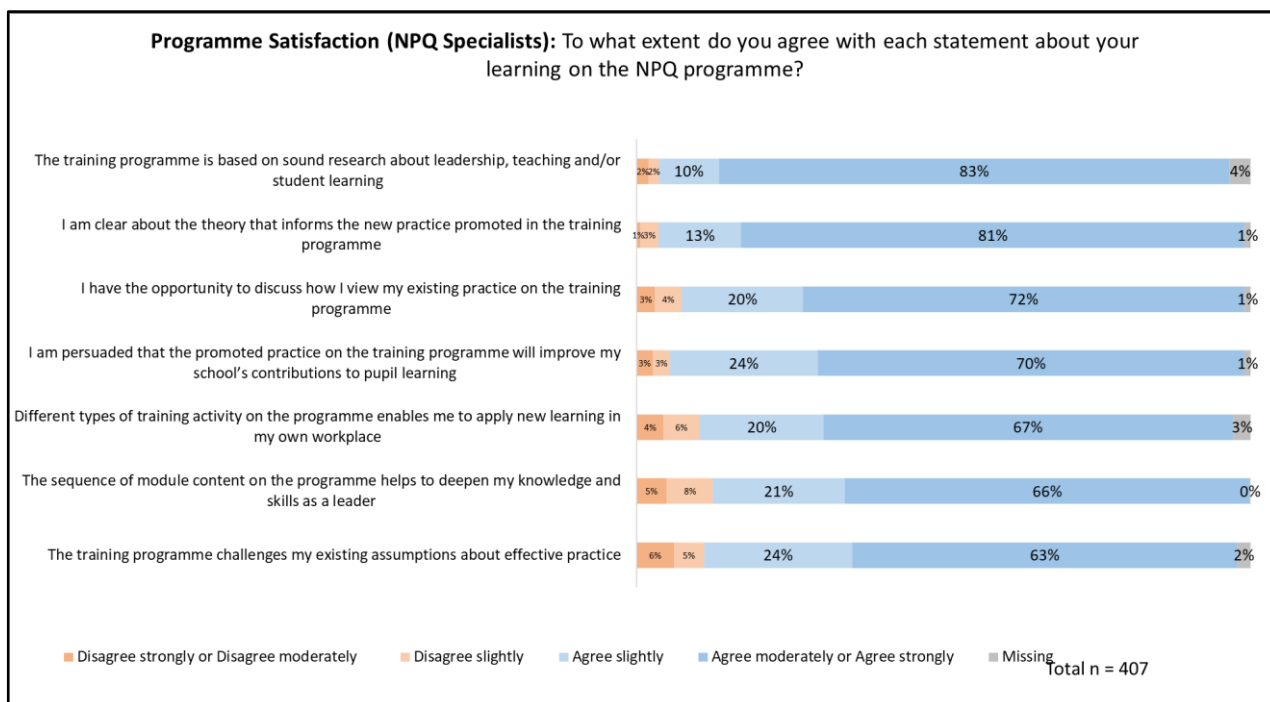
Key message 5: The vast majority of the surveyed school leaders reported positive learning experiences with their Specialist NPQ programmes – mostly related to the pedagogy of the programmes that had helped them to apply the NPQ learning in their work.

Planning and conducting the implementation project was the most highly rated learning experience. The project enabled participants to apply leadership learning in context, reflect on changes in practice, and identify impact of improvements.

Satisfaction with the Specialist NPQ programmes was high overall, indicating that learning on these programmes has contributed to participants' knowledge, skills and practice as school leaders. As Figure 8 shows, they were especially positive about the **research-informed nature** of the Specialist NPQs – with 83% agreeing strongly or moderately that they were *based on sound research about teaching and pupil learning*.

There were similarly high levels of positive responses in relation to the extent to which participants were *clear about the theory that informs the practice promoted on the programme* (81% agreed moderately or strongly). Nearly three-quarters (72%) of survey participants agreed moderately or strongly that they *had the opportunity to discuss how they view their existing practice on the programme*, indicating that the programme had encouraged them to reflect on their practice.

Figure 8: Survey participants' satisfaction with elements of the Specialist NPQ programmes



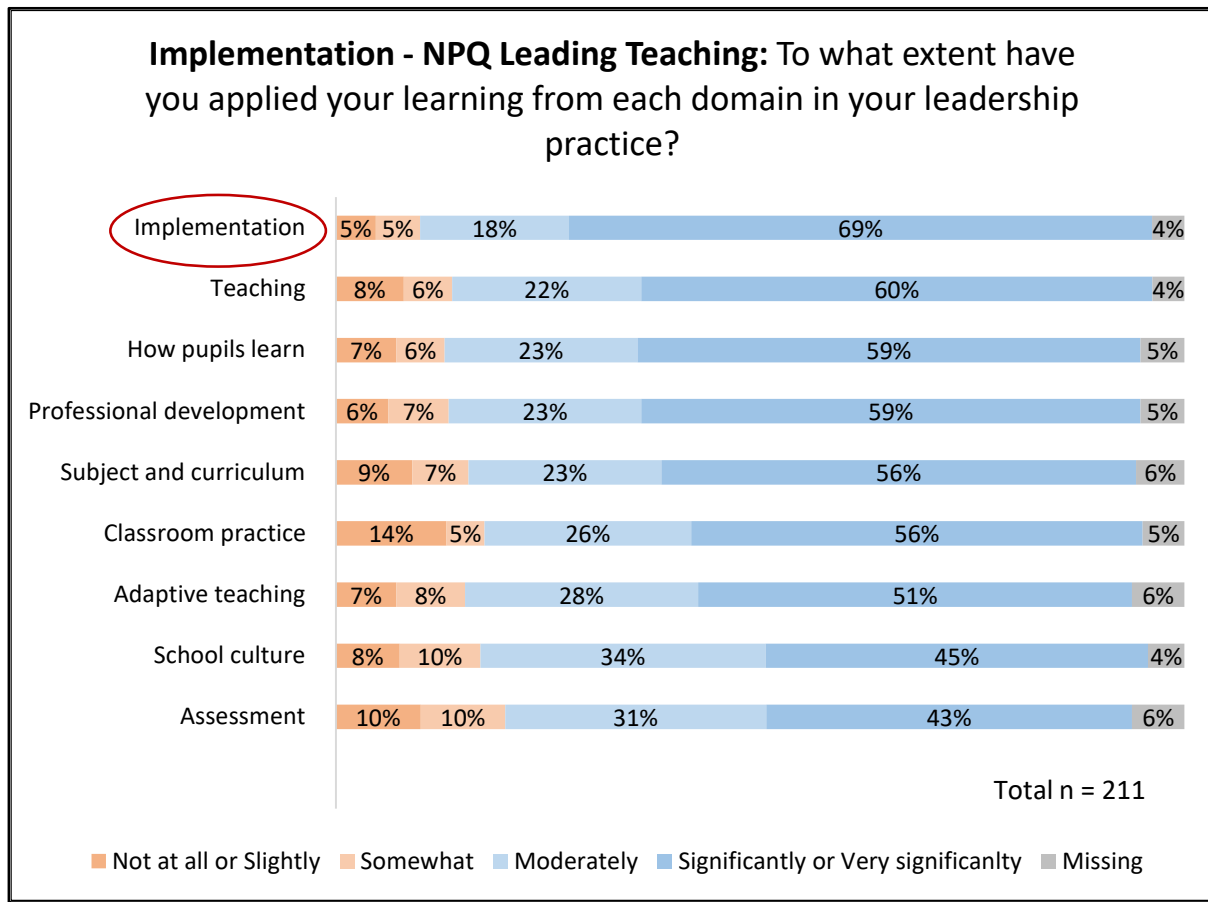
Planning and conducting an implementation project that brings together relevant learning is a key feature of the UCL NPQ programme pedagogy. Using an enquiry-based approach, the project helps them to apply their learning in practice and to better understand the impact of their practice in schools.

The survey results show that the majority of participants had applied their NPQ learning 'very significantly', 'significantly' or 'moderately' across most domains of leadership practice (Figure 9). *Implementation* was the one most likely to have been applied very significantly or significantly (69%), indicating that with support of this 'learning-by-doing' pedagogy, the **NPQ learning can result in change in practice**. A case study interview participant gave an example of this:

☑☑ When I did the NPQ Leading Teacher Development, I had to lead a project which was about number fluency, and back then as a school, our school improvement plan was to focus on number fluency and we were so good at [...] delivering maths lessons, but the part of maths teaching, fluency, was missing completely, [...] so we thought, "Oh, that's not working for all pupils." We have to make sure that we have some sort of scheme that all pupils are accessible to. So I implemented the number fluency scheme called "numbersense" back in 2021 and that was my project through the NPQ course and was successfully implemented and it's fully embedded now for Key Stage One. We've got to the point where we have to sustain the quality teaching. ☑☑

(Case study interview participant – Specialist NPQ programme)

Figure 9: Extent to which NPQ Leading Teaching participants have applied learning from each domain in their leader practice



A participant in a case study interview summed up how the NPQ had shaped them through the learning:

“NPQ has fashioned me a little bit. [...] I've [become] a diamond. I think I was a rough stone and I'm getting chipped away by the end because I'm learning certain things and how to change, how I might respond to behave in certain situations. [It's] really, really taught me a lot.”

(Case study interview participant – Specialist NPQ programme)

2.5.2 The impact of the Specialist NPQ Programmes on participants' retention decisions

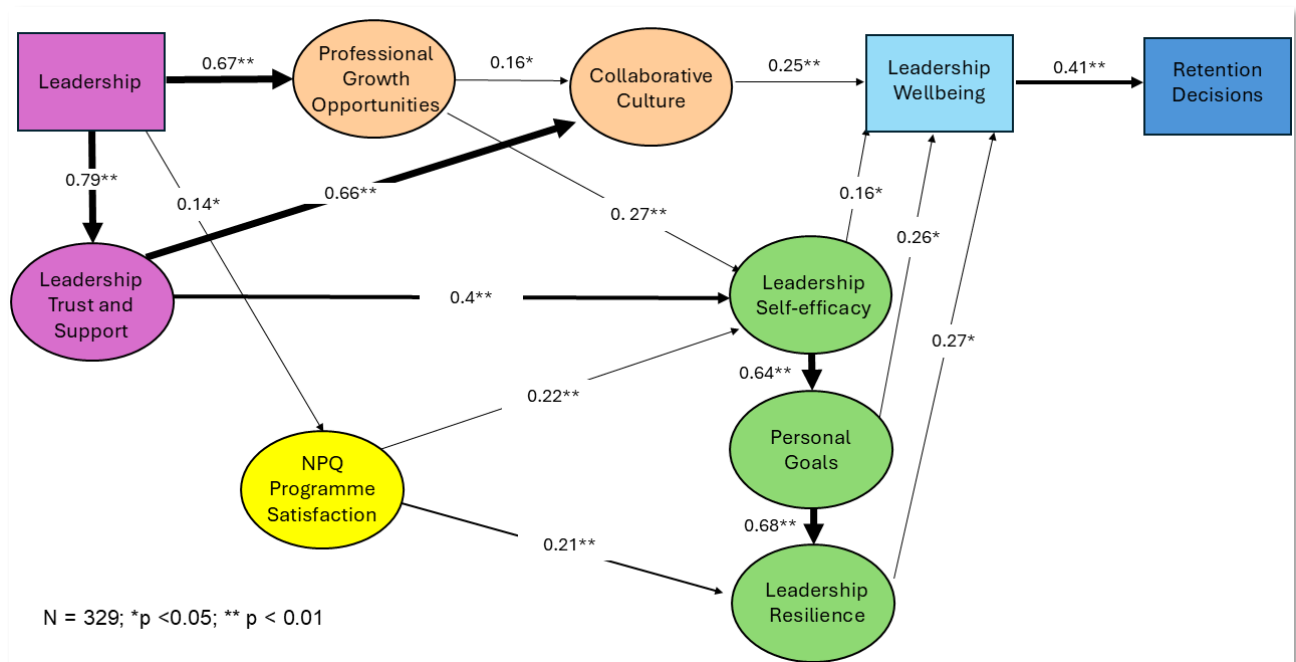
Key message 6: Most participants in the Specialist NPQ programmes reported improvement in their self-efficacy and resilience as school leaders. However, such programme satisfaction was dependent on the nature of leadership in their schools.

The Specialist NPQ programmes can make a difference in participating leaders' retention decisions *if* their learning is supported by their schools' leadership.

Survey responses from participants on the Specialist NPQ programmes were further analysed using structural equation modelling (SEM) to explore the relationships between learning on the Specialist NPQs and other school contextual and personal disposition factors, and whether and how these are ultimately linked to wellbeing and retention decisions.

Figure 8 presents the overall SEM result. The SEM model shows ‘**paths of influence**’ connecting school leadership, NPQ programme satisfaction, to participants’ retention decisions through wellbeing. These paths explain how different school-level and person-level factors measured in the survey interact¹⁵ to influence participants’ retention decisions. The factors that contributed to each of the factors represented in the diagram are presented in Appendix 2.

Figure 10: Overall representation of the SEM findings



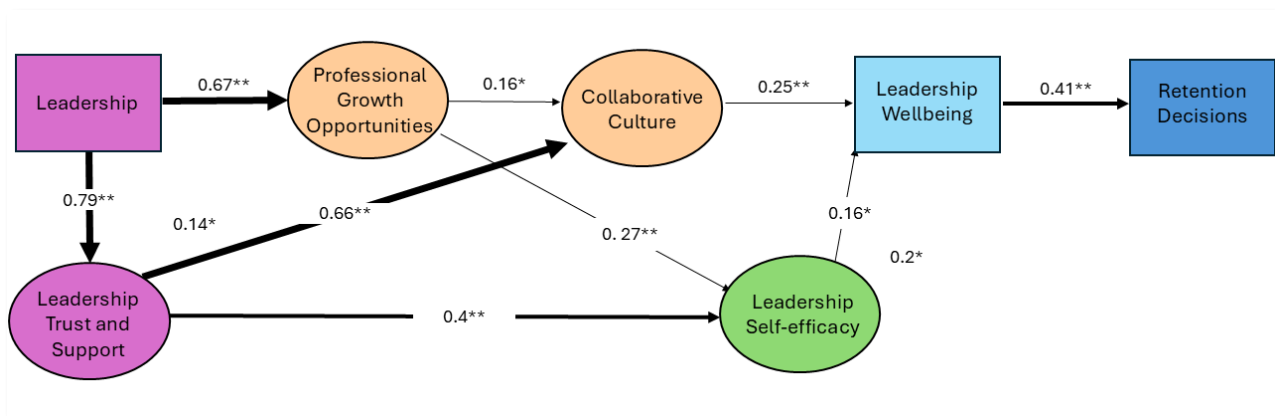
The following six takeaway messages help make sense of the SEM model. Each message focuses on a specific path of influence in the SEM model. We have used quotes from the case study interviews to illustrate the relationships identified in these paths.

Takeaway 1

Successful school leadership improves participants’ professional growth opportunities. Those opportunities, in turn, have several different effects, one of which is to improve the extent to which the culture in the school is collaborative, which is an important influence on participants’ wellbeing. An especially important part of successful leadership is building trust and support among staff. When trust and support are strong in a school, the school culture becomes more collaborative, and participants have higher self-efficacy.

¹⁵ The numbers shown in the joins between the dimension are path coefficients, those that are closer to 1 or -1 show stronger relationships between variables and those near 0 show weak relationships, with a value of 0 indicating no relationship. All path coefficients in this model are positive numbers, this means that **as values in one variable increases, the others tend to also increase. The higher the number, the stronger the ‘causal’ relationship between the two variables is.** All of the relationships/paths represented in the diagram were found to be statistically significant.

Figure 11: Representation of the findings to support takeaway 1



Case study quote:

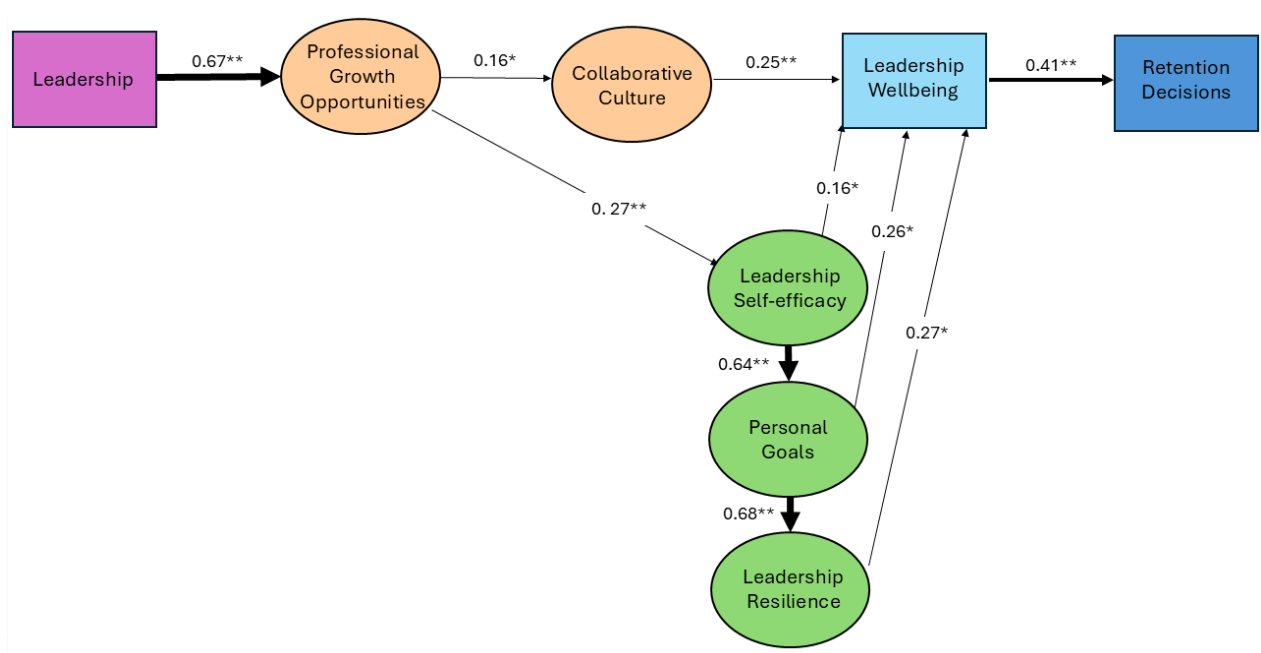
“The leaders in the school [...] lead by example. I think they represent the school values very well, I think. [...]they're very approachable, very personal, wonderful people. [There are] very inspiring leaders in school and I've certainly got an interest myself in heading into the leadership team and yeah, it's a good group.”

(Case study interview participant – NPQ specialist programme)

Takeaway 2

Professional growth opportunities — created and shaped by successful leadership practices — make important contributions to participants' professional and personal dispositions.

Figure 12: Representation of the findings to support takeaway 2



Case study quote:

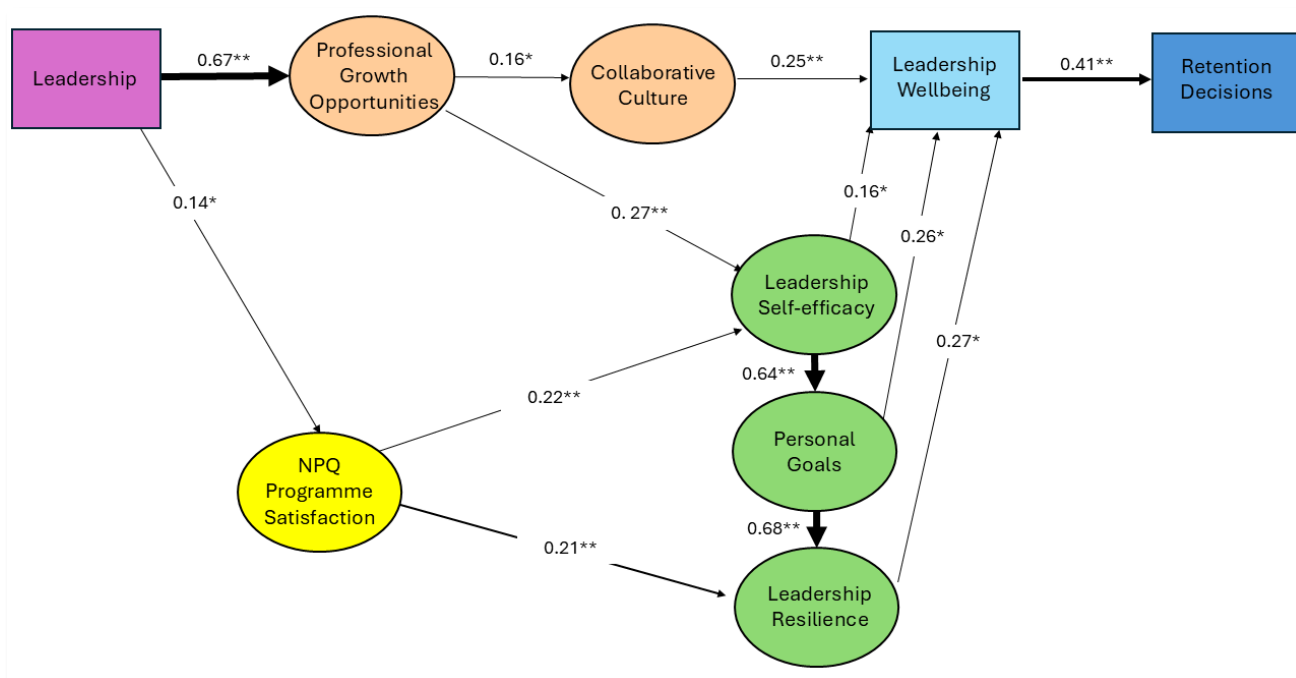
“ I did not want to do the NPQ initially because I've not been to university and I feel like a lot of members of staff in school have gone through the career path for university and I wasn't confident in that. But I was really pushed by the headteacher who said I'd be completely fine to do it. ... So that makes me feel valued. [...] I think they valued my skill set and I will have more opportunity in the next academic year to develop that future. ”

(Case study interview participant – NPQ specialist programme)

Takeaway 3

NPQ programme satisfaction contributes to participants' resilience and self-efficacy as leaders. Their self-efficacy influences personal goals and both have a direct effect on their wellbeing, as does resilience.

Figure 13: Representation of the findings to support takeaway 3



Case study quote:

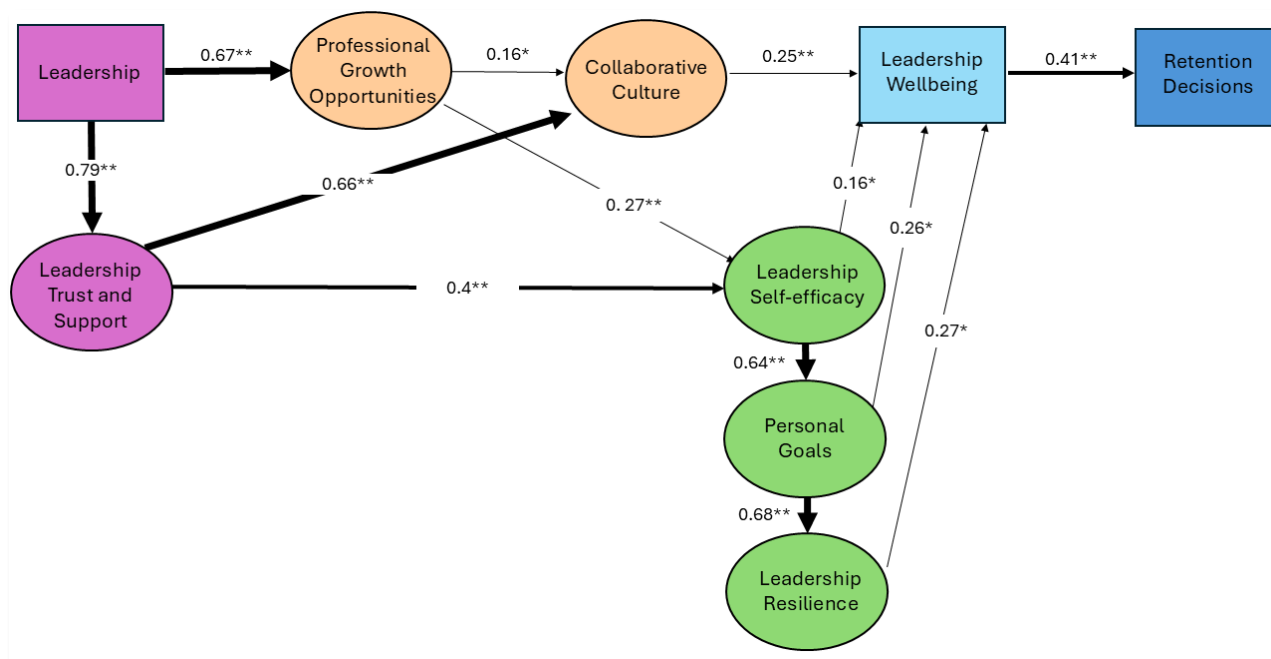
“ [The NPQ] made me feel more confident in what I was saying, even with just, well, two reasons. One, because it was so research-led, which therefore meant that you were able to speak with confidence. But, two, also knowing that things that I have found the hardest over my teaching career, it's not the implementation of change, it's maintaining that change and driving it forward and always getting to a point where the project then just whittles away because something else takes over. [...] Some of the statistics that we were given at the very beginning [of the NPQ], which were things like: it takes 7 years for any new initiative to really become embedded. That gave me hope and the determination to keep going with it, whereas before I might have given up or felt that it was [failing and then] taking it really personally. So it de-personalised things. ”

(Case study interview participant – NPQ specialist programme)

Takeaway 4

When participants view their leaders as trustworthy and supportive, both their self-efficacy and desire to collaborate with colleagues are increased.

Figure 14: Representation of the findings to support takeaway 4



Case study quote:

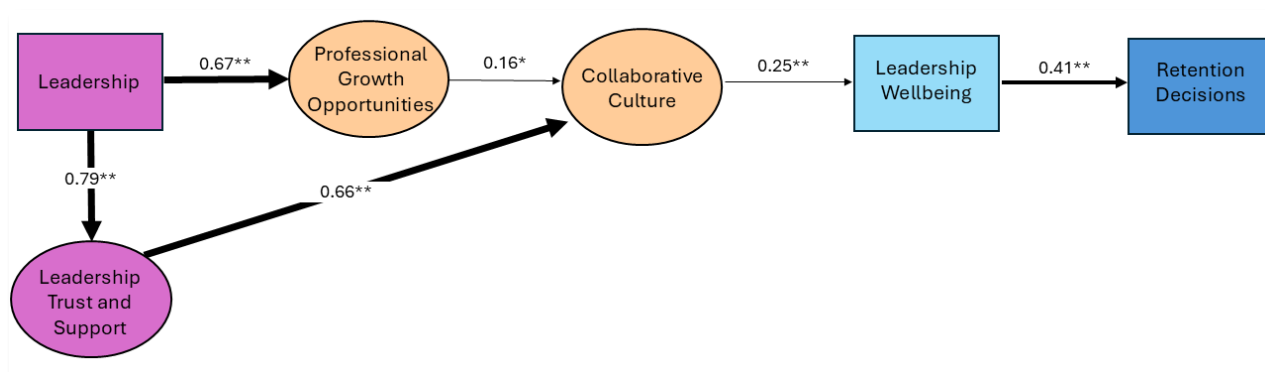
“Once you get something, you've got to put it into practice and have it as part of your routine, otherwise you won't use it. Recently one of our INSET days was actually to go out to another school or placement and spend the day there and do some research about how they use feedback and looking at our priorities and [compare to] how they do it. I really enjoyed the research [on the NPQ]. There was a lot of it, a lot of reading; and sharing ideas was one of the most useful things I got out of the course.”

(Case study interview participant, class teacher, NPQ specialist programme)

Takeaway 5

The influence of collaborative culture, professional growth opportunities and leadership trust and support combines to improve participants' wellbeing.

Figure 15: Representation of the findings to support takeaway 5



Case study quote:

“I've just found the school predominantly really supportive. SLT are there to support you and you're given opportunities to progress in your career. So I'd like to go on to NPQs, and the school prioritises those to make sure that you can basically go in the direction of the career that you want to go into. I do think it is just really, a really good place to work, a really supportive place to work. [...] I don't actually think the school could potentially do more than what they're already doing to support me with my wellbeing.”

(Case study interview participant, class teacher, NPQ specialist programme)

Takeaway 6

Participants reporting a stronger sense of wellbeing are more likely to plan to stay in the teaching profession or stay at their schools. Wellbeing in this study encompassed sense of belonging in school, job satisfaction in teaching, capabilities as a leader, and affective engagement and enthusiasm at work.

Figure 16: Representation of the findings to support takeaway 6



Case study quote:

“ I went through a bit of a rocky patch myself last year, mental health a little bit [poor], but not too [...] bad, but I did feel really supported and they did what they could where they could. So, it's really nice. I think it's just been able to have those open and honest relationships because I know maybe in some settings it's not like that and people don't feel that they can go to their senior staff, which I think at [school name] actually we do all respect each other. We have all got each other's back. We all value each other which is nice. [The headteacher said] I can't just let you go knowing that you haven't got another job lined up. [...] It was a difficult time last year, but I think at the time, the choice [to stay in my job] was right. And then the decision and the changes that were made, I think it suited me and the school at the same time. ”

(Case study interview participant - NPQ specialist programme)

3. Learnings and Reflections

3.1 Learnings

Evidence in this report offers *hope* for schools and policymakers who invest substantial sums in professional development programmes each year and assume that this is a cost-effective approach to raising education standards and improving retention.

First, most teachers and school leaders remain committed and enthusiastic about what they do and feel that their jobs inspire them. This is an encouraging finding for pupils because research shows that committed and motivated teachers are most likely to improve the outcomes of student learning. We call it 'quality retention' (Gu & Day, 2013¹⁶).

Second, most teachers and school leaders have found NPQ learning positive and beneficial and valued the inquiry-oriented implementation project in deepening their leadership understanding. Such 'learning-by-doing' pedagogy (which is unique to UCL-led NPQs) enables them to apply their learning in the workplace, and through reflecting *on* and *about* their actions, improve their practice. This is an encouraging finding for participating schools because their investments in professional development have yielded dividends.

However, evidence also shows that **the positive impact of NPQ learning is not achieved in isolation from the environments in which teachers and school leaders work**, and thus points to **a major source of the retention solution: the school organisation**. Results supporting this observation may not appear new, but they reinforce important knowledge about teacher development and retention, nevertheless.

Findings reinforcing knowledge that requires our continued attention

This research highlights the complex but crucial role that wellbeing plays in shaping school leaders' professional experiences and retention decisions.

First, there are **clear links between wellbeing and retention in schools**. School leaders who experience higher levels of wellbeing – explained through a combination of belonging in school, job satisfaction, affective engagement in teaching, and purpose and capabilities – are significantly more likely to stay at their current schools or remain in teaching.

Second, **wellbeing is strongly influenced by the wider school environment**. Leadership trust and support, a collaborative culture, and professional growth opportunities all play a role in shaping the wellbeing of teachers and school leaders. Together, they create a social and organisational environment in which teachers and leaders feel able to thrive and wish to remain.

Findings highlighting big ideas: attending to the on-the-ground mechanisms that enable NPQs to make a difference

The idea that *schools matter* in improving student learning and outcomes is not new. In the context of improving teachers' learning and teacher retention, our research findings reinforce the importance of the school organisation and what happens within it in shaping the work and lives of teachers and school leaders.

Evidence shows that **NPQ learning improves school leaders' self-efficacy and contributes to their retention decisions indirectly** by improving their leadership efficacy, resilience, and wellbeing. However, the benefits of NPQ participation are **dependent on the conditions of the school**: positive learning experiences and outcomes tend to be found in schools where leaders

¹⁶ Gu, Q. and Day, C. (2013) Challenges to teacher resilience: Conditions count. *British Educational Research Journal*, 39 (1), 22-44.

nurture trust and prioritise professional development, and where participants feel safe and confident to contextualise learning for improved practices.

Two *big* ideas arise from this evidence. They highlight important principles that both schools on the ground and policymakers in the DfE should consider in their efforts to make the heavy investments in professional development work.

First, school leaders themselves need to understand that their leadership practices are likely to have the largest effects on both teacher learning and retention. **The NPQ training itself is not the game changer.** Long-term commitments by school leaders to actively shape the cultures and conditions of their schools in support of such learning improves both teacher learning and retention outcomes.

Second, the school organisation provides the **structural mechanisms** that connect the professional learning policy with retention outcomes. This is not to downplay the significance of content and pedagogy in effective professional development programmes. However, most factors that make a real difference to learning and retention outcomes are found within the school organisation.

In summary, the message from the analysis presented in this report is: schools and systems that invest in leadership support, collaboration, and development opportunities are more likely to retain high-quality staff. NPQ programmes can be a powerful part of this strategy, but only if they are incorporated into a broader school culture that values and supports teacher growth and wellbeing. As schools continue to face recruitment and retention pressures, it is imperative that we prioritise staff wellbeing not as a peripheral issue, but as a central driver of professional effectiveness and long-term workforce sustainability.

3.2 Reflections

Based on these insights, the following reflections are offered for school leaders, policymakers, NPQ providers, and programme participants.

For school leaders

Foster a trusting and supportive environment for NPQ participants.

Participants who view their school leaders as trustworthy and supportive report higher levels of self-efficacy and resilience. Trust also strengthens collaboration across the school. Prioritising transparent communication, emotional support, and shared decision-making can help to embed trust in leadership relationships.

Encourage a culture of collaboration to enhance wellbeing.

Collaborative school cultures are directly associated with higher wellbeing in the SEM findings. School leaders should actively create structures for professional dialogue, shared problem-solving, and cross-role (and cross-school) collaboration.

Prioritise professional growth opportunities.

Opportunities to learn and develop professionally enhance participants' self-efficacy and their alignment with personal goals. These experiences contribute to stronger wellbeing and greater likelihood of staying in post. Schools can foster this by enabling access to NPQs, offering mentoring or coaching roles, and aligning development opportunities with teachers' career aspirations.

For policymakers and NPQ programme providers

Support school leaders to create more 'stickier' schools for retention.

The study found leadership of the school organisation had significant direct effects on teachers' and school leaders' workload, wellbeing and retention. This finding aligns with the observation from

our earlier [report](#)¹⁷ on developing and retaining talented mentors: ‘School leaders retain high quality teachers by helping to create productive work environments aimed at achieving ambitious, socially valued goals for all students. Given similar student populations, a high-retention (“sticky”) school is doing many things well, a low-retention (“slippery”) school, not so much’.

Policymakers need to consider how to provide coherent and aligned support for schools (and networks of schools) to have the capacity, space, and intellectual, material and financial resources to nurture professional learning cultures that enable teachers and leaders to better enjoy the inner rewards that the teaching profession can provide.

Ensure NPQ learning is supported by strong school leadership structures.

Programme satisfaction was greater in schools with positive and supportive leadership practices. NPQs are most effective when situated within a wider ecosystem of school-based professional learning and support. Policy and programme design should therefore consider how NPQs are embedded in schools’ broader leadership development strategies.

Emphasise resilience- and confidence-building in programme content.

Our findings indicate that, with positive leadership conditions, NPQs support participants’ resilience and confidence / self-efficacy, both of which contribute directly to wellbeing and indirectly to retention. Programme design should explicitly target these areas, particularly for early-stage and middle leaders navigating demanding roles.

For NPQ participants

Seek out mentorship and peer collaboration.

Engaging with colleagues inside and outside your school can boost confidence, build networks, and reduce feelings of isolation. Collaboration supports both wellbeing and, ultimately retention.

Apply NPQ learning to foster a positive school culture.

Participants who expressed more positive views on the professional growth opportunities and programme satisfaction reported higher levels of self-efficacy, which in turn was linked to positive attitudes to personal goals and greater resilience. This suggests that experiencing the NPQ learning and putting this learning into practice can help enhance self-efficacy, which in turn, supports their ongoing engagement in the profession.

Reflect on personal growth and leadership goals.

Those who aligned their development with personal leadership goals reported higher levels of wellbeing and more positive retention intentions. Taking time to reflect and shape your trajectory is an important part of professional sustainability and resilience.

¹⁷ Leithwood, Kenneth; Gu, Qing; Eleftheriadou, Sofia; Baines, Lisa (2024) [Developing and Retaining Talented Mentors](#) (Interim Research Report 3). Publication series of the research into the impact of the Early Career Framework (ECF) programme on the work engagement, wellbeing and retention of teachers: a longitudinal study, 2021-2026. UCL Centre for Educational Leadership: London, UK.

Appendix 1: Survey sample profile

Achieved Sample Demographics: *Individual Level*

		NPQ SL-H (N = 241)		NPQ Specialists (N = 387)		NPQ SL-H and Specialists combined (N = 628)		National NPQ participants Year 21/22 (N = 29,641)		National NPQ participants Year 22/23 (N = 35,584)	
Variable	Value	N	%	N	%	N	%	N	%	N	%
Gender	Male	61	25%	84	22%	145	23%	8410	28%	8397	24%
	Female	153	63%	257	66%	410	65%	19850	67%	24021	68%
	Prefer not to say	1	<1%	1	<1%	2	<1%				
	Missing or Unknown	26	11%	45	12%	71	11%	1381	5%	3166	9%
Ethnicity	Asian or Asian British	13	5%	25	7%	38	6%	1176	4%	1335	4%
	Black or Black British	7	3%	19	5%	26	4%	804	3%	849	2%
	White	190	79%	271	70%	461	73%	23219	78%	26545	75%
	Any other Mixed background	1	<1%	8	2%	9	1%	443	1%	512	1%
	Any Other ethnic group	3	1%	17	4%	20	3%	138	<1%	222	1%
	Missing or Unknown	27	11%	47	12%	74	12%	3861	13%	6121	17%
Role	Headteacher or equivalent	18	7%	1	<1%	19	3%	1710	6%	1924	5%
	Deputy headteacher or equivalent	55	23%	6	2%	61	10%	1973	7%	1921	5%
	Assistant headteacher or equivalent	64	27%	14	4%	78	12%	2875	10%	3139	9%
	Classroom teacher	77	32%	201	52%	278	44%	21247	72%	24420	69%
	Other	19	8%	19	5%	38	6%				
	Missing	8	3%	146	38%	154	25%	1836	6%	4180	12%
Age group	Under 25	0	0%	1	<1%	1	<1%	449	2%	506	1%
	25 to 29	4	2%	66	17%	70	11%	5296	18%	5571	16%
	30 to 39	85	35%	149	39%	234	37%	12354	42%	13788	39%
	40 to 49	89	37%	89	23%	178	28%	8136	27%	9581	27%
	50 to 59	34	14%	32	8%	66	11%	2049	7%	2869	8%
	60 and over	0	0%	3	<1%	3	<1%	59	<1%	119	<1%
	Missing or Unknown	29	12%	47	12%	76	12%	1298	4%	3150	9%
School Phase	Primary	103	43%	107	28%	210	33%	13379	45%	16869	47%
	Secondary	86	36%	196	51%	282	45%	13978	47%	14636	41%
	Middle	1	<1%	1	<1%	2	<1%				
	Other	25	10%	38	10%	63	10%	2281	8%	4072	11%
	Missing or Unknown	26	11%	45	12%	71	11%	3	<1%	7	<1%
School Type	Academies	105	44%	183	47%	288	46%	17709	60%	19778	56%
	Free schools	17	7%	21	5%	38	6%	1324	4%	1400	4%

		NPQ SL-H (N = 241)		NPQ Specialists (N = 387)		NPQ SL-H and Specialists combined (N = 628)		National NPQ participants Year 21/22 (N = 29,641)		National NPQ participants Year 22/23 (N = 35,584)	
Variable	Value	N	%	N	%	N	%	N	%	N	%
	Local authority maintained schools	91	38%	142	37%	233	37%	9485	32%	11612	33%
	Other types	18	7%	25	7%	43	7%	228	1%	1315	4%
	Special schools	10	4%	13	3%	23	4%	892	3%	1472	4%
	Unknown			3	<1%	3	<1%	3	<1%	7	<1%

Note: To compare the participant profile with national level data, the table above includes only UK survey participants (which as the overwhelming majority of the sample). A very small number of participants, for NPQ Leadership (n=28) are participants who are undertaking NPQ International and are included in the survey findings and descriptive tables, but not in the representativeness table above as there are no comparable data for them.

Achieved Sample Characteristics: *School Level*

		NPQ SL-H (N = 217)		NPQ Specialists (N = 315)		National School data Year 22/23 (N = 24,442)	
Variable	Value	N	%	N	%	N	%
School phase	Primary	101	47%	112	36%	17166	70%
	Secondary	78	36%	154	49%	3281	13%
	All-through	7	3%	4	1%	160	1%
	Not applicable/No URN	31	14%	45	14%	3835	16%
Location	Urban	198	91%	289	92%	18301	75%
	Rural	19	9%	23	7%	6141	25%
	No URN			3	1%		
OFSTED	Outstanding	48	22%	60	19%	3097	13%
	Good	120	55%	191	61%	14933	61%
	Requires Improvement/Special Measures/Inadequate/Serious Weaknesses	21	10%	22	7%	1939	8%
	Missing/No URN	28	13%	42	13%	4473	18%
FSM	Band 1 (0% to 8%)	46	21%	59	19%	3102	13%
	Band 2 (9% to 20%)	74	34%	93	30%	7466	31%
	Band 3 (21% to 35%)	57	26%	87	28%	5909	24%
	Band 4 (36%+)	37	17%	68	22%	5548	23%
	Not recorded/No URN	3	1%	8	3%	2417	10%

Notes: The category "Primary" includes Nursery, Middle-deemed primary and Primary schools. The category "Secondary" includes Secondary schools, Middle-deemed secondary, and 16 plus.

Appendix 2: Dimensions used in the SEM

The table below shows the dimensions used in the SEM and shows which survey items contribute to these dimensions.

Factor	Item	Unstandardised factor loading (SE)	Standardised factor loading
Wellbeing			
Factor 1_belonging (social)			
WB1	1. I feel like I belong at this school	1	.834
WB4	4. I feel like people at this school care about me	1.030 (0.060)	.876
WB6	6. I am treated with respect at this school	1.021 (0.058)	.896
Factor 2_capability (psychological functioning)			
WB3	3. I am good at helping students learn new things	1	.541
WB5	5. I have accomplished a lot as a leader	3.267 (.469)	.823
WB7	7. I feel like my leadership is effective and helpful.	3.176 (.436)	.867
Factor 3_job satisfaction			
JS1	1. The advantages of being a school leader clearly outweigh the disadvantages	1	.881
JS2	2. If I could decide again, I would still choose to work as a school leader	1.010 (.061)	.890
JS4_rev	4. I do not wonder whether it would have been better to choose another profession	.779 (.109)	.539
Factor 4_Affective wellbeing			
ENG1	1. I am enthusiastic about my leadership job	1	.896
ENG2	2. My job inspires me	.906 (.060)	.852
ENG4	4. I am content with my role as a leader and all it involves	1.158 (.085)	.756
Leadership Practices in School			
Setting directions			
LEADSD1	1) Gives staff a sense of overall purpose.	1	.776
LEADSD2	2) Demonstrates high expectations for staff's work with learners.	.988 (.057)	.821
LEADSD3	3) Demonstrates high expectations for learner behaviour.	.992 (.061)	.884
LEADSD4	4) Demonstrates high expectations for learners' academic achievement.	.863 (.052)	.845
LEADSD5	5) Demonstrates high expectations for learners' development of good health and wellbeing.	.841 (.060)	.859
Developing teachers			
LEADDEV1	6) Gives us individual support to help us improve teaching practices.	1	.889
LEADDEV2	7) Encourages us to consider new ideas for teaching.	.919 (.057)	.848
LEADDEV3	8) Promotes leadership development among teachers.	1.097 (.058)	.910
LEADDEV4	9) Promotes a range of continuing professional development experiences among all staff.	1.117 (.060)	.915

Factor	Item	Unstandardised factor loading (SE)	Standardised factor loading
LEADDEV5	10) Encourages us to think of learning beyond the academic curriculum (e.g. personal, emotional and social education, citizenship, etc.).	.975 (.058)	.904
Redesigning the organisation			
LEADRO1	11) Encourages collaborative work among staff.	1	.843
LEADRO2	12) Engages parents/carers in the school's improvement efforts.	1.141 (.081)	.932
LEADRO3	13) Builds community support for the school's improvement efforts.	1.204 (.080)	.997
LEADRO4	14) Allocates resources strategically based on learners' needs.	1.168 (.077)	.922
LEADRO5	15) Works in collaboration with other schools.	.909 (.083)	.867
Managing the teaching programme			
LEADMANAGE1	16) Provides or locates resources to help us improve teaching.	1	.900
LEADMANAGE2	17) Regularly observes classroom activities.	1.097 (.085)	.853
LEADMANAGE3	18) After observing classroom activities, works with teachers to improve teaching.	1.433 (.090)	.972
LEADMANAGE4	19) Uses coaching and mentoring to improve quality of teaching.	1.403 (.091)	.902
LEADMANAGE5	20) Encourages all staff to use learners' progress data in planning for individual learners' needs.	.877 (.073)	.824
Leadership trust and support			
CULT1	1. Support and encourage	1	.851
CULT3	3. Recognise staff members for a job well done	1.197 (.063)	.845
CULT4	4. Trust the staff to do their jobs well	1.127 (.061)	.850
CULT5	5. Look out for the personal welfare of the staff	1.329 (.064)	.896
CULT6	6. Provide staff with opportunities to participate actively in school decisions	1.216 (.065)	.867
Personal Dispositions			
Personal goals			
DISP9	9. At this time, I am meeting the goals that I have set for myself	1	.822
DISP10	10. I can think of many ways to reach my current goals	.933 (.058)	.885
DISP11	11. Right now I see myself as being pretty successful	.999 (.065)	.809
DISP12	12. There are lots of ways around any problem that I am facing now	.943 (.062)	.858
Optimism			
DISP14_rev	14. If something can go wrong for me, it will not	1	.844
DISP16_rev	16. I expect things to go my way	1.115 (.063)	.915
DISP17_rev	17. Things work out the way I want them to	1.009 (.057)	.910
Emotional management capability			

Factor	Item	Unstandardised factor loading (SE)	Standardised factor loading
DISP1	1. I recognize my own emotional responses and how those emotional responses shape my focus of attention and influence my actions	1	.807
DISP2	2. I am sensitive to the emotions being experienced by others from their tone of voice, facial expressions, body language and other verbal and non-verbal information	.965 (.083)	.728
DISP3	3. I understand the reasons for my own “intuitive” emotional responses and reflect on the potential consequences of those responses	1.054 (.079)	.853
Professional Growth Opportunities in School			
PG1	1) I have many opportunities to take on new challenges	1	.899
PG2	2) I have adequate opportunities to develop my leadership skills	1.050 (.042)	.935
PG3	3) I have adequate opportunities for renewal and refreshment of myself as a professional	1.007 (.047)	.861
PG4	4) Opportunities for promotion within my school are adequately available to me	.980 (.062)	.727
PG6	6) Professional training and development opportunities rarely conflict with my work schedule (Notes: PG6: Workload)	.587 (.068)	.462
Collaborative Culture			
CULT7	7. Teachers mostly work together to improve their practice	1	.772
CULT9	9. There is a culture of shared responsibility for school issues	1.133 (.071)	.846
CULT10	10. There is a collaborative school culture which is characterised by mutual support	1.324 (.079)	.927
Programme Satisfaction			
PS1	1) I am persuaded that the promoted practice on the training programme will improve my school's contributions to pupil learning	1	.826
PS2	2) I have the opportunity to discuss how I view my existing practice on the training programme	.957 (.072)	.715
PS3	3) Different types of training activity on the programme enables me to apply new learning in my own workplace	1.128 (.073)	.832
PS4	4) The training programme challenges my existing assumptions about effective practice	1.121 (.079)	.765
PS5	5) The training programme is based on sound research about leadership, teaching and/or student learning	.836 (.061)	.797
PS7	7) The sequence of module content on the programme helps to deepen my knowledge and skills as a leader	1.186 (.082)	.801
Leadership Resilience			
RES1	1. I enjoy learning new things when I am at work.	1	.543
RES3	3. I am always optimistic about my future as a school leader.	1.921 (.254)	.590

Factor	Item	Unstandardised factor loading (SE)	Standardised factor loading
RES4	4. When I make mistakes at school, I see these as learning opportunities.	2.090 (.249)	.721
RES5	5. At school I focus on building my strengths more than focussing on my limitations.	2.542 (.302)	.800
Leadership Self-efficacy			
SE1	1. Establish a widely shared and agreed vision and goals for my organization	1	.823
SE2	2. Assist my colleagues to develop the capacities they need to help achieve our organization's vision and goals	.898 (.051)	.882
SE3	3. Develop and maintain organizational structures, policies and culture that supports my organization's vision and goals	1.006 (.058)	.890
SE4	4. Further develop the quality of my school's pedagogy.	.998 (.065)	.808
SE5	5. Respond productively to the demands for accountability faced by me, my colleagues, and my school	.849 (.060)	.778