National College for Teaching & Leadership

High Potential Middle Leaders (Secondary) programme: an evaluation

Research report

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Executive summary

Ipsos MORI and Education Datalab were commissioned by the Department for Education (DfE) and the National College for Teaching and Leadership (NCTL) to evaluate the effectiveness and impact to date of the High Potential Middle Leaders (HPML) programme across secondary schools.

The HPML programme, delivered by Ambition School Leadership (Ambition; formerly known as Teaching Leaders), is a two-year leadership development programme for high-potential middle leaders working in schools in challenging contexts. Blending intensive coaching, face-to-face training and online learning, the HPML programme aims to help schools retain and develop high-potential staff, improve pupil outcomes and close achievement gaps for disadvantaged children.

A number of research activities were conducted: an analysis of participants on the programme using Ambition management information, School Workforce Census (SWC) and National Pupil Database (NPD) datasets; analysis of participant feedback data provided by Ambition; impact evaluation using SWC and NPD datasets; and primary research including an online survey and telephone depth interviews. This research was designed with a view to providing insight that may contribute to continued improvement of the programme design and delivery, as well as adding to the wider evidence base around effective leadership development.

Summary findings in relation to the main research questions are identified below.

Is the HPML programme reaching the intended target middle leaders and schools?

- Analysis of the HPML management data and the School Workforce Census suggests that the programme is reaching the intended target of high potential middle leaders. The middle leaders participating in the programme tend to be:
    - Relatively young, with a median age of 32 years
    - Relatively new to the profession: the mean number of years since achieving qualified teacher status being 7.13 for participants of the programme, compared to 13.79 for other middle leaders in participating schools
- Of the schools joining the programme each year, 91% were eligible based on the criteria set by Ambition[1]. Ambition clarified that ineligible schools were sometimes allowed to participate where they had recently been eligible, or where their participation contributed to the viability of providing the programme in a specific area.

[1] See Appendix table 1.2 for details.

- The qualitative depth interviews suggested that, due to the rigor of the application process, both headteachers and participants felt that it effectively 'weeded out' those who were not suited for the programme and provided an indication about expectations for the rest of the programme.

What are participants' and headteachers' overall perceptions of the HPML programme?

- Overall, data from the online survey, participant session feedback and qualitative depth interviews with programme participants indicated that the programme was perceived as high quality.
- Three-quarters of respondents to the online survey (72%) scored the overall quality of the programme an eight or above on a 10-point scale. In addition, three-quarters of respondents (76%) scored their likelihood to recommend the programme to other colleagues an eight or above on a 10-point scale.

Is participation on the HPML programme having an impact on teacher retention?

- Participation in the programme was associated with an 11 percentage point increase in the chance that a middle leader was still working in a state-funded school in England in the year after the programme.
- However, there was no association between participation and middle leaders still working in their original school in the year after the programme.
- Participation was associated with a small decrease in department-wide retention in the second year after the completion of the programme.

Is participation on the HPML programme having an impact on career progression?

- Participation in the programme was associated with higher pay increases by both the final year of the programme, and the year after the programme. More specifically, participation in the programme is associated with 30% faster growth in pay than matched future participants by the year after the programme (an average pay rise of £7,523 and £5,237 respectively).
- Based on findings from the online survey, over three-fifths of respondents (63%) had been promoted since completing the programme. Eighty-four percent of those who received a promotion did so within one year of completing the programme.

Is participation on the HPML programme having an impact on pupil attainment?

- Participation in the HPML programme was associated with an increase in pupil attainment of approximately one twelfth of a grade[2]. However, this effect does not emerge until two years after the programme, suggesting the benefits of leadership training take time to filter through into improved pupil learning.

What are participants' and headteachers' perceptions of the impact of the HPML programme?

- Over two-fifths of survey respondents (44%) reported that the programme had a positive impact on their well-being, and one-third of (33%) reported that the programme had a positive impact on their teaching time. Qualitative findings suggest that this was due to improved time-management skills learnt on the course.
- Over two in five survey respondents reported that they are now working more with other schools in their local authority (46%), similar category schools (43%), or other schools in their multi-academy trust (46%) as a result of the programme. This was in line with the findings from the qualitative depth interviews.
- Over half of survey respondents (57%) felt that the programme had a negative impact on their personal time. Participants interviewed found the programme to be a significant time commitment; however, they felt the benefits outweighed the drawbacks.
- Qualitative findings suggested that impact initiative projects had a positive effect.

What elements of the HPML programme are perceived as most helpful by participants and their headteachers?

- Though all elements of the programme received positive feedback in the session evaluation data and qualitative depth interviews, the residentials were perceived as the highest quality element.
    - Based on the session feedback data, nearly all (93%) of the average scores for the residentials held in 2014 to 2016 exceeded the key performance indicator (KPI) of eight[3].

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[2] This is equivalent to 0.6 of a grade point. There are six grade points between each GCSE grade classification. For example, an A is 52 grade points while an A* is 58 grade points. Please note that this increase in attainment is per pupil, per subject within the department. As such, a maths department may offer GCSEs in maths and statistics. In this case, pupils would, on average, see an 0.6 increase in both their maths and statistic grade points.

[3] Ambition's contract with NCTL is for the overall average score for sessions across quality, stretch and applicability "Average session evaluation score of 8 out of 10 (based on a ten point scale)" rather than separate scores for quality, stretch and applicability. Ambition reports the average score for the month to NCTL.

    - In the qualitative depth interviews, respondents referred to the residentials as inspirational and thought provoking.
- The session evaluation data and qualitative depth interviews also highlighted variation in the relevance and stretch of session content. Overall, however, the average scores were still in the top 40th percentile (i.e. a six or above on a 10-point scale).

1. Background

1.1 Background to the evaluation

Ipsos MORI and Education Datalab were commissioned by the Department for Education (DfE) and the National College for Teaching and Leadership (NCTL) to evaluate the effectiveness and impact to date of the HPML programme across secondary schools. This research was designed with a view to providing insight that may contribute to continued improvement of the programme design and delivery as well as adding to the wider evidence base around effective leadership development.

A number of research studies show that effective school leadership is key to raising teaching standards and ultimately improving pupil achievement. Evidence suggests that strong school leadership increases pupil learning, adding between one and two months' progress each year[4]. Leaders have a positive impact through setting direction, establishing and enforcing policies, improving other teachers' pedagogy, and establishing a climate in which teachers can collaborate and learn from each other[5]. A leader's role in supporting teacher development is particularly important, with studies showing that, in the first ten years of their career, new teachers will learn 38% more if they work in schools with a highly collaborative, supportive leadership[6]. Strong leadership is also uniquely predictive of teacher retention, currently the greatest challenge facing headteachers in England[7].

The National College for Teaching and Leadership (NCTL) and Department for Education (DfE) believe that effective middle leaders, i.e. heads of department, heads of year and those in whole school middle leadership roles, are critical for improving the quality and consistency of teaching in schools. However, middle leadership is also highly demanding, requiring individuals to juggle the twin demands of being a collegial subject-specialist and a manager with school-wide responsibilities[8]. Moreover, many middle leaders have no prior experience of managing people, requiring them to learn a new skill set. It is

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4 Scheerens, J. (Ed.). (2012). *School Leadership Effects Revisited: Review and Meta-Analysis of Empirical Studies*. Springer Science & Business Media and Higgins, S., Kokotsaki, D. & and Coe, R. (2012) The Teaching and Learning Toolkit Technical Appendices. Education Endowment Foundation.

5 Supovitz, J., Sirinides, P., & May, H. (2009). How principals and peers influence teaching and learning. *Educational Administration Quarterly* and Wiliam, D. (2016) Leadership for Teacher Learning. Learning Sciences International.

6 Kraft, M. A., & Papay, J. P. (2014). Can professional environments in schools promote teacher development? Explaining heterogeneity in returns to teaching experience. *Educational Evaluation and Policy Analysis*, *36*(4), 476-500

7 Ladd, H. F. (2011). Teachers' Perceptions of Their Working Conditions: How Predictive of Planned and Actual Teacher Movement? *Educational Evaluation and Policy Analysis*, *33*(2), 235–261.

8 Bennett, N., Woods, P., Wise, C., & Newton, W. (2007). Understandings of middle leadership in secondary schools: A review of empirical research. *School Leadership and Management*, 27(5), 453-470

therefore critical that middle leaders are given the support they need to develop and grow into their new role.

1.2 Summary of the programme

The High Potential Middle Leaders (HPML) programme is delivered by Ambition School Leadership (Ambition), formerly known as Teaching Leaders. There are separate programmes tailored for secondary schools (which has been running since 2008/09) and primary schools (which has been running since 2014). As of March 2016, there were a total of 1,419 participants in 562 secondary schools. A new contract, which started in 2016, will deliver training to around 1,170 new participants in secondary schools over two full cohorts by 2019.

The HPML secondary programme is a two-year leadership development programme for high-potential middle leaders working in schools in challenging contexts, which includes schools where the number of pupils eligible for free school meals is above the national average and the school's attainment level is below the national average. The programme aims to help schools retain and develop high-potential staff, improve pupil outcomes and close achievement gaps for disadvantaged children.

To achieve this, the programme is delivered via a blended learning approach of face-to-face, peer-to-peer and online learning. A number of delivery mechanisms[9] are used to meet the learning outcomes, including:

- **Seminars** led by experienced facilitators;
- **Coaching with a Development Coach** to support participants to put their learning from the programme into practice;
- **Joint practice development** (JPD) sessions, whereby participants develop practice and present findings on leadership themes themselves, evaluating their own and their colleagues' input as they progress;
- **Residentials** (**one each year of the programme):** five days in year one[10] for an intense learning experience; and

[9] The mix of different programme elements has changed over the years as the programme model has been refined. Therefore the number and content of seminars and the number of joint practice development sessions varies from year to year.

[10] A second, three day residential has been added at the start of the second year of the programme, as a new element from the 2016 programme onwards. The first one is due to be held during academic year 2017-18.

- **Challenge Days**, which bring participants together regionally for national level keynote speakers, workshops, experiential learning, the sharing of participants' learning through Fellow Exchange[11] and peer-supported planning.

In addition, participants of the programme have the opportunity to put their skills and learning into practice in the form of an impact initiative project, where participants set and track progress towards improved pupil attainment within their area of responsibility.

1.3 Objectives of the evaluation and its limits

The detailed evaluation questions included:

- Is the HPML programme reaching the intended target middle leaders and schools?
- What are participants' and headteachers' overall perceptions of the HPML programme?
- What elements of the HPML programme are perceived as most helpful by participants and their headteachers?
- What are participants' and headteachers' perceptions of the impact of the HPML programme?
- Is participation on the HPML programme having an impact on teacher retention?
- Is participation on the HPML programme having an impact on middle leaders' career progression?
- Is participation on the HPML programme having an impact on pupil attainment?

In order to address these objectives, the following research activities were conducted. Detailed technical information is provided in the appendices (Appendix A1.1-1.2).

- Analysis of School Workforce Census (SWC) and National Pupil Database (NPD) datasets (management information provided by NCTL) to ascertain whether the programme is reaching and retaining the intended middle leaders and schools (conducted by Education Datalab).

[11] Participants of the HPML secondary programme are referred to as 'Fellows' by Ambition. Fellow ExChange is a Teach Meet; a TeachMeet is an organised but informal meeting for participants to share good practice, practical innovations and personal insights in teaching.

- Impact evaluation using SWC and NPD datasets to identify whether the HPML programme is having an impact on participant progression and pupil outcomes. This part of the analysis was conducted by Education Datalab.

- Analysis of session evaluation data from participants of the programme[12] provided by Ambition to provide detailed feedback on specific components of the programme. This part of the analysis was conducted by Ipsos MORI.

- Primary research including an online survey of 566 participants in the programme and telephone depth interviews with nine participants and seven headteachers/assistant headteachers and one senior leader to provide data on overall perceptions on the programme.

1.3.1 Limits of the evaluation

When interpreting the findings from this evaluation it is important to bear in mind the following:

Impact evaluation[13]

As with all evaluations, the challenge was to eliminate, as far as possible, concerns that those who take part in the programme are fundamentally different to those who do not take part. Only by doing this can we be confident that differences in outcomes can be attributed to participation in the programme, rather than pre-existing differences between the two groups. For example, it may be the case that headteachers only select those they know are particularly talented, or those they have plans to promote in future, meaning they are more likely than non-participants to be promoted anyway. To address this challenge, a technique called propensity score matching was employed. This involves finding a group of non-participants who are as similar as possible to HPML participants in terms of the variables available in the data e.g. age, experience.

For this method to give us an accurate estimate of the effect of the programme, two assumptions need to be true:

1) The HPML participants and non-participants have been matched on all the characteristics that determine whether a teacher participates in the programme. We cannot check this using our data and it is always possible that other things are affecting participation.

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[12] Please see the limits of the evaluation for detail regarding the cohorts included in the analysis of session feedback data from participants for each specific component of the programme.

[13] For more detail regarding the methodology and associated assumptions, please see Appendix A.1.1.

2) We can find a set of similar non-participants in our data to act as a control group. We provide evidence that this assumption is justified in Appendix A.1.1.

With respect to assumption 1, the very fact that participants are being chosen for the programme and non-participants are not is itself a reason to doubt whether the assumption is justified. Where possible, we therefore restrict our matched control group to middle leaders who do participate in the programme, *but only at a later date.* For example, we might be matching somebody who starts the programme in 2010 to somebody who participates, but only in 2013, with outcomes measured in 2011 and 2012 for both individuals. Because both of these groups eventually participate, there are less likely to be differences between them. In later stages of the analysis we use panel-data methods, which exploit the fact that we follow the same individual across time, to eliminate even more potential differences between participants and non-participants. Different parts of our analysis therefore rely on assumptions of different strengths and we try to highlight this in each section of the report.

Session feedback data

The data included in this report's analysis of the feedback data from participants is summarised in table 1.1.

Table 1.1. Summary of data included in the analysis of feedback data from participants

Programme component	Cohorts included in the analysis of feedback data
Residentials (section 3.2)	- Main residential 2014 - Main residential 2015 - Alternative residential 2015[14] - Main residential 2016 - Alternative residential 2016
Evening seminars (section 3.3)	- 2013 first year[15] - 2013 second year - 2014 first year - 2014 second year

[14] In 2015 and 2016, Teaching Leaders held shorter 'alternative' residential weekends for those who were unable to attend the main residential. These took place over a long weekend and were a condensed version of the main residential event.

[15] According to Ambition, the data recorded pre-September 2013 are unavailable due to the change in data collection modes. From September 2013, data was recorded through an online rather than paper survey.

Programme component	Cohorts included in the analysis of feedback data
	- 2015 first year[16]
Challenge Days (section 3.4)	- Includes the Challenge Days that took place during 2015
Joint practice development (JPD) (section 3.5)	- 2013 first year - 2013 second year - 2014 first year - 2014 second year - 2015 first year

The session evaluation feedback was collected directly by Ambition and provided to Ipsos MORI as Excel outputs. Where possible, this analysis was supplemented with the use of independent data collected by Ipsos MORI in the form of qualitative depth interviews and an online survey.

It is important to caveat that the data are not complete – where data is not included, this is due to the session not being delivered for that cohort, or because the question was not asked in reference to the specific session

Online survey

When interpreting the online survey findings, it is important to remember that the results are based on a sample, rather than the entire population of HPML (secondary) programme participants. In total, only a proportion (a sample of 566 participants of the total population (2,131 in Ambition's database[17]) completed the survey. As such, we cannot be certain that the results obtained are the same as those we would have obtained if all 2,131 participants completed the survey ("the true value"). In addition, when results are compared between separate groups within a sample, the difference may be "real" or it may occur by chance (because not everyone in the population has been interviewed). For more detail regarding statistical reliability, please see Appendix A.1.2. Only significant differences are reported in the report.

[16] The data for this component was provided by Ambition in autumn 2016, therefore data for sessions held in 2016 (i.e. attended by participants on the 2015 second year cohort, and participants on the 2016 first year cohort) were not ready for analysis.

[17] This sample was provided in January 2017, and included all participants who had enrolled on to the HPML secondary programme between 2008 and 2016 and provided an eligible email address.

It is also important to consider that findings are based on a respondents' *perceptions* of the programme.

Qualitative interviews

The qualitative findings are based on nine interviews with participants and eight headteachers/senior school staff. They are not designed to be representative of all participants and their headteachers. The qualitative research is intended to be illustrative, providing insight into the perceptions of the programme among a small selection of participants and their headteachers. The sample is self-selected, in that interviewees were recruited at the end of the online survey and provided their contact details to set up an interview. Before conducting the participant interview, agreement from the corresponding headteacher to be interviewed also was sought.

Therefore, claims cannot be made about the extent to which the findings may be generalised to all participants in the programme and their headteachers. Instead, we present the broad range of views given and where appropriate make reference to the overall balance of opinion or general consensus. The paired interview approach is also aimed at identifying similarities and differences in participants' and their corresponding headteachers' views of the value or impact of the programme. Verbatim quotes are used throughout the report in order to illustrate particular bodies of opinion, but these should not be taken to define the opinion of all participants.

2. Eligibility of participants and reaching the 'right' middle leaders

Summary of findings

The first cohort of participants joined the programme in London in 2008. Since then the programme has been rolled out to other regions and it has been operating nationwide since 2012 (table 2.4).

The HPML programme is aimed at high-potential middle leaders in schools that serve a deprived intake or those that are low performing.

The middle leaders participating in the programme:

- Tend to be fairly young, with a median age 32 (figure 2.5).
- Tend to be fairly new to the profession, with the mean number of years since achieving qualified teacher status being 7.13, compared to 13.79 for other middle leaders in participating schools (table 2.1).
- Tend to experience 30% higher pay growth than similar non-participants by the year after the programme (table 4.6).

Taken together, these findings suggest that the programme is reaching the intended target of high potential middle leaders.

Of the schools joining the programme:

- 91% were eligible and 9% were ineligible (table 2.5).
- The proportion of ineligible schools varied from 17% in 2008 (3 out of 18 schools) to 2% in 2012 (3 out of 130). In 2016, the most recent year for which data is available, 12% of schools joining the programme were ineligible (table 2.5).
- Participating schools were more likely to be sponsored academies (41%) than schools in general (12%), more likely to be in the bottom two Ofsted grades (36%) than schools in general (31%), tend to have higher rates free school meals pupils (29% compared to 15%) and a lower Best 8 points score (238 compared to 296) (table 2.6).

Ambition explained that ineligible schools were sometimes allowed to participate where they had recently been eligible or where their participation contributed to the viability of providing the programme in a specific area. Taken together, these findings suggest that, while the programme is, in the vast majority of cases, reaching the intended target schools, this is not always the case.

2.1 Profile of participants

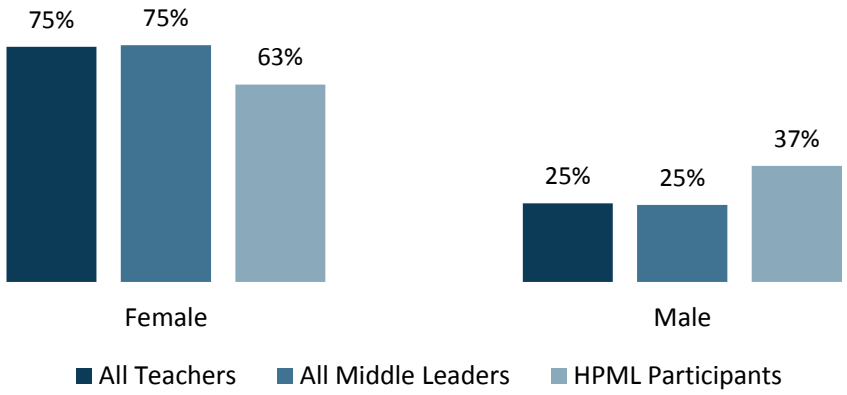
This section of the report looks at the characteristics of HPML participants, relative to middle leaders in their own schools, middle leaders in all schools and relative to the teaching workforce in general. Understanding who takes part in the HPML programme provides important context for the impact evaluation in section 4. If, for example, the programme is being used to help inexperienced teachers to make the transition into middle leadership, or as a remedial measure to help support struggling departments, outcomes in participants' departments may be expected to be worse than those in non-participating departments even in the absence of the programme. If, by contrast, the programme is being used to try to reward and retain the most effective middle leaders, the opposite may be expected to be true. The analysis here, therefore, helps to inform the design and interpretation of the impact evaluation.

2.1.1 Age of participants

Figure 2.1 shows the gender of HPML participants relative to the gender of middle leaders in general and teachers in general. In this analysis, a 'middle leader' is defined as any individual whose total pay is above the 40th percentile, but who is not a headteacher or an assistant headteacher.[18]

[18] There is no standard definition of a middle leader and the School Workforce Census does not include an indicator of middle leadership status. Rank in the pay distribution is arguably the best way to measure seniority in the School Workforce Census data. By taking everybody above the 40th percentile of that distribution four-tenths of the most junior teachers in the workforce are excluded from the analysis. Excluding those who are listed as head teachers or assistant head teachers ensures that the analysis does not also capture senior leaders. Our argument is that this leaves us with what people would intuitively recognise as middle leaders.

Figure 2.1: Gender of HPML participants[19]



Source: HPML Management Data and SWC.

As figure 2.1 shows, females are under-represented by 12 percentage points, relative to both middle leaders and teachers in general. Males are correspondingly over-represented.

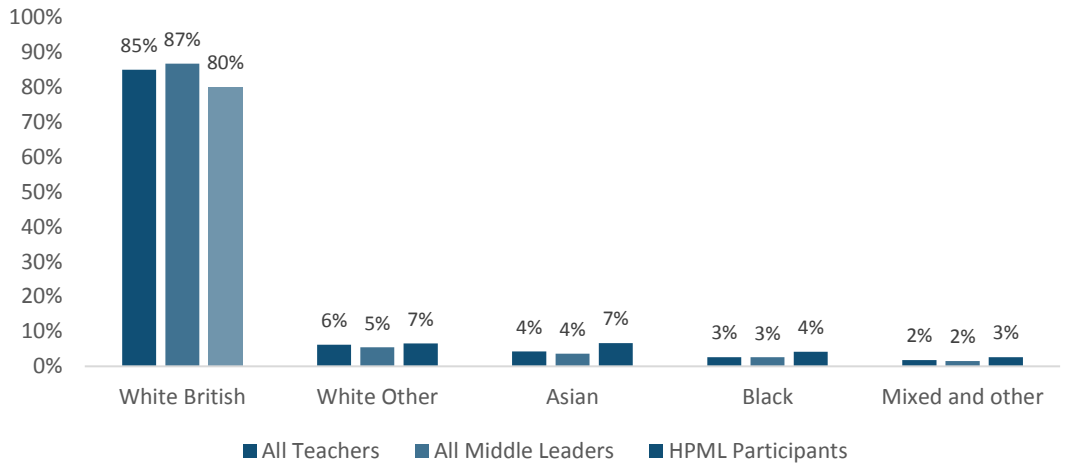
2.1.2 Ethnicity of participants

Figure 2.2 shows the ethnic breakdown of HPML participants, revealing that all ethnic minority groups are over-represented relative to both middle leaders and teachers in general. White British people are correspondingly under-represented relative to middle leaders and teachers in general[20].

[19] Note: N of HPML participants= 1,567. Figures for All Teachers and All Middle Leaders calculated using all secondary teacher/years 2010-2015. Figures for HPML participants calculated using all participants 2008-2015. Columns may not add to 100 due to rounding.

[20] The HPML programme is required to demonstrate "effectiveness in recruiting a diverse group of participants with respect to ethnicity". A key performance indicator for the programme requires that 15% of each cohort are black, Asian and minority ethnic

Figure 2.2: Ethnicity of HPML participants[21]



Source: HPML Management Data and SWC.

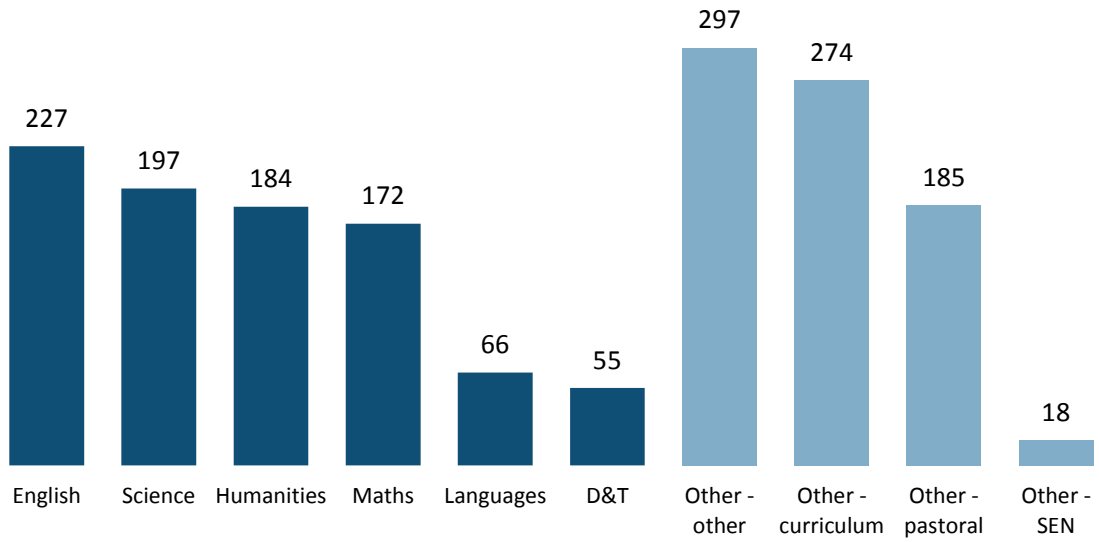
The next two figures show the responsibilities of HPML participants.

2.1.3 Middle leadership responsibilities of participants

Figure 2.3 shows the middle leadership responsibilities that participants listed when joining the programme. The first six bars include all participants who listed an explicit departmental middle leadership position (e.g. Head of History), which amounts to 53.8% of all participants. English, Maths and Science are the most common individual-subject-departmental middle leadership positions, reflecting both the size of these compulsory-subject departments and the importance placed on these subjects by schools. The humanities, languages and design & technology (D&T) clusters are the next largest.

[21] Note: Percentages as a proportion of those with known ethnicity. N (HPML participants) = 1,539.

Figure 2.3: HPML participants' middle leadership responsibilities[22]



Source: HPML Management Data.

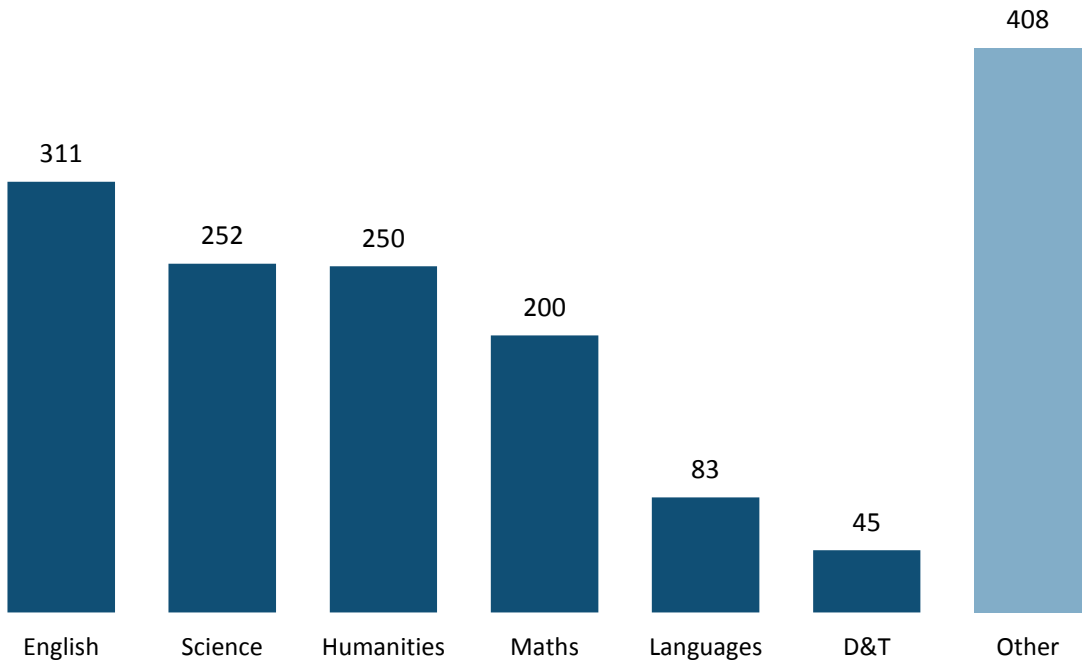
The last four bars in figure 2.3 include all participants who listed a non-departmental middle leadership responsibility, which amounts to 46.2% of all participants. Those with cross-cutting curriculum or pastoral (e.g. Head of Year) responsibilities are the most common.

2.1.4 Classroom responsibilities of participants

Figure 2.4 looks instead at the classroom teaching responsibilities of participants and categorises them based on the subjects in which they do the most teaching.

[22] Note: N= 1,675. Allocation of participants to broad subject departments done by the analyst using free text field from Ambition Management Data. See Appendix A.1.1 for more on method used.

Figure 2.4: HPML participants' main teaching area[23]



Source: HPML Management Data and SWC.

The results here are broadly comparable, suggesting those with non-departmental middle leadership responsibilities in figure 2.3 are drawn fairly evenly from the other departments, in terms of where they do their teaching.[24]

2.1.5 Age, tenure and experience on entry

The next three figures display the age, tenure and experience of participants on entry to the programme.

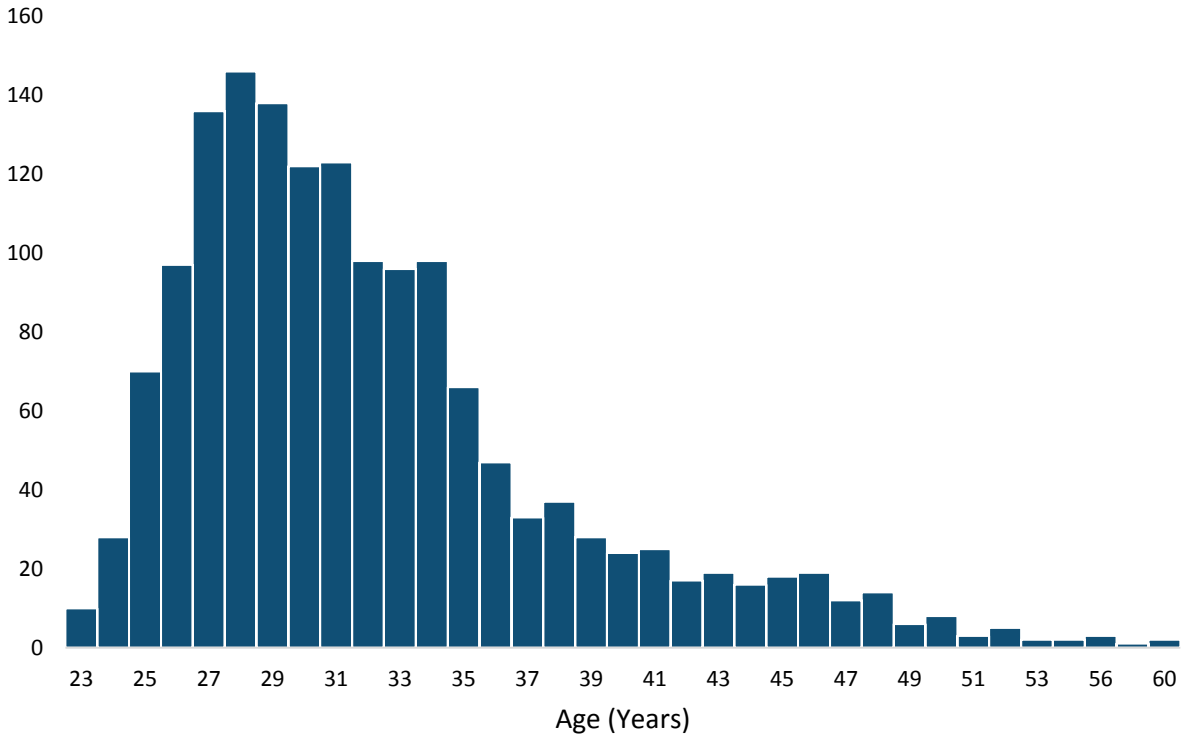
Figure 2.5 shows that participants tend to be relatively young, with half of them being under the age of 32. There are however a number of participants in their forties and fifties at the time they enter the programme, suggesting either that some participants are late

[23] Note: N= 1,549. Main teaching area defined as the subject in which a participant does most hours of teaching in the year of entry to the programme. "Other" includes all those who could not be allocated to one of the first six departments, see Appendix A.1. for more information on method used.

[24] More detail on how participants were grouped into departments and the content of the "Other" category can be found in Annex A.1.1.

entrants to middle leadership or that they already have experience in middle leadership when they join.

Figure 2.5: Age of HPML participants on entry to programme[25]

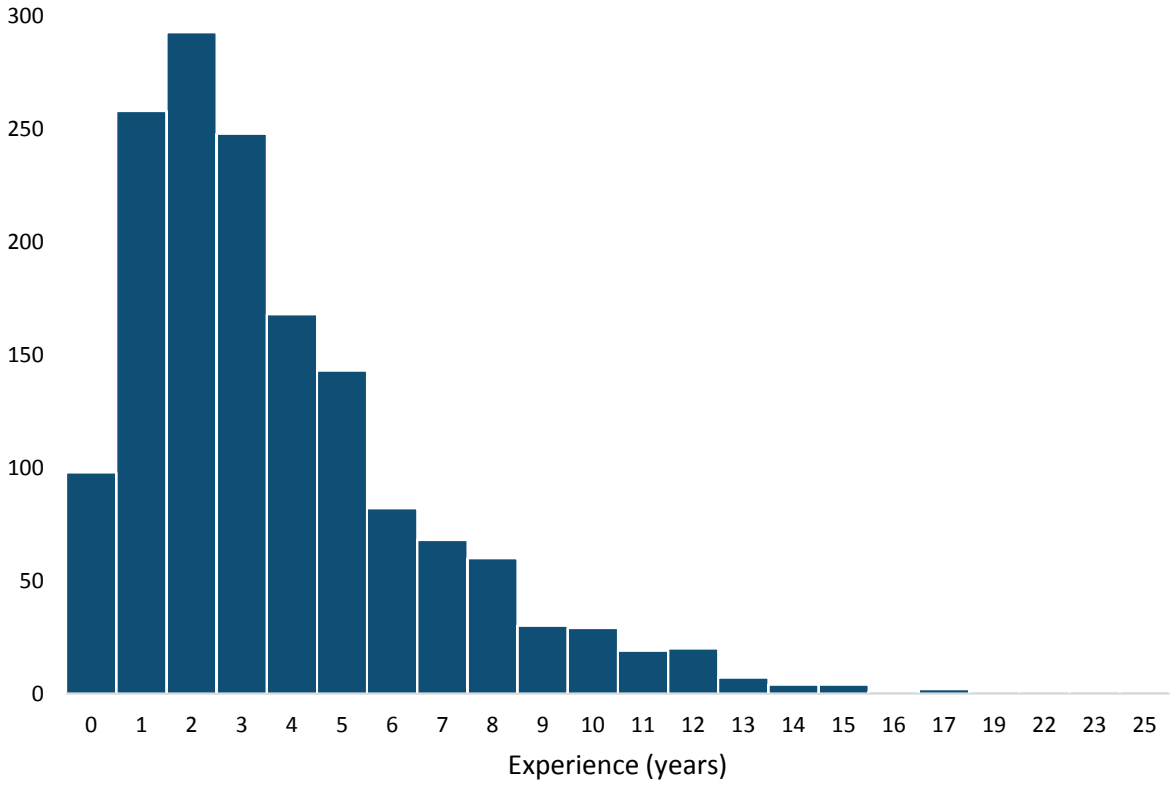


Source: HPML Management Data and School Workforce Census.

Figure 2.6 adds to this picture by showing a proxy for experience: the number of years since participants achieved qualified teacher status. Age is rounded to the nearest whole year, so those with 0 years of experience qualified less than six months prior to joining the programme, which may suggest they trained through a school-centred route. It shows that most participants have qualified fairly recently, with the majority having qualified less than 6.2 years ago. As with the last figure however, there are also a minority of participants with ten or more years since qualification which suggests middle leaders who qualified up to 17 years ago are participating on the programme.

[25] Note: N= 1,567. Age is rounded to nearest whole year.

Figure 2.6: Years since qualification on entry to programme[26]

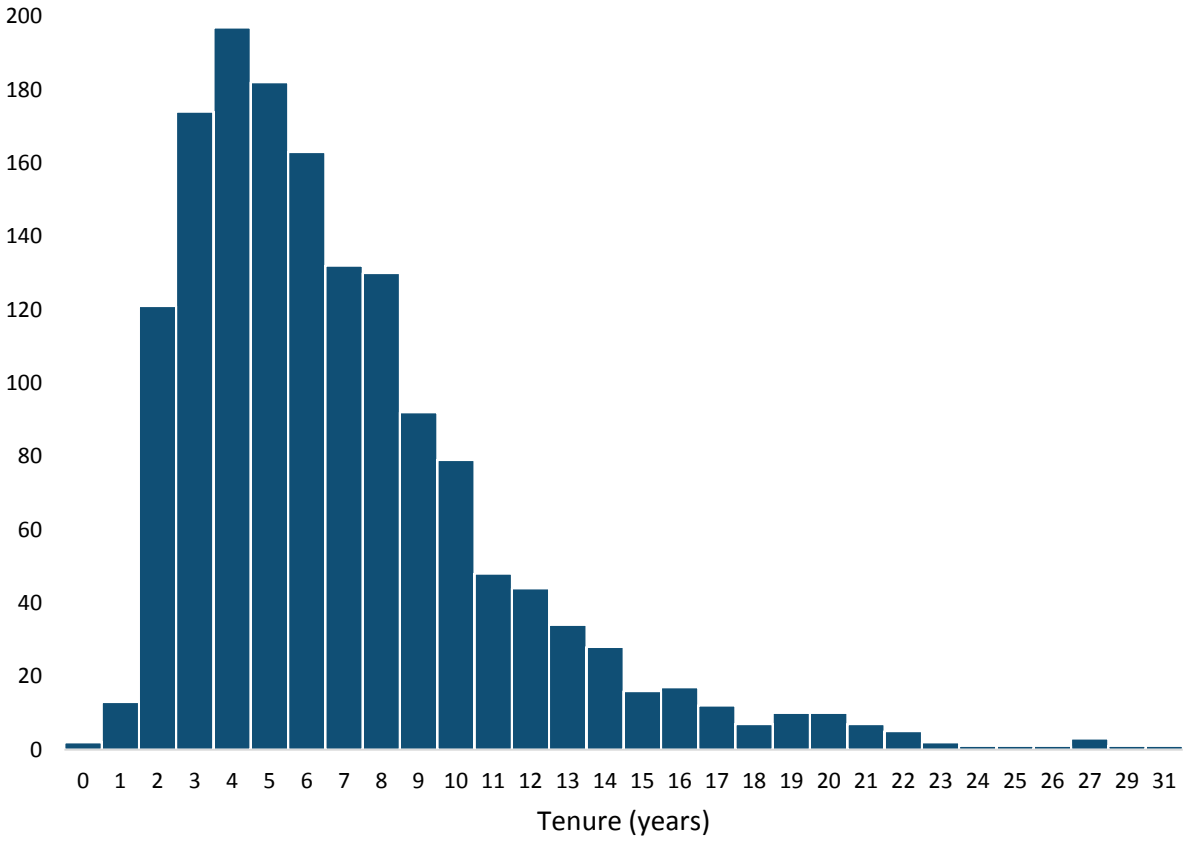


Source: HPML Management Data and School Workforce Census.

Figure 2.7 shows the number of years (rounded to the nearest whole number) that participants had been at their school at the time they joined the programme. Again, participants tend to be relatively new to their school, with the majority having arrived within the last 3.2 years.

[26] Note: N= 1,533. Qualification defined as receipt of Qualified Teacher Status. Years since qualified rounded to nearest whole year. Experience of 0 means participant had qualified for less than half a year at time of entry. NB: teachers may not have worked continuously since qualification.

Figure 2.7: Years at current school on entry to programme[27]



Source: HPML Management Data and School Workforce Census.

Table 2.1 puts participants' experience and tenure characteristics (column 1) in context by comparing them with other middle leaders in their schools (column 2). It shows clearly that participants are on average newer and less experienced than other middle leaders in their schools.

[27] Note: N= 1,538. Tenure is defined as the number of years that a participant had been at their school on entry to the programme. Tenure is rounded to the nearest whole year. A tenure of 0 means participant had been at their school for less than half a year at time of entry.

Table 2.1: Comparing characteristics of HPML participants with non-participants[28]

	(1)	(2)	(3)	(4)
	Participating Middle Leaders	**Middle Leaders in Participating Schools**	**Teachers in Participating Departments**	**Teachers in Participating Schools**
Mean Years Tenure	3.89	6.94	4.95	5.12
Mean Years Experience	7.13	13.79	10.21	10.89
QTS	-	-	93%	92%
Permanent Contracts	-	-	90%	89%

Source: HPML Management Data and School Workforce Census.

However, columns 3 and 4 show that this patterns does not hold when comparing teachers in participating and non-participating departments. This pattern of less experienced middle leaders from otherwise comparably experienced departments suggests that the HPML programme is being used to help teachers make the step up to middle leadership.

Comparing the proportions of teachers with Qualified Teacher Status (QTS) and permanent contracts in participating and non-participating departments reveals no major differences, suggesting that the HPML programme is not being used as a tool for departments that are struggling with retention or recruitment.

2.1.6 Participation in HPML programme

Participation in the programme is a joint decision between Ambition, the potential participant and senior leaders in the potential participants' school. Table 2.2 presents the characteristics of headteachers that choose to participate with the programme, relative to headteachers in general.

[28] Note: All columns include participants. Data pooled across different years. All departments and schools single weighted, even if multiple participants in a single year. Middle leaders defined as those with pay >40th percentile pay within a school and not senior leadershio team (SLT), see Annex A.1.1. for more detail. Annex table 1.5 also shows standard deviations for these figures.

Table 2.2: Comparing headteachers in participating and all schools[29]

	Headteachers in participating schools	Headteachers in all Schools 2015/16
Mean Age	49.1	48.6
Mean Tenure (Years)	8.6	8.4
Mean Experience (Years)	24.6	23.7

Source: HPML Management Data and School Workforce Census.

Table 2.2 shows few differences between headteachers that choose to participate with the programme and headteachers in general in terms of age, tenure and time since qualification (experience).

A final consideration is whether participants are taking part in the programme alongside peers at their school ('clustered entry') or individually ('individual entry').

Table 2.3 divides participants joining the programme into four categories:

- clustered entry from a school which has not participated in previous year (column 1);
- clustered entry from a school which has participated in previous years (column 2);
- individual entry from a school which has not participated in previous years (column 3) and
- individual entry from a school which has participated in previous years (column 4).

[29] Notes: Experience is measured as time since QTS was awarded. Teachers may not have taught every year since qualification. If schools have more than one participant, then headteachers are counted more than once.

Table 2.3: Patterns of HPML participation within schools [30]

	(1)	(2)	(3)	(4)
	First clustered participant (%)	Subsequent clustered participant (%)	First single participant (%)	Subsequent single participant (%)
2010	57	0	43	0
2011	43	17	33	7
2012	36	24	31	8
2013	40	23	23	14
2014	30	33	21	16
2015	27	39	16	18

Source: HPML Management Data.

Table 2.3 shows that clustered entry has become more common over time and suggests that new entrants are increasingly concentrated amongst schools that have already participated in prior years.

2.2 Eligibility and take-up

This section looks at the types of schools that are participating in the HPML programme, providing an analysis of their location, characteristics and intake. This includes an analysis of how the programme has grown over time, how it has been rolled out across the UK and how the eligibility criteria have been applied. It therefore provides useful information about how programme resources have been allocated.

Table 2.4 shows the number of schools with a new participant joining in each Government Office Region each year.

[30] Notes: Clustered participation means joining the programme at the same time as another middle leader in the school. First participant means the participants are amongst the first cohort in their school to take part.

Table 2.4: Number of schools with a new participant joining by year and region

	2008	2009	2010	2011	2012	2013	2014	2015	2016
London	18	36	39	44	41	53	45	51	39
East England	0	0	2	9	7	6	18	19	14
South East	0	0	2	5	8	24	16	21	16
South West	0	0	1	1	0	6	3	17	10
North West	0	0	0	22	37	54	52	56	42
Yorks & Humber	0	0	0	2	16	24	30	31	21
West Midlands	0	0	0	0	15	25	35	37	29
North East	0	0	0	0	4	10	15	21	10
East Midlands	0	0	0	0	2	10	9	17	18

Source: HPML Management Data and School Workforce Census.

Table 2.4 highlights how the programme has grown, starting with the first cohort in London in 2008. The HPML was then gradually rolled out to other regions in the South and East before expanding nation-wide in 2012. Since 2015 the programme has consistently had at least ten new joiners in each region in each year. Despite having one participant as early as 2010, the South West has seen the slowest growth in joiners and, along with the North East, had the lowest number of joiners in 2016. London and the North West have had consistently high levels of joiners relative to other regions.

The HPML programme is targeted at schools serving disadvantaged intakes and/or areas with poor educational outcomes. The eligibility criteria have changed from year to year and are set out in Appendix A.1.2. Table 2.5 shows the proportion of schools which had a participant join the programme each year that were either eligible or ineligible.

Table 2.5: Eligibility of joiners by academic year

	2008	2009	2010	2011	2012	2013	2014	2015	2016
Schools joining	18	36	44	83	130	212	223	270	199
Not eligible (n)	3	2	2	7	3	19	23	22	23
Not eligible (%)	17	6	5	8	2	9	10	8	12

Source: HPML Management Data, School Workforce Census and National Pupil Database.

As displayed in table 2.5, there is an upward trend in the proportion of ineligible schools joining the programme each year between 2008 and 2013, levelling off thereafter.

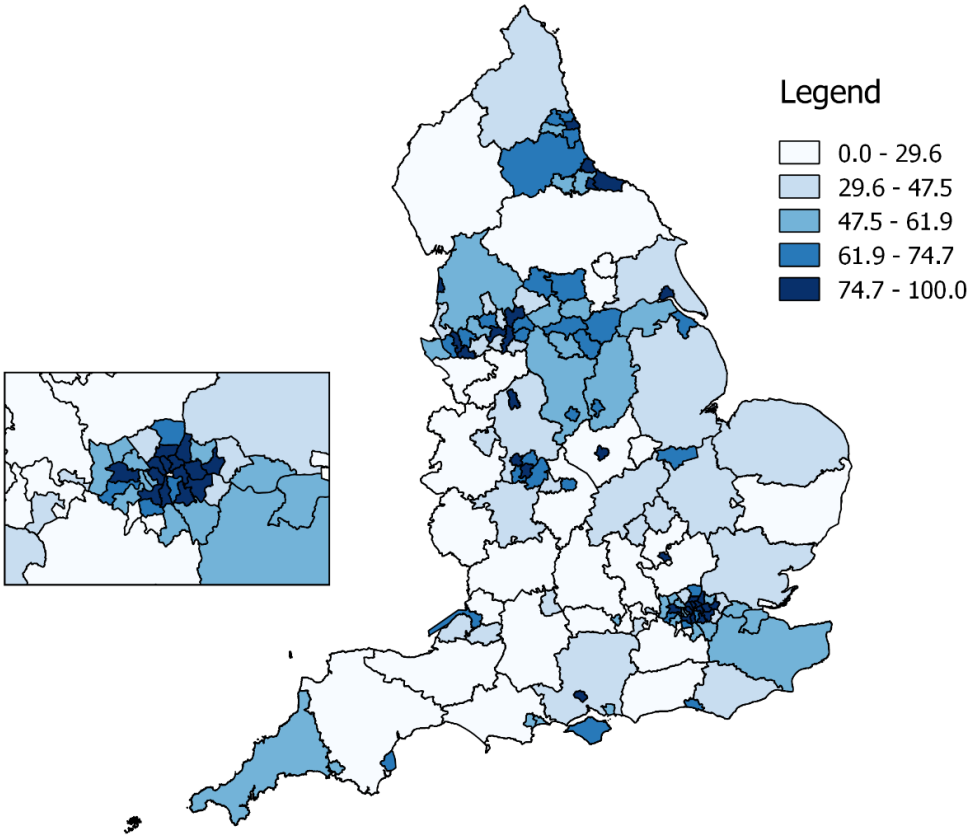
Ambition provided three explanations:

1. Ambition make decisions about eligibility using the most recent GCSE results data but these are sometimes revised at a later date.
2. Where schools are just below the eligibility criteria, but have previously been eligible and have participated in the programme they will sometimes work with the school anyway.
3. As the programme requires participants from different schools to collaborate they will sometimes allow a middle leader from an ineligible school to participate to make the programme viable in a local area. Looking back at Table 2.4, the years with the highest proportion of ineligible schools are also the years before the East, South East and South West regions became established, which is consistent with this explanation.

In addition to these exceptions there are technical reasons why this analysis of eligibility may differ from any that Ambition School Leadership use. For example, when schools merge there is need to make assumptions about which one of the merged schools represents the “true” predecessor school. To the extent that different conventions are adopted this could lead to disagreement. Further discrepancies might also arise from the fact that our analysis is based on the underlying national pupil database, whereas Ambition School Leadership use the data tables, which have already been through one stage of processing.

The next three figures map the distribution of eligibility and participation by local authority in the 2015/16 academic year.

Figure 2.8 Percentage of Schools Eligible by Local Authority in 2015/16 [31]

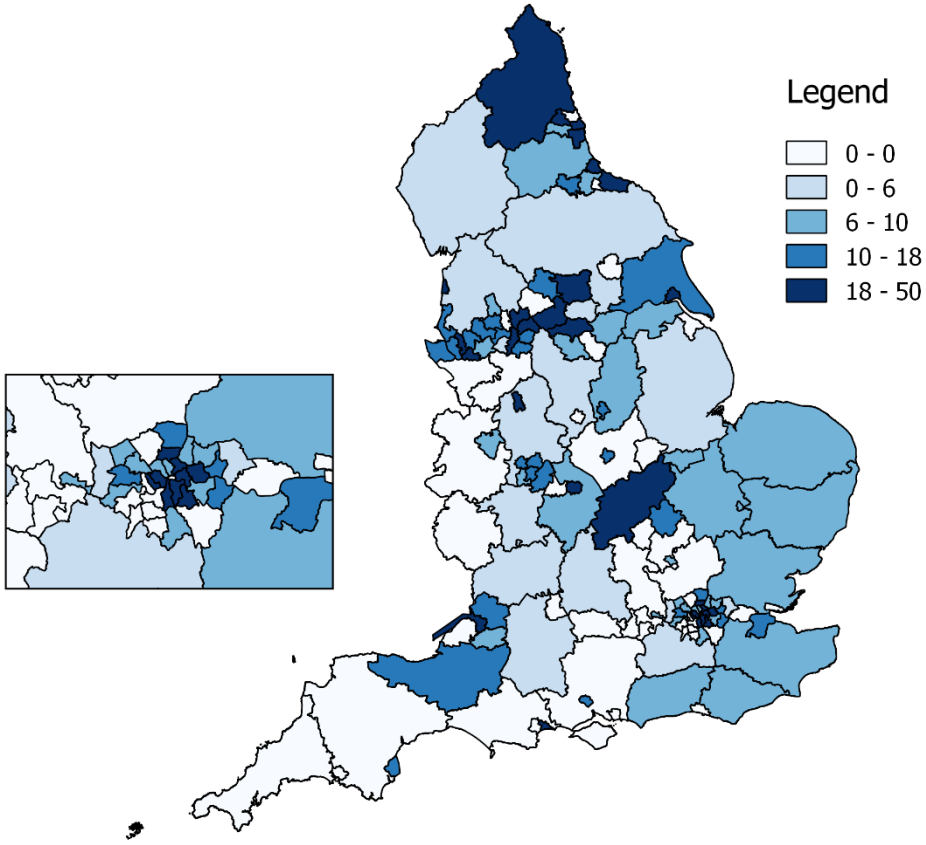


Source: HPML Management Data and School Workforce Census.

Figure 2.8 shows a clear concentration of eligible schools in the large urban areas, where 75% or more of secondary school are often eligible. Larger, more rural counties by contrast often have less than 25% eligibility.

[31] Note: shows eligibility as a proportion of all schools in a local authority area in 2015/16 using the 2015/16 eligibility criteria.

Figure 2.9 Percentage of Schools Participating by Local Authority in 2015/16[32]

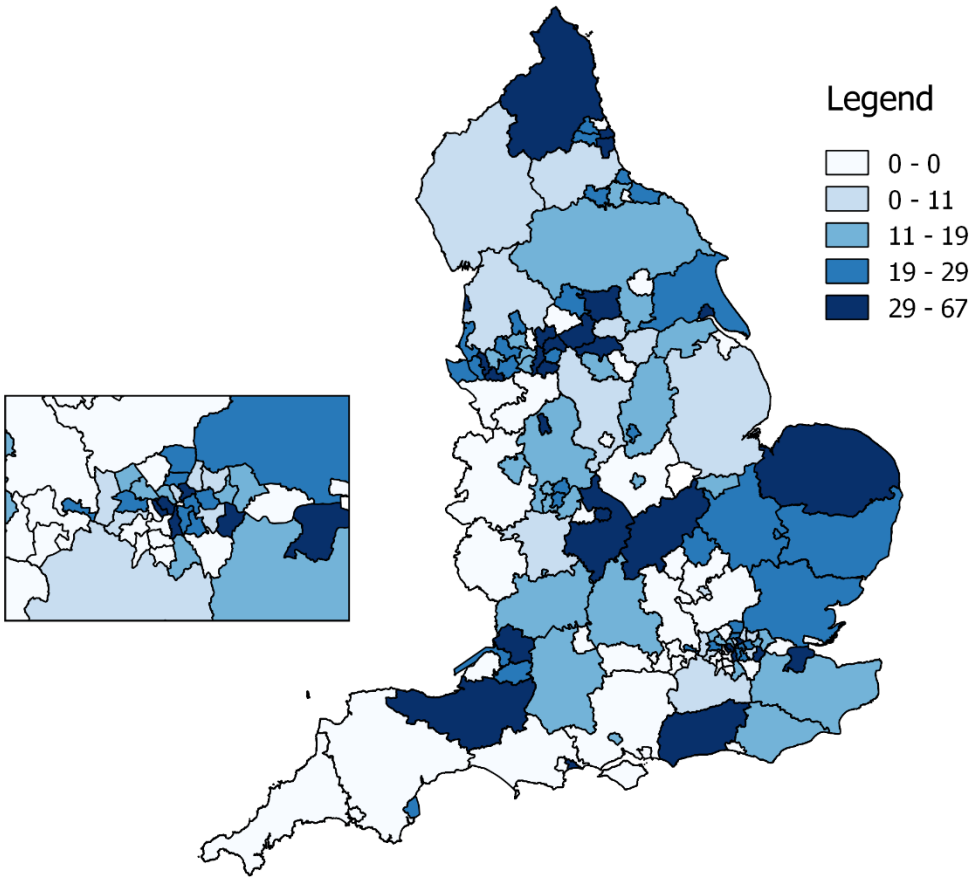


Source: HPML Management Data and School Workforce Census.

Figure 2.9 shows participating schools as a proportion of all schools in each local authority area. The darkest blue now represents a smaller proportion than in the last map. The pattern is, however, much the same, except for some larger rural counties which did not have a high proportion of eligibility but do have a relatively high level of participation.

[32] Note: shows participation as the proportion of all schools in a local authority area in 2015/16 using the 2015/16 eligibility criteria.

Figure 2.10 Percentage of Eligible Schools Participating in 2015/16



Source: HPML Management Data and School Workforce Census.

This pattern is accentuated further in figure 2.10 which shows participation as a proportion of eligible schools, with the East Midlands, East of England, North East England and Bristol Channel areas having particularly high participation rates.

Taken together, these three figures (2.8-2.10) suggest that schools in areas where fewer schools are eligible are more likely to participate.

Table 2.6 compares the characteristics of all schools, eligible schools and participating schools.

Table 2.6: Characteristics of all, eligible and participating schools[33]

		All Schools	Eligible Schools	Participating Schools
School Type	Academy Converter	46%	58%	24%
	Academy Sponsor Led	12%	6%	41%
	City Tech College	0%	0%	0%
	Community	21%	17%	18%
	Foundation	11%	8%	9%
	Free schools	0%	1%	0%
	Voluntary Aided	9%	9%	7%
	Voluntary Controlled	1%	2%	1%
Ofsted	Outstanding	21%	27%	16%
	Good	42%	45%	40%
	Satisfactory	27%	21%	29%
	Unsatisfactory	4%	2%	7%
	No judgement	6%	5%	9%
Demographics	Mean Pupil roll	1024	929	1023
	% in conurbations	47%	53%	67%
	Mean % FSM	15%	44%	29%
	Mean % FSM6	28%	36%	50%
	Mean % minority	24%	36%	46%
Attainment	Mean 5 ACEM	58%	48%	50%
	Mean Best 8 score	296	274	238

Source: HPML Management Data, National Pupil Database, Edubase. Notes: each observation is a school/year.

Participating schools are more likely to be sponsor-led academies or in the lower Ofsted grades than eligible school or schools in general. Participating schools are also more likely to be large conurbations (urban areas). In line with the eligibility criteria, participating schools also tend to have twice the proportion of disadvantaged pupils and noticeably lower attainment than schools in general.

2.3 Perceptions from qualitative telephone interviews

Qualitative telephone interviews were conducted with nine individuals who had participated or were still participating in the programme, as well as interviews with six

[33] Note: N (participating schools) = 1,016. This counts each school once for each year the school had at least one new participant join the programme.

headteachers, one assistant headteacher and one senior leader (who was the participant's line manager) of those schools[34]. The research team was unable to reach the final headteacher to interview.

School context

The schools the headteachers and respondents worked in varied in size from very small to large. Both headteachers and respondents described the schools they were working in to be located in deprived areas (e.g., low socio-economic status, high unemployment) with students from disadvantaged backgrounds with low aspirations and low attainment. Headteachers and respondents reported high percentages of pupil premium, from 40% to 80%, and a significant number of students with special education needs (SEN).

2.3.1 Perceptions from headteachers on choosing the 'right' programme for the 'right' participants

Headteachers reported that they learned about the programme in a variety of ways, including through their own active searching for middle leadership programmes, social media (Twitter), teacher newsletters, networking with other headteachers (e.g., within their Academy Trust, during local headteachers' meetings), being approached by Ambition to speak with their school/MAT, the programme being available at schools they had previous positions at, and their own experience on the Future Leaders programme (also run by Ambition). Headteachers felt that the Ambition School Leadership programmes fitted their needs well, but were also aware of other middle leadership programmes:

> "I put one teacher on it as a pilot and it had good impact, and I decided it was the thing for me. I like the fact that it takes a class or year and works with them, and I like that the high quality mentoring for the middle leaders. There are three things about it: provides a bit of confidential mentoring, a strong focus on outcomes, and a chance for them to network and get ideas."

> "When looking at programmes to choose, it seemed like this programme was more long term and invested in that person more. We liked that it was out of school hours so it was not taking teachers out of class and we also liked that it was two

[34] This group is referred to simply as 'headteachers' in the report of qualitative findings for simplicity but does include the views of the assistant headteacher and senior leader.

years not one. Plus it's accredited[35] for the person taking part - so they get something out of it that can benefit them in their future."

For several schools, this was the only middle leadership training they offered while one headteacher said their school offered a variety of training programmes which would be closely matched to the requirements of each individual.

Although headteachers described different ways of offering the programme to their middle leaders, for example through an annual offer to their staff or through one-to-one discussions, they emphasised the need to choose the 'right' individuals to go on the programme. Indeed when one headteacher said they would recommend the programme this was caveated with 'for the right people'.

In most cases, headteachers set up an informal internal application process in which middle leaders expressed their interest by meeting with the headteacher or submitting a written note to them about their interest in the programme. In one case, there was an official internal application process. The headteacher made the initial decision about which middle leaders would go on to apply. Common characteristics that headteachers used to describe suitable individuals were 'independent', 'motivated', 'ambitious', 'driven' and 'self-sufficient'. They felt that having these characteristics was an indication of their likely success from participating in the programme and that they were less likely to require support. When asked how they chose the participants to go on the programme, several headteachers described what they were looking for:

> "Those who were consistently very good in the classroom and who had leadership potential that could develop within schools…They have potential to lead departments."

> "We only put teachers on the programme who think they can manage it. People have to be motivated themselves."

One headteacher described how they learned more about the sort of individuals they should put forward for the application after going through the process previously:

> "I learnt a bit from the first time around. I originally put people forward for the programme whilst I offered them a job to start in September. I learned I needed to know more about the people before putting them forward."

[35] Over the course of the programme, participants have the opportunity to gain a National College accreditation: the National Professional Qualification for Middle Leadership (NPQML). The content for the qualification is covered within the sessions of the programme. In addition, participants also have the opportunity to work towards a Master's degree.

Generally headteachers knew very little about the application process itself. They were typically aware of an online application as well as an interview and assessment day. One headteacher felt that the application process 'made them think about who they were' and praised the process as 'rigorous'. Headteachers seemed unsurprised when some of their middle leaders were not accepted onto the programme. They often saw this as a positive indication of the rigor of the application process:

> "A lot comes down to the person doing the application – I wasn't surprised that the one person didn't get on."

> "I would say the two people they turned down were the right people to turn down, they both weren't ready - so I think [the application process] is probably pretty rigorous."

As a point for recommendation, one headteacher felt that the application process could be more open:

> "I think the application process could be more transparent because one teacher applied and didn't get on the programme and I didn't know until I asked [the teacher]."

Headteachers seemed to identify individuals who were ready to develop their career but a number of headteachers also described how putting teachers on the programme was related to efforts to retain them as they progressed their careers:

> "It's hard to recruit in the area so it was important to keep them."

> "Not only does it give people skills, but it also shows commitment and retention. Recruitment is a huge challenge in education right now and to lose good teachers is hard."

2.3.2 Perceptions from respondents on their motivations and the application process

Most of the respondents were unaware of many other middle leadership programmes and most had never been offered or completed any formal leadership training, though they had completed training related to teaching.

In line with the characteristics described by the headteachers, many of the respondents saw themselves to be driven and organised individuals. When asked about their motivations to participate in the programme, there were typically two overarching reasons. First, there was a practical point of view around their current circumstances or desire to develop their career:

> “It just came at the right moment because I’d just taken on a Head of Department role, so it made perfect sense to have some leadership training at that time.”

> “If it's going to improve my career, it's a logical step.”

This went hand-in-hand with aspects of the programme that they felt would help them achieve better career development opportunities such as the programme’s reputation and accreditation nationally, as well as the opportunity to build a network.

Second, several respondents felt a moral push to participate in the programme:

> “It was that sense of wanting a bigger goal and to do some good in the world and affect peoples' lives who need it – it matched well with Teaching Leaders and their emphasis on closing the gap between the haves and have-nots. I don't think I could commit to the programme if it didn't have that.”

Overall, respondents described the application process as challenging, even exhausting, but that it felt ‘elite’ and ‘reassuringly professional’. Due to the rigor, some felt that it effectively ‘weeded out’ those who were not suited for the programme and provided an indication about expectations for the rest of the programme:

> “I thought the application process was perfect – I think it was good to put us under pressure, it weeds some people out.”

> “It is designed to put you on the spot, if you knew what was coming you would answer completely differently. It was the most challenging interview I’ve ever had. It’s very thorough but sets the stage for the rest of the programme.”

For one respondent, the application process linked back to their moral motivation:

> “Having to write about your motives and your moral purpose was good…this reassured me. I liked that we had a face-to-face interview and I liked the style of the interview - it tested open mindedness and ability to think outside the box.”

As such, headteachers felt fairly confident about choosing the right middle leaders to go on the programme and most participants were highly motivated to start the programme.

3. Views on programme quality

Summary of findings

Overall views (section 3.1)

HPML secondary programme survey respondents rated the overall quality of the programme very highly: almost three-quarters of respondents (72%) scored the programme an eight or above on a 10-point scale. In addition, they were highly likely to recommend the programme: slightly more than three-quarters of respondents (76%) scored their likelihood to recommend the programme to other teachers an eight or above. This includes a third (33%) who scored their likelihood to recommend the programme the maximum of ten on a 10-point scale.

When asked about the duration of the programme, just over half of respondents (51%) felt it was just right, compared with 44% who thought the programme was too long and 1% who thought the programme was too short.

Residentials (section 3.2)

Based on the session feedback data, respondents rated the residentials held in 2014 to 2016 very highly: nearly all (93%) of the average scores exceeded the key performance indicator (KPI) score of eight. This view was supported by the qualitative depth interviews, with interviewees referring to the residentials as inspirational and thought-provoking.

Evening seminars (section 3.3)

Overall, the evening seminars exceeded the KPI of eight for the rating of quality in the session feedback data. The stretch of the content for these sessions was rated slightly below this KPI; the lowest average score across the cohorts analysed was 6.9, which notably still sits within the top 40th percentile on a 10-point scale. The findings from the qualitative depth interviews with programme participants were mixed: they enjoyed the opportunity to network and exchange ideas, but also highlighted that the topics of the seminars were not always relevant. The requirement to travel and attend these seminars in their own time was also noted as a challenge.

Challenge Days (section 3.4)

The session feedback data generally suggests that programme participants felt that the Challenge Days met the objectives set for each session. Like the evening seminars, the stretch of these sessions was rated slightly below the KPI of eight. Across the Challenge Days analysed, the lowest score for stretch was 6.9. Overall, the interviewees were positive about the Challenge Days and embraced the opportunities they offered.

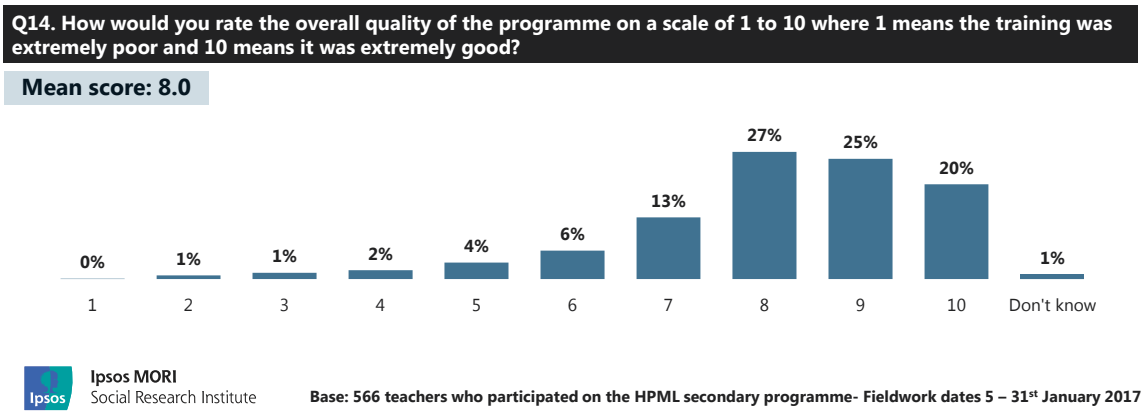
Joint Practice Development (JPD) (section 3.5)

Based on the session data available, the four types of JPD activities – fellow-led (participant-led) facilitation sessions, the case study on prioritisation, peer review of impact initiative projects and school visits – were rated highly by programme participants for discussion and session quality. On an aggregated-level, the cohorts analysed also scored the stretch of the fellow-led facilitation sessions above the KPI of eight. The qualitative depth interviews highlighted, however, that this varied depending on the relevance of the topic, whether the facilitator was engaging, and whether the participants were committed to learning from that session.

3.1 Overall views

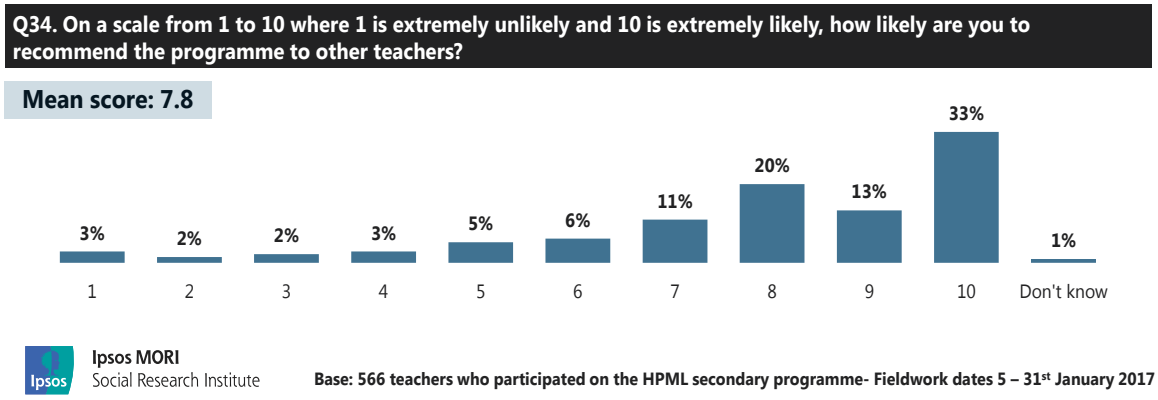
This section examines the overall views of participants on the HPML secondary programme in relation to the quality of the programme's design and delivery. Evidence is drawn from the online survey, the secondary analysis of the session evaluation feedback data provided by Ambition, and the qualitative depth interviews with programme participants and their headteachers.

Figure 3.1: Rating of overall quality of the programme



As figure 3.1 demonstrates, survey respondents rated the overall quality of the HPML secondary programme very highly, with a mean score of 8.0. Fewer than one in ten respondents (8%) scored the programme below six, whilst nearly three-quarters of respondents (72%) scored the programme an eight or above. It appears that tenure was an important factor in relation to the perceived quality of the programme, with respondents who qualified 11 years or more ago, and respondents who have spent more than five years at their school before starting the programme, scoring the programme significantly higher (mean scores of 8.3 respectively) than average.

Figure 3.2: Rating of likelihood to recommend the programme to other teachers



As shown in figure 3.2, a third (33%) of survey respondents scored their likelihood to recommend the programme the maximum of ten on the 10-point scale. This is significantly higher among respondents who spent more than five years at their school before starting the programme (40%), respondents who had already completed their impact initiative project (43%)[36], and respondents who scored the overall quality of the programme a nine or ten (57%). Overall, the likelihood to recommend the programme to was high, with a mean score of 7.8.

Among the nine programme participants interviewed, all of them said they would recommend, or already have recommended, the programme:

> "Absolutely, no hesitations."

> "Yes, definitely."

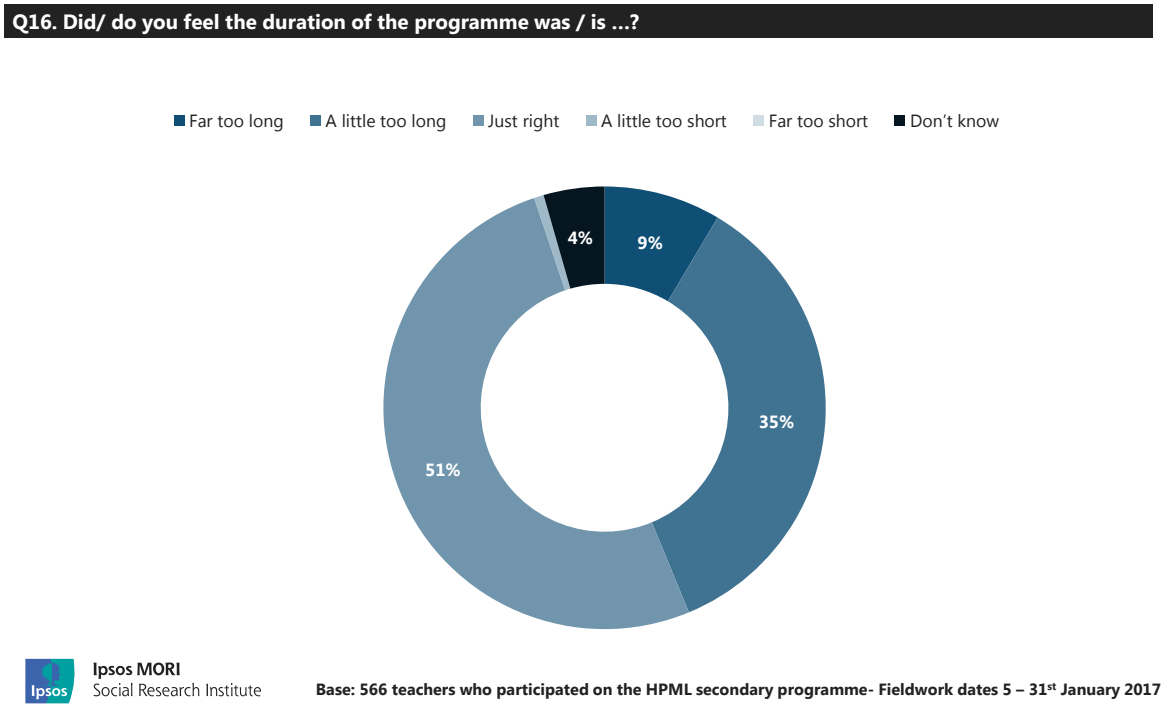
> "Definitely would [recommend], absolutely, 100%."

[36] The impact initiative project is a compulsory element of the programme, but cohorts who were still completing the programme when responding to the survey may not have completed it and a minority of participants also finish the programme having not completed their projects.

Such positive recommendations were consistent despite these respondents varying in terms of the length they had been at their school and whether their initiative project was in progress or completed.

3.1.1 Duration of the programme

Figure 3.3: Duration of the programme



As displayed in figure 3.3, just over half (51%) of survey respondents felt that the duration of the programme was just right, compared with 44% who thought the programme was too long and 1% who thought the programme was too short. The duration of the programme appears to contribute to respondents' perceptions of the programme's overall quality, with a significantly higher proportion (74%) saying the duration of the programme was just right among those who scored the overall quality of the programme a nine or ten. In addition, respondents who had already finished their impact project were more likely to perceive the duration of the programme as just right compared with respondents who had not finished their impact initiative project (61% and 44% respectively).

Interviewed programme participants reported that the programme required a significant time commitment but generally felt that it was worth the benefits of the programme (see section 4.1). Some liked the length of the programme – one felt that having a coach supporting them for two years was very useful because the coach was able to learn about the participant's strengths and weaknesses, as well as their school's context and needs. Another who had completed the course at the time of the interview found the first

year of the programme more useful than the second year. This was due to their interest waning and not finding the content as useful in the second year.

When respondents were asked to describe the activities of the programme without being prompted about specific activities, many freely mentioned the quality of the coaching and the residential. Interviewees felt that their coach played an important role throughout their time in the programme:

> "I can't speak highly enough about my coach. Because it's over 2 years, you build a really good relationship. It's very tailored, she knows me, my context, my strengths and weaknesses. It's been really helpful."

> "Fantastic. Haven't had this good of an experience before. Can open up about problems - mentor gives me direction and helps me find answers for myself."

> "Coach was fantastic. Met twice every half-term. Phone or text, retired headteacher – they'd been there, done it. Gave me sounding board. I didn't always agree with SLT, but he gave me the reasoning behind decisions in schools. Face-to-face were invaluable as well – seeing how I interact with staff and students. Coach got an idea what school was like."

> "I was coached for two years which was immensely useful. It reshaped the way I thought about myself as a middle leader."

> "Having a coach has been really, really helpful. Any time I'm in a difficult situation (either I put myself in one or someone else has), it's been really good to have a helpline about what to do. When you're trying to push change forward in an organisation, it's bound to cause conflict so it's good to have someone with lots of experience. It is helpful and uplifting to speak with her."

3.1.2 Materials

Most interviewees did not freely mention the online training and materials. However, these elements were only introduced in the 2016 programme so many of the interviewees would not have had access to them during their time on the programme. The two that did mention these elements had not yet engaged fully with them:

> "They're currently changing the HPML programme – there's an online module now, with information on how to collect baseline data, useful research methods. I didn't get that until this year and it would have been helpful at the start."

3.1.3 Engagement

The involvement of other school staff and support received from the in-school liaison tended to be minimal; however a number of interviewees felt they did not always need the support:

> "My Teaching Leaders in-school liaison is the Deputy Head, not a lot of support there, but I'm not sure I needed a lot though. We have timetable meetings every week that he doesn't always turn up to so in terms of in-school support, hardly any really."

> "My in-school liaison is not really involved and doesn't need to be because there's no requirement really."

> "School has just agreed to my needs but has not had direct involvement. The headteacher who put me forward was very supportive and has since left; the new headteacher doesn't really know the details. My in-school liaison is very supportive but not involved, just agrees to my needs."

Participants interviewed reported very little engagement from their headteacher besides being generally supportive. Two would have liked more feedback from the headteacher or additional involvement with the senior leadership team:

> "Bit disappointed that the headteacher was not involved much. Never had a chance to talk about what I'm doing in the school. It's not her priority, but would be nice to be recognised."

> "I think the senior leader team needs to be more closely involved to increase whole school impact."

The following sections provide more detail on participants' perceptions of residentials (3.2), evening seminars (3.3), Challenge Days (3.4) and joint practice development (3.5).

Session evaluation feedback

According to Ambition, the evaluation feedback they receive from session evaluations directly feeds into any changes they make to the content of the session. Figure 3.4 summarises Ambition's approach to taking into account the views of participants.

Figure 3.4: Summary of Ambition's use of session evaluation feedback

On an annual basis, Ambition review each session in light of the feedback that participants provided in the session evaluations. They compare this to feedback that they receive from the facilitators who deliver the sessions, and other feedback gathered from regional teams. Feedback is then collated and used to inform how the sessions should be improved.

Furthermore, throughout the year Ambition continually monitor participant feedback from sessions at a regional and national level; this is done both by regional delivery teams as well as the national team who oversee the content of the programme. If a session does not score as highly as they would hope, they use feedback from participants to identify whether it is content or facilitation which needs to be addressed and then make amendments to sessions for subsequent delivery to ensure that the HPML programme quality remains high. Where appropriate, for example if session feedback highlights that the content is not useful for participants, Ambition will stop delivering that particular element. Similarly, if the facilitation of a session falls below KPI in a particular region, training for that facilitator or additional quality assurance of that facilitator will be arranged, for example to aid them in using questioning to stretch participants. New elements may also be introduced based on evidence of effective leadership development practice.

The average evaluation scores for each delivery mechanism are summarised in sections 3.2 – 3.6.

3.2 Residentials

The HPML secondary programme includes two national residentials (five days in year one and three days in year two).

Session evaluation feedback

This section examines the session evaluation feedback data for the previous three years of residential events: held in 2014, 2015 and 2016.

In 2015 and 2016, Teaching Leaders held shorter 'alternative' residential weekends for those who were unable to attend the main residential. These took place over a long weekend and were a condensed version of the main residential event.

Participants of the main residential events and 'alternative' residential weekends were required to complete evaluation forms.

Overall evaluation scores for the residentials held in 2014– 2016

Table 3.1 summarises the evaluation scores based on participants experience of the resientials held between 2014 and 2016.

Table 3.1: Overall evaluation scores for the residentials held in 2014- 2016

Rating	2014	2015	2015 (Alternative)	2016	2016 (Alternative)
Overall session rating	9.5	9.5	9.5	9.4	9.8
Quality of facilitation/ delivery	9.6	9.6	9.8	9.5	9.8
Met objectives		9.5		9.3	9.7
Stretch/ challenge	9.5	9.3	9.2	9.4	9.6
Likelihood you will apply learning/ make a change	8.9	8.8	8.6	9.0	9.5
Relevance to Teaching Leaders' mission	7.9	9.2	8.6	9.1	9.5
Usefulness of working with coach	8.7	8.2		8.2	7.8
Clarity of coaching during programme	8.7	8.6		8.8	8.7
Chance to network with cohort	9.0	8.8	9.2	8.4	8.5
Enjoyability of the social events	8.4	8.7	8.7	8.3	7.8

Base: 140 secondary participants for the 2014 residential, 147 for the 2015 residential, 54 (51 for chance to network and enjoyability of social events) for the 2015 alternative residential, 121 for the 2016 residential, 94 (93 for objectives) for the 2016 alternative residential.

Overall, the residential events feedback analysed scored very highly by participants on a 10-point scale across a number of measures. Nearly all (93%) of the average scores (presented in table 3.1) exceeded the KPI score of eight, with 40% scoring between 8.0

and 8.9, and 54% scoring 9.0 or above. There were only three occasions where events scored just below 8.0: the relevance of the main residential in 2014 to Teaching Leaders' (now known as Ambition) mission (7.9), the usefulness of working with a coach (7.8), and the enjoyability of the social events during the alternative 2016 residential (7.8).

Individual residential session scores

The residential events operate in different 'streams', and the evaluation surveys are said to be designed to reflect the sessions in each stream. As such, the analysis focusses on two key questions that were asked consistently across all individual sessions:

- Objectives: 'To what extent did the following sessions meet their learning objectives?'
- Applicability: 'To what extent do you think you can apply the learning from this session in your school?'

The full data tables for the average individual residential session scores are provided in Annex A.2.1 (tables 2.1-2.5).

There is notable variation in the scoring of the individual residential sessions. This includes variation in scoring for the same session across the different residential events, including within the same year. For example, the sessions based on lessons from Henry V received an average score of 9.0 for meeting the objectives and 8.2 for applicability during the main residential in 2016, but received an average score of 8.0 for meeting the objectives and 7.4 for applicability during the 2016 alternative residential. This highlights an important consideration around which sessions fit best into which programme design. In this example, the session based on lessons from Henry V appeared to fit into the main residential better than the condensed alternative session (based on participants' evaluation scores). Alternatively, the scoring may not be a reflection of the programme design or session delivery, but rather differences in the types of participants that attend the two different event formats and their feelings about attending particular sessions or residential events.

On the other hand, there are some sessions that received consistent scores across the residential events. One facilitator's sessions on literacy and leadership, for example, all exceeded the KPI of eight, with average scores above nine for meeting the learning objectives and the applicability of the session's content to participants' learning. This is consistent across 2014 to 2016, and both the main and alternative event formats. Conversely, the 'data case study' session scored below the average KPI of eight for meeting the learning objectives across all events it has been run.

There was one session, entitled 'Transformation and Return', that scored particularly low (in comparison to the scores for the other sessions) for both meeting the learning

objectives (average score of 5.4) and the applicability of the session's content to participants' learning (average score of 5.2): this was the session run in 2015. The session was a reflective activity and was integrated into a broader session in 2016 so was therefore not scored separately in that year

Participants' perceptions of the residential

The residential was praised by the participants interviewed as being an effective starting point. They described activities that made them think about who they were and the sort of leader they were as well as a range of inspiring talks. For some it was overwhelmingly positive:

> "I can only describe the residential as life changing – I went in there one person and I came out a different person. It changed the whole way I felt about leadership."

> "Regarding the residential, it was the quality of speakers speaking about leadership outside of the school context, it was truly inspiring. We did activities that took you out of your comfort zone. It was the first time someone said this is what leadership is and it could look like this."

Two of the participants interviewed described an experiential learning activity that required them to cooperate as a team in order to achieve a goal – this activity challenged both of these individuals:

> "A lot of how you communicate is through facial expressions and seeing who is looking at you…It helped me learn how to take charge when people are not looking at you… Someone could've just sat there quiet the whole time and no one would've known, or you can be a leader."

> "I felt my own insecurities were gone because they couldn't see me…I never thought I could do [lead a group of strangers]. I thought I'd need to first build positive relationships to lead, to have the legitimacy to lead."

Participants also enjoyed the opportunity to network, and described a range of inspiring talks that took place at the residential that they enjoyed. However, one respondent did describe that one talk did not feel relatable or relevant because the speaker's circumstances would be impossible to replicate.

3.3 Evening seminars

The HPML secondary programme includes evening seminars led by experienced facilitators with school leadership backgrounds. Ambition used to hold elective seminar

sessions in the past, where participants were able to select which session they felt would be most relevant to them. However, this has changed over the years, and they now offer optional sessions online or on Challenge Days.

Over time Ambition has also reduced the number of evening seminar sessions for various reasons:

- There is now a greater focus on peer-to-peer learning through joint practice development and peer learning groups;
- There was a need for greater geographical reach, meaning that some elements of the curriculum moved online; and
- The ongoing curriculum reviews have led to a more focused curriculum as the HPML programme has developed.

Session evaluation feedback

This section examines the session evaluation feedback for seminars attended by participants of the 2012 second year cohort, 2013 first and second year cohorts, 2014 first and second year cohorts, and 2015 first year cohort. Data is summarised as average scores on an aggregate-level by cohort and by individual seminar, across a number of measures.

2012 second year - 2013 first year

Participants of the 2012 second year and 2013 first year cohorts were asked to rate each seminar session on a 10-point scale for:

- Quality: ‘The quality of facilitation/ delivery’
- Objectives: ‘The session met the session objectives’
- Challenge: ‘The level of challenge’
- Change: ‘Likelihood of making a change as a result of the session’
- Relevance: ‘The session was relevant to Teaching Leaders’ mission’
- Knowledge: Participants were asked to rate their knowledge/ skills at the start and end of the session. The change in score has been calculated.

Table 3.2 summarises the average aggregate scores for all seminar sessions attended by participants of the 2012 second year cohort and 2013 first year cohort.

Table 3.2: Aggregate scores for all seminar sessions attended by participants of the 2012 second year cohort and 2013 first year cohort

Year/ Cohort	Quality	Objectives	Challenge	Change	Relevance	Knowledge
2012 Year 2	8.3	8.3	7.8	8.0	8.5	+1.8
2013 Year 1	8.3	8.4	7.5	8.0	8.5	+1.5
Overall	**8.3**	**8.4**	**7.6**	**8.0**	**8.5**	**+1.6**

Base: 2012 Y2 participants (1,406 quality and objectives, 1,403 challenge, 1,407 change, relevance, knowledge), 2013 Y1 participants (2,319 quality, objectives, change, relevance and knowledge, 2,312 challenge)

As demonstrated by table 3.2, the average scores for all seminar sessions attended by participants of the 2012 second year cohort and 2013 first year cohort are highly consistent across the two cohorts. All average scores, measured on a 10-point scale, met or exceeded the KPI of eight with the exception of the level of challenge. Notably, the average scores would meet the KPI of eight when rounded. For the measure of knowledge, calculated using the change in ratings of knowledge between the start and end of the session, there is no set KPI. However, an improvement in knowledge is reported for both cohorts.

On an individual-level (see the annex A.2.2 for full data, Tables 2.6-2.7), the seminar sessions evaluated by the 2012 year two and 2013 year one cohorts all scored highly, with 39% of sessions meeting or exceeding the KPI of eight across all measures, and 30% meeting or exceeding the KPI of eight across five of the six measures. In addition, all sessions reported a positive change in knowledge as a result of the session.

Tables 3.3 summarises the average evaluation scores for the individual seminar sessions, attended by participants of the 2012 second year cohort and 2013 first year cohort, that scored below the KPI of eight for at least two measures.

Table 3.3: Individual seminar sessions that scored below the KPI of eight for at least two measures (2012 Y2, 2013 Y1)

Cohort	Session	Quality	Objectives	Challenge	Change	Relevance	Knowledge
2012 Y2	Coaching Skills	7.7	7.8	7.3	7.6	8.2	+1.4
2012 Y2	Literacy	7.1	7.1	7.3	7.4	7.4	+1.6
2012 Y2	Mindfulness Elective	7.5	8.0	6.7	7.7	6.8	+2.8
2012 Y2	Navigating your team through change	7.2	7.2	6.4	7.1	7.6	+1.4
2013 Y1	Eat the Frog: Time management	8.2	8.2	6.7	7.5	8.2	+1.3
2013 Y1	Removing Barriers to Learning	8.1	8.2	7.1	7.8	8.4	+1.3

Base: participants that attended each session – 32 coaching skills, 16 literacy, 22 mindfulness elective, 194 navigating your team through change, 197 eat the frog: time management, 233 removing barriers to learning

Notably, though the sessions highlighted in table 3.3 scored below the KPI of eight for at least two measures on the 10-point scale, all sessions reported an improvement in knowledge. It is important to also note that the lowest average score for these sessions is 6.4, which still sits in the top 40th percentile on a 10-point scale.

2013 second year - 2015 first year

Participants of the 2013 year two to 2015 year one cohorts were asked to rate each seminar session on a 10-point scale for:

- Quality: ‘How would you rate the quality of the facilitation of the session?’
- Stretch: ‘How stretched were you by the content of the session?’
- Applicability: ‘To what extent do you think you can apply the learning from this session in your school?’

Table 3.4 summarises the average aggregate scores for all seminar sessions attended by participants of the 2013 year two to 2015 year one cohorts.

Table 3.4: Aggregate scores for all seminar sessions attended by participants of the 2013 second year to 2015 first year cohorts

Year/ Cohort	Quality	Stretch	Applicability
2013 Year 2	8.3	7.7	7.9
2014 Year 1	8.6	8.0	8.4
2014 Year 2	8.2	7.7	7.8
2015 Year 1	8.5	7.9	8.4
Overall	**8.4**	**7.8**	**8.1**

Base: 2013 Y2 participants (1,134), 2014 Y1 participants (1,253), 2014 Y2 participants (1,103 quality, 1,171 stretch and applicability), 2015 Y1 participants (1,531 quality and applicability, 1,529 stretch)

As demonstrated in table 3.4, the participants of the 2013 second year to 2015 first year cohorts rated the quality of the seminar sessions they attended highly, with average scores ranging between 8.2 and 8.6. The stretch of the content scored between 7.7 and 8.0 across the cohorts. The applicability of the sessions varied, with first year cohorts giving average scores of 8.4 in 2014 and 2015, and second year cohorts giving an average score of 7.9 in 2013 and 7.8 in 2014. This suggests the mix of seminar sessions attended in year one were more applicable; it is unclear whether this is due to the participant profile, contextual factors, or the actual content of the seminars.

On an individual-level (see the annex A.2.2 for full data, Tables 2.8-2.11), the seminar sessions evaluated by participants of the 2013 year two to 2015 year one cohorts scored highly for ‘quality’, with 86% of the sessions meeting or exceeding the KPI of eight for this question. The sessions also scored highly for ‘applicability’, with 73% meeting or exceeding the KPI of eight for this question. Fewer sessions met or exceeded the KPI of eight for ‘stretch’. However, it is important to note that the lowest session score across these cohorts was 6.9, which still sits in the top 40th percentile on a 10-point scale.

Table 3.5 summarises the average evaluation scores for the individual seminar sessions, attended by participants of the 2013 second year to 2015 first year cohorts, that scored below the KPI of eight for at least two measures.

Table 3.5: Individual seminar sessions that scored below the KPI of eight for at least two measures (2013 Y2 – 2014 Y2)

Cohort	Session	Quality	Stretch	Applicability
2013 Y2	Navigating your team through change	7.9	6.9	7.5
2014 Y1	Effective Monitoring and Feedback	8.0	7.2	7.5
2014 Y2	Managing and Influencing Others	7.7	6.9	7.3
2014 Y2	Project Management	7.8	7.3	7.8

Base: participants that attended each session (in order) – 2013 Y2 (215), 2014 Y1 (165), 2014 Y2 (259 for quality, 276 for stretch and applicability), 2014 Y2 (191 for quality, 203 for stretch and applicability)

Notably only four seminar sessions, out of a total of 22 possible sessions, across the 2013 year two to 2015 year one cohorts, scored below the KPI of eight for at least two measures. As mentioned above, the lowest average score was 6.9 (displayed in table 3.5), which still sits in the top 40th percentile on a 10-point scale.

Participants' perceptions about evening seminars

Discussions about evening seminars generated mixed views among respondents. Some felt that these required a good deal of pre-reading and preparation, and that it took up much of their evening when energy was low, especially if they had added travel time.

> "Seminars in the evening were tiring. Not sure how much I'm using it. I'm not able to absorb anything that time of the day."

> "The evenings were hard work (I stepped up to SLT during it) and I had to drag myself there sometimes, but there was always something useful."

However, most sessions were valued even for those who found them to be more onerous:

> "There are times you don't want to drive 1 hour and 20 minutes to the session there and then back again, or the Saturday sessions. But it was not enough to want to leave it."

> "They were difficult sometimes to travel across – it eats into your time. But they gave me a purpose and made me a better middle leader. For example the one on time management – I put that into practice immediately. I had more time with my family because of better time management and now I have a lot more extra time even though I have more responsibility."

For some, the evening seminar topics were not always relevant. For example, although the participant above describes the utility of the session on time management, another teacher felt they were already competent at managing their time so several hours on that occasion were not beneficial. The same participant felt that the programme could be improved if participants could select from a range of elective options that are appropriate to their needs. Most reported that there were a few sessions that were irrelevant or that they did not feel stretched by; however, these were certainly one-off cases:

> "There are also lots of coaches and facilitators and some are better than others. This has meant that the level of challenge hasn't always been there but then the next one can be really powerful."

Several participants enjoyed the opportunity for networking during the evening seminars. This gave them a chance to exchange ideas and discuss what each is doing in their own schools, particularly with other participants in the same subject area.

3.4 Challenge Days

Over the two-year HPML secondary programme, Challenge Days include national level keynote speakers, locally-driven workshops, experiential learning, the sharing of participants' learning through 'Fellow Exchange'[37], and peer-supported learning.

Compared to evening seminars, which are delivered in localised hub areas, Challenge Days allow participants to access the wider network while still remaining out of school hours. Challenge Days enable participants to meet with other middle leaders from across the region where they can share best practice, network and continue to access opportunities to work in partnership with others focusing on school to school development. In addition, Challenge Days allow Ambition to provide access to professionals with a national profile and expertise that would not be practical or possible in twilight hours and would not be affordable on a hub level.

Session evaluation feedback

As the programme design and subsequent evaluation data collection varies significantly, this chapter explores the Challenge Day delivery in 2015 only (the most recent data provided by Ambition). There were four Challenge Days delivered across 2015, which will be looked at individually.

[37] Fellow ExChange is a Teach Meet; a TeachMeet is an organised but informal meeting for participants to share good practice, practical innovations and personal insights in teaching.

Challenge Day 1 (2015)

Table 3.6 summarises the average evaluation scores for the morning session 'Defusing conflict' for Challenge Day 1 in 2015.

Table 3.6: Challenge Day 1 (2015) scores for the morning session 'Defusing conflict'

Rating		Average
Facilitation		**8.3**
Stretch		**7.3**
Applicability		**7.9**
To what extent did the session meet the following learning objectives:	To understand the causes and characteristics of escalated conflict	**8.3**
	To explore your own personal responses to conflict situations	**8.0**
	To explore an approach for defusing conflict	**8.0**
	To rehearse effective and safe responses to conflict	**7.5**
	To identify techniques that will help you to better manage conflict	**7.8**

Base: participants that attended (303)

As shown in table 3.6, the average scores for the morning session range between 7.3 and 8.3. The lowest average score refers to the level of stretch, but notably, this is only 0.7 below the KPI of eight.

Table 3.7 summarises the average evaluation scores for the afternoon session 'Communicating in conflict' for Challenge Day 1 in 2015.

Table 3.7: Challenge Day 1 (2015) scores for the afternoon session 'Communicating in conflict'

Rating		Average
Facilitation		**8.1**
Stretch		**7.3**
Applicability		**7.6**
To what extent did the session meet the following learning objectives:	To understand the importance of effective communication in conflict	**8.1**
	To explore different approaches for communicating in conflict	**7.8**
	To work with other Fellow's to develop approach to managing conflict	**8.0**

Base: participants that attended (301)

As shown in table 3.8, the average scores for the afternoon session range between 7.3 and 8.1. Like the morning session, the lowest average score refers to the level of stretch, but this is also only 0.7 below the KPI of eight.

Challenge Day 2 (2015)

Table 3.8 summarises the average evaluation scores for Challenge Day 2 in 2015.

Table 3.8: Aggregated scores for Challenge Day 2 (2015) sessions

Rating		Average
Facilitation: The three intelligences		**8.5**
Stretch: The three intelligences		**7.6**
Applicability: The three intelligences		**7.7**
Facilitation: MBTI[38]		**8.7**
Stretch: MBTI		**8.1**
Applicability: MBTI		**8.4**
To what extent did the session meet the following learning objectives:	To assess and understand your personal preferences, as interpreted by the MBTI instrument and the three intelligences	**8.7**
	To gain an understanding around how different ways of working can impact the effectiveness of your leadership role	**8.4**
	To consider the impact of your MBTI preferences on your work, role and relationships with your colleagues and line-manager	**8.3**
	To review your learning and identify next steps for development	**7.9**
Motivation of keynote		**7.6**
Overall stretch		**6.8**
Extent to which developed understanding of the importance of self-awareness		**7.4**
Overall applicability		**7.2**

Base: participants that attended (312)

[38] The Myers–Briggs Type Indicator (MBTI) is an introspective self-report questionnaire claiming to indicate psychological preferences in how people perceive the world around them and make decisions.

As shown in table 3.8, the average scores for Challenge Day 2 range between 6.8 and 8.7. Like Challenge Day 1, the lowest average score refers to the stretch of the content – though in context, 6.8 still sits in the top 40th percentile on a 10-point scale.

Challenge Day 3 (2015)

Challenge Day 3 (2015) focussed on coaching; the average evaluation scores are summarised in table 3.9.

Table 3.9: Aggregated scores for Challenge Day 3 (2015) sessions

Rating		Average
a. Facilitation (morning session)		**8.3**
b. Stretch (morning session)		**7.3**
c. Applicability (morning session)		**8.0**
d. Facilitation (afternoon session)		**7.9**
e. Stretch (afternoon session)		**7.6**
f. Applicability (afternoon session)		**8.0**
To what extent did the session meet the following learning objectives:	g. To introduce and embed key coaching skills	**8.1**
	h. To develop an understanding of a coaching model	**8.0**
	i. To reflect on coaching practice through an introduction to coaching supervision	**8.1**
	j. To develop an understanding of your own responsibilities as a coach	**8.2**

Base: secondary participants who attended the Challenge Day session (a-f: 296, g-j: 293)

As shown in table 3.9, the average scores for Challenge Day 3 range between 7.3 and 8.3. Following the trend apparent for Challenge Days 1 and 2, the lowest average score refers to the level of stretch, though, again, it is only 0.7 below the KPI of eight.

Challenge Day 4 (2015)

Aggregated scores

Table 3.10 summarises the average evaluation scores for Challenge Day 4 in 2015.

Table 3.10: Aggregated scores for Challenge Day 4 (2015) sessions

Rating		Average
To what extent did the session meet the following learning objectives:	To develop Fellows' awareness of the current educational landscape and the key changes and challenges impacting on the role of school middle leaders	**8.5**
	To consider the impact that the changing educational landscape will have on their area of responsibility	**8.3**
	To reflect on how to how they can use this knowledge to close the gap for disadvantaged pupils	**7.6**

Base: 198 participants

As displayed in table 3.10, Challenge Day 4, on average, exceeded the KPI of eight for two out of three of its learning objectives. The third objective achieved an average score of 7.6, which would meet the KPI of eight when rounded.

Individual session scores

Participants that attended the individual sessions on Challenge Day 4 of 2015 were asked to rate each session on a 10-point scale for:

- Facilitation: 'Rate the quality of facilitation'
- Stretch: 'How stretched were you by the content of the session? (1-10)'
- Applicability: 'To what extent do you think you can apply the learning from this session in your school?(1-10)'

The average scores for the individual sessions on Challenge Day 4 in 2015 are summarised in table 3.11.

Table 3.11: Individual session scores for Challenge Day 4 (2015) sessions

Session	Facilitation	Stretch	Applicability
Lessons from abroad	8.1	7.4	6.8
Secondary school accountability	8.8	8.5	8.6
The future of school inspection	8.1	7.8	8.5
The future of secondary curriculum	7.7	7.3	7.6
Why are we still talking about gender in 2016?	7.8	6.9	6.6

Base: participants that attended each session (in order) – 58, 127, 130, 56, 41

The average scores for the individual sessions of Challenge Day 4 in 2015 are varied. The session on ‘Secondary school accountability’ is the only individual session with average scores exceeding the KPI of eight. The lowest average score of 6.6 refers to applicability of the session ‘Why are we still talking about gender in 2016?’.

Participants’ perceptions of Challenge Days

Overall participants interviewed were generally positive and felt the Challenge Days took them out of their comfort zone. Some also described them as the key opportunity to discuss their impact initiative projects, which helped boost their skills and understanding around creating impact:

> “Everything I go to – there's always something I can take from it to improve my practice. Always come out positive.”

> “[The Challenge Days were] all around the impact initiative. Showing impact was something I hadn't done before.”

Similar to the evening seminars, there were two main barriers: time commitment and varied interest in the topics. Regarding the time commitment, participants still felt it was worth the time and some described how they balanced it at home:

> “Challenge Days take up an entire Saturday and for teachers Saturdays are sacred. They’re always useful and enriching but sometimes it feels like I never stop working.”

> “Because I knew there was challenge day on Saturdays, the weekend before and after I didn't take any work home so I could spend time with my family.”

The interest in the topics also varied though a number of participants interviewed spoke about the usefulness of the sessions on coaching and how they used that in practice:

> “Best one we’ve done was Coaching Skills – we observed each other coaching someone else and then gave feedback to them about what they were like coaching.”

Also, a further challenge was the impact of not having the full commitment to the sessions from the whole group. One participant described:

> “Not everyone is in it 100%, which makes an impact on the group work.”

However, once again, participants were overwhelmingly positive in light of these challenges. Most seemed to want to make the most of each opportunity:

"If it were easy, it'd be pointless. There were the best middle leaders from the schools in the area there - the moaning members of staff weren't there."

"If you came out and haven't been challenged, it's because you're not going in with your eyes open, because everything is challenging."

3.5 Joint practice development

Joint practice development (JPD) sessions comprise of four types of activities:

- Fellow[39]-led facilitation, during which participants deliver content to other participants in their group (known as peer learning groups);
- A case study on prioritisation, which is presented to the group by an external facilitator and subsequently discussed (with a key focus on time management and prioritisation);
- Peer reviews of impact initiative projects, during which participants look at, challenge and discuss each other's impact initiatives projects and;
- School visits[40].

Session evaluation feedback

This section examines the session evaluation feedback for joint practice development (JPD) sessions attended by participants of the 2012 second year cohort, 2013 first and second year cohorts, 2014 first and second year cohorts, and 2015 first year cohort. Data is summarised as average scores on an aggregate-level by cohort for each type of activity, across a number of measures.

Participants of the 2013 year two to 2015 year one cohorts were asked to rate each seminar session on a 10-point scale for:

- Discussion quality: 'How would you rate the quality of the way the facilitator conducted the discussion after each presentation?'
- Session quality: 'How would you rate the quality of the facilitation of the session?'
- Stretch: 'How stretched were you by the content of the session?'

[39] Participants of the HPML secondary programme are referred to as 'Fellows' by Ambition

[40] These are not a formal element, but they do occur as participants can choose to arrange them.

- Applicability: ‘To what extent do you think you can apply the learning from this session in your school?’

The average evaluation scores are analysed by the four types of JPD activities (tables 3.13-3.15)

Fellow-led facilitation sessions

Table 3.12 summarises the average scores for the fellow-led facilitation sessions, attended by participants of the 2013 second year to 2015 first year cohorts.

Table 3.12: Evaluation scores for the fellow-led facilitation sessions, attended by participants of the 2013 second year to 2015 first year cohorts

Year/ Cohort	Discussion Quality	Session Quality	Stretch	Applicability
2013 Year 2		8.4	8.6	8.8
2014 Year 1	8.3			8.5
2014 Year 2	8.7		8.8	8.5
2015 Year 1	8.5			8.4
Overall	**8.5**	**8.4**	**8.6**	**8.5**

Base: participants of each cohort (in chronological order) rated the sessions for discussion quality (439, 1,077, 758), session quality (142), stretch (112, 52), applicability (109, 439, 1,050, 758)

Based on the data available[41], fellow-led facilitation sessions received average scores above the KPI of eight for discussion quality, session quality, stretch and applicability.

[41] Where table cells are blank, this reflects that evaluation data was not collected for this measurement.

Case study on prioritisation

Table 3.13 summarises the average evaluation scores for the case study on prioritisation, attended by participants of the 2014 and 2015 first year cohorts.

Table 3.13: Evaluation scores for the 'Case study on prioritisation', attended by participants of the 2014 first year and 2015 first year cohorts

Year/ Cohort	Discussion Quality	Session Quality	Stretch	Applicability
2014 Year 1	8.7			8.5
2015 Year 1	8.6	8.0	6.8	7.8
Overall	**8.7**	**8.0**	**6.8**	**8.1**

Base: 2014 Y1 participants (337), 2015 Y1 participants (discussion quality 90, session quality 162, stretch 140, applicability 246, 252)

For the 2014 year one cohort, participants that attended this session rated the discussion quality and applicability of the session above the KPI of eight[42]. For the 2015 year one cohort, participants that attended this session rated the discussion and session quality above the KPI of eight, but the level of stretch and applicability of the session below the KPI.

Peer review of impact initiative projects

Table 3.14 summarises the average evaluation scores for the peer review of impact initiative projects, attended by participants of the 2014 and 2015 first year cohorts.

Table 3.14: Evaluation scores for 'Peer review of impact initiative projects', attended by participants of the 2014 first year and 2015 first year cohorts

Year/ Cohort	Discussion Quality	Session Quality	Stretch	Applicability
2014 Year 1	8.0			8.0
2015 Year 1	8.0	8.3	7.7	8.3
Overall	**8.0**	**8.3**	**7.7**	**8.1**

Base: 2014 Y1 participants (298), 2015 Y1 participants (discussion quality 174, session quality 193, stretch 135, applicability 298, 266)

For the 2014 year one cohort, participants that attended this session gave the discussion quality and applicability of the session an average score of 8.0, the equivalence of the KPI[43]. For the 2015 year one cohort, participants that attended this session rated the

[42] Where table cells are blank, this reflects that evaluation data was not collected for this measurement.
[43] Where table cells are blank, this reflects that evaluation data was not collected for this measurement.

discussion and session quality, and the applicability of the session as above the average KPI score of eight. The level of stretch was rated slightly lower, though notably if rounded, the average score for stretch would meet the KPI.

School visits

Some of the participants of the 2014 second year cohort (n=22) also completed school visits in the South of England. On average, these participants gave the quality of discussion facilitation a score of 8.5 and the stretch of the content a score of 7.9.

Participants' perceptions about joint practice development (JPD)

Most interviewed participants provided very little input regarding the joint practice development (JPD) sessions, suggesting they are fairly neutral about these sessions. Of those interviewees who mentioned JPDs of their own accord, the feedback was mixed. One commented that JPDs were "good to pool resources to share what works well and the impact it had".

Alternatively, when asked if there were any activities that they felt least stretched by, some participants interviewed discussed the limitations of the JPDs. This was largely due to interviewees feeling that the topics (led by other participants) were not always relevant or engaging:

> "I'm not sure how useful they are. We don't really choose the topic so I haven't gotten much from them. I know it is good for us to be facilitating but it's a lot of time to have everyone go…It's too much time, bit of a bore now. I think it'd be better if they made you facilitate something in school – get that practical experience."

> "The fellows lead on different JPD sessions – the content is very variable; some are great and some are not. Of course Teaching Leaders cannot control this."

This ties back to previous comments about how some seminars or Challenge Days were better than others due to the relevance of the topic and whether the facilitator is engaging and whether the participants are committed to learning from the session.

4. Impact: Measured and perceived

Summary of findings

Measured impact of the programme

To evaluate the impact of the programme, the outcomes of middle leaders who have participated on the programme have been compared with the outcomes for similar non-participants.

Impact on the career progression of participating middle leaders (section 4.2.1):

Participation in the programme was associated with higher pay increases by both the final (second) year of the programme, and the year after the programme. Specifically, HPML participants see their pay grow 30% more than matched future participants by the year after the programme (an average pay rise of £7,523 and £5,237 respectively). These are associations and should not be interpreted as causal estimates.

Impact on the retention of participating middle leaders (section 4.3.1):

Participation in the programme was associated with fewer participating middle leaders leaving their school in the final year of the programme, but not in the year after the programme. The results for leaving the profession were more stable however, showing that participation was associated with a reduced chance of leaving the profession in both the final year of the programme and the year after. These are associations and should not be interpreted as causal estimates.

Impact on the department-wide retention of teachers within participating middle leaders' departments (section 4.3.2)[1]:

The findings indicate that there were small but consistent negative effects on departmental retention in the second year after the programme has finished. However there was no clear impact on tenure. We urge caution in interpreting the effects of the programme on department-wide retention.

Impact on the attainment of pupils within participating middle leaders' departments (section 4.4)[2]:

Participation in the HPML programme was associated with an increase in pupil attainment of approximately one-twelfth of a grade. [1] However, this effect does not emerge until two years after the programme, suggesting the benefits of leadership training take time to filter through into improved pupil outcomes.

Perceived impact of the programme

Impact on the individual (section 4.1):

Over two-fifths of survey respondents (44%) reported that the programme had a positive impact on their well-being, and one-third (33%) reported that the programme had a positive impact on their teaching time. Qualitative findings suggest that this was due to improved time-management skills learnt on the course.

Over half of respondents (57%) felt that the programme had a negative impact on their personal time, with those who rate their programme below six reporting being significantly more likely to report that the programme negatively impacted on their personal time. Interviewed participants did find the programme to be a significant time commitment; however, they also felt that the benefits outweighed the drawbacks.

Impact at a school-level (sections 4.33, 4.5, 4.6):

Over two in five survey respondents reported that they are now working more with other schools in their local authority (46%), similar category schools (43%), or other schools in their multi-academy trust (46%) as a result of the programme. This was in line with the findings from the qualitative depth interviews. Slightly more than four-fifths of respondents (83%) who had completed their impact initiative projects and took part in the online survey reported that their project had become embedded in their subject area or key stage, and 88% considered their project to be relevant to their school beyond their subject area or key stage. Qualitative findings suggest that impact initiative projects had a positive effect when closely linked to the school improvement plan.

Interviews with headteachers suggest that the programme, albeit considered expensive, is money well-invested if the right teacher is chosen to participate.

4.1 Impact on participants' time and well-being

This section examines views of HPML secondary programme participants in relation to the impact on their time and well-being. Evidence is drawn from the online survey, and the qualitative depth interviews with programme participants.

In the online survey, respondents were asked to rate the impact of the training programme on their teaching time, personal time, and well-being (figure 4.1).

Table 4.1: Impact of the training programme on respondents' time and well-being

	Positive impact	No impact	Negative impact	Too soon to say	Don't know
Your teaching time	33%	32%	21%	12%	3%
Your personal time	20%	14%	57%	7%	2%
Your well-being	44%	25%	20%	9%	2%

Base: 566 HPML secondary programme participants (Q32 of the online survey)

Impact on teaching time

One-third of respondents (33%) reported that the programme had a positive impact on their teaching time. Qualitative findings suggest that this was due to improved time-management skills learnt on the course.

In the online survey, a number of sub-groups were more likely to report that the programme had a positive impact on their teaching time. This included:

- Respondents who had completed their impact initiative project (46% reported a positive impact on their teaching time, compared to the average of 33%);
- Respondents who were responsible for humanities or languages (41% reported a positive impact on their teaching time, compared with an average of 33%)
- Male respondents (39% reported a positive impact on their teaching time, compared to the average of 33%).; and
- Respondents who qualified 11 years or more ago (38% reported a positive impact on their teaching time, compared to the average of 33%);

Conversely, one-fifth of respondents (21%) reported that their teaching time had been negatively impacted by the programme. Two-fifths who scored the overall quality of the programme between one and six (42%) reported that the programme had a negative impact on their teaching time.

Impact on personal time

Over half of respondents (57%) felt that the programme had a negative impact on their personal time. This appears to be strongly associated with ratings for the overall quality of the programme: 81% who scored the programme between one and six reported that the programme had a negative impact on their personal time, whereas 46% who scored of the programme between nine and ten said that the programme had impacted their personal time negatively.

On the other hand, one-fifth of respondents (20%) said the programme had a positive impact on their personal time.

Impact on well-being

Over two-fifths of respondents (44%) reported that the programme had a positive impact on their well-being.

Notably, a number of sub-groups were more likely to report that the programme had a positive impact on their well-being. This included:

- Respondents who had completed their impact initiative project (60% reported a positive impact on their well-being, compared to the average of 44%);
- Respondents who have held a middle leadership role for six years or more (53% reported a positive impact on their well-being, compared to the average of 44%);
- Respondents who qualified 11 years or more ago (51% reported a positive impact on their well-being, compared to the average of 44%); and
- Respondents who have spent more than five years at their school before starting the programme (50% reported a positive impact on their well-being, compared to the average of 44%).

On the other hand, one-fifth of respondents (20%) reported that the programme had a negative impact on their well-being. This appears to contribute to ratings of the overall quality of the programme, with 49% of those who scored the overall quality between one and six saying the programme had a negative impact compared to 9% of respondents who scored the overall quality a nine or ten.

4.1.1 Participants who have considered or actively deferred or withdrawn from the programme

In the online survey, respondents who had deferred[44] from the HPML secondary programme, and those who had withdrawn[45] from the programme were asked for their main reasons for not proceeding with their training. Due to the low sample sizes, it is not possible to quantify their main reasons. Overall, a variety of reasons were cited, most often these related to personal circumstances (such as family illness), or a change in job role or school.

The impact on the respondent's time and well-being was cited in some of these individual cases:

> "A combination of the distance and time for the Saturdays impacting on my family life and time with family".
>
> Withdrew (2016 cohort)

> "I was anxious about workload and felt unsupported with this".
>
> Deferred (2015 cohort)

As discussed in the perceptions of evening seminars and Challenge Days, programme participants interviewed did find the programme to be a significant time commitment; however, they felt the benefits outweighed the drawbacks. Some also described how the programme improved their time management so despite their commitment to the programme and more responsibility as a middle leader, they felt they had more time:

> "It extended the work load, but helped me be more effective. It was manageable but hard work. I was really valuing what we were getting."

> "It is obviously a lot of evening and weekend sessions – it is onerous. But it does feel like it is worth it. The payoff is that it has given me strategies to streamline day to day working – I am better/quicker at the work I do."

> "Now I have a lot more extra time even though I have more responsibility."

An open-ended question in the online survey on respondents' reasons for considering to withdraw showed the workload of the course, coupled with the teaching workload as the

[44] a total of 9 participants of those who have deferred from the programme completed the survey
[45] a total of 23 participants of those who have withdrawn from the programme completed the survey

main reason. Perceived poor quality of the course, or the course content not meeting the need of the participant were the next most commonly cited reasons.

Reasons for not withdrawing, despite considering to do so, were the determination to complete the programme; already having seen improvements; the career prospects upon completion (and negative impact of not completing) and motivation from the coach as well as the quality of the coaching. To a lesser extent, the cost of the course, commitment to the school and support from Ambition and the school were cited as reasons for completing the course.

4.2 Impact on career progression

4.2.1 What is the relationship between participation and career progression?

Evidence from Education Datalab

Although Ambition does not make the claim that participation in the programme improves career prospects for participants, it seems plausible that a middle leadership development programme would have this effect. For instance, evaluations of Teach First, an initial teaching training programme that develops leaders in challenging schools, have found similar effects[46]. As such, this section examines the association between participation and career progression.

As with all evaluations, the challenge was to eliminate, as far as possible, concerns that those who take part in the programme are fundamentally different to those who do not take part. For example, it may be the case that headteachers only select middle leaders that they recognise are particularly talented, or those they have plans to promote in future, meaning such participants would be more likely than non-participants to be promoted anyway.

To address this challenge, a technique called propensity score matching was employed. This involved finding a group of non-participants who look as similar as possible to HPML participants in terms of the variables available in the data. The participants were therefore matched on: age, whether they had qualified teacher status (QTS), their middle leadership responsibility, sex, pay, experience, tenure, school department, school attainment, deprivation of the school intake, ethnicity of the school intake, whether the

[46] https://www.teachfirst.org.uk/sites/default/files/The_careers_of_Teach_First_Ambassadors_who_remain_in_teaching.pdf

school is in an urban area, the type of school (e.g. academy), and the region in which the school is located.

Assuming that:

1. we are matching the participants and non-participants on all characteristics which determine whether they participate in HPML and
2. we can find a set of similar non-participants to act as controls,

a comparison of the retention rates of these two groups will show the effect of the programme. Empirical evidence for assumption 2 can be found in the Appendix A.1.1, where we report tests of similarity for the two groups. Assumption 1 is however much harder to justify, since we cannot know that we are matching on every relevant characteristic. The very fact that participants are being chosen for the programme and non-participants are not is itself a cause for doubt.

In a second step of the analysis we therefore restrict our matched control group to middle leaders who do participate in the programme *but only at a later date.* For example, we might be matching somebody who starts the programme in 2010 to somebody who participates, but only in 2013, with outcomes measured in 2011 and 2012 for both individuals. Because both of these groups eventually participate, there are less likely to be differences between them. However, as can be seen from Table 4.2, this does come at the cost of reduced sample size.

Progression was measured in two ways. First, by the size of the pay increases since the start of the programme for HPML participants, compared to the size of the pay increases over the same number of years for non-participants. Prior to the introduction of performance related pay in 2013, a teacher's pay was linked to their responsibilities using a standardised, nation-wide system, meaning pay reflected seniority quite well. Since 2013 however, schools have had more flexibility around pay.

The second measure of progression looked at a pay rank within a school. A pay rank of 60 means that, broadly speaking, a teacher is paid more than 60% of the teachers in their school, but less than the other 40% of teachers in their school.

Table 4.2 summarises the comparisons in change in pay and change in pay rank between HPML participants and the statistically-matched non-participants.

Table 4.2: Comparing career progression of matched participants and non-participants[47]

	Change in pay		Change in pay rank	
	By final year of programme	**By year after programme**	**By final year of programme**	**By year after programme**
Participants	+£5,090	+£7,435	+13	+17
Matched Non-Participants	+£2,977	+£4,670	+9	+14
Stat Sig Difference 95%	Yes	Yes	Yes	No
Number of Individuals (N)	1,175	583	1,175	583

Source: HPML Management Data and School Workforce Census.

As demonstrated in table 4.2, participation in the programme was associated with higher pay increases by both the final (second) year of the programme, and the year after the programme. Specifically, HPML participants see their pay grow 37% more than similar non-participants by the year after the programme (an average pay rise of £7,435 compared to £4,670).

The same trend is apparent when measuring career progression using pay rank. Notably, the gap in change in pay rank between the two groups narrows the year after the programme, and this difference is no longer statistically significant.

As noted above, in the next step of the analysis we try to improve the match by matching participants to middle leaders who do participate in the programme, *but only at a later date*.[48] Table 4.3 summarises the comparisons in change in pay and change in pay rank between HPML participants and the statistically-matched future participants. The findings are comparable with those reported in table 4.2, with HPML participants seeing faster progression than the matched control group. However, the between-group difference in estimates for change in pay by the year after the programme was slightly smaller (30% rather than 37%).

[47] Note: Stat Sig Difference shows the results from a t-test of whether the means of the two groups are equal or not, at the 95% confidence level. Pay is measured in pounds and pay rank is measured as the percentile of the pay distribution in which the teacher ranks.

[48] For example, matching somebody who starts the programme in 2010 to somebody who participates, but only in 2013, with outcomes measured in 2011 and 2012 for both individuals.

Table 4.3: Comparing career progression of matched participants and future participants [49]

	Change in pay		Change in pay rank	
	By final year of programme	By year after programme	By final year of programme	By year after programme
Participants	+5,161£	+7,523£	+10	+15
Matched Untreated Future Participants	+3,403£	+5,237£	+13	+16
Stat Sig Difference 95%	Yes	Yes	Yes	No
Number of Individuals (N)	1,250	646	1,250	646

Source: HPML Management Data and School Workforce Census.

4.2.2 Evidence from the online survey

Figure 4.1: Promotion following the completion of the programme

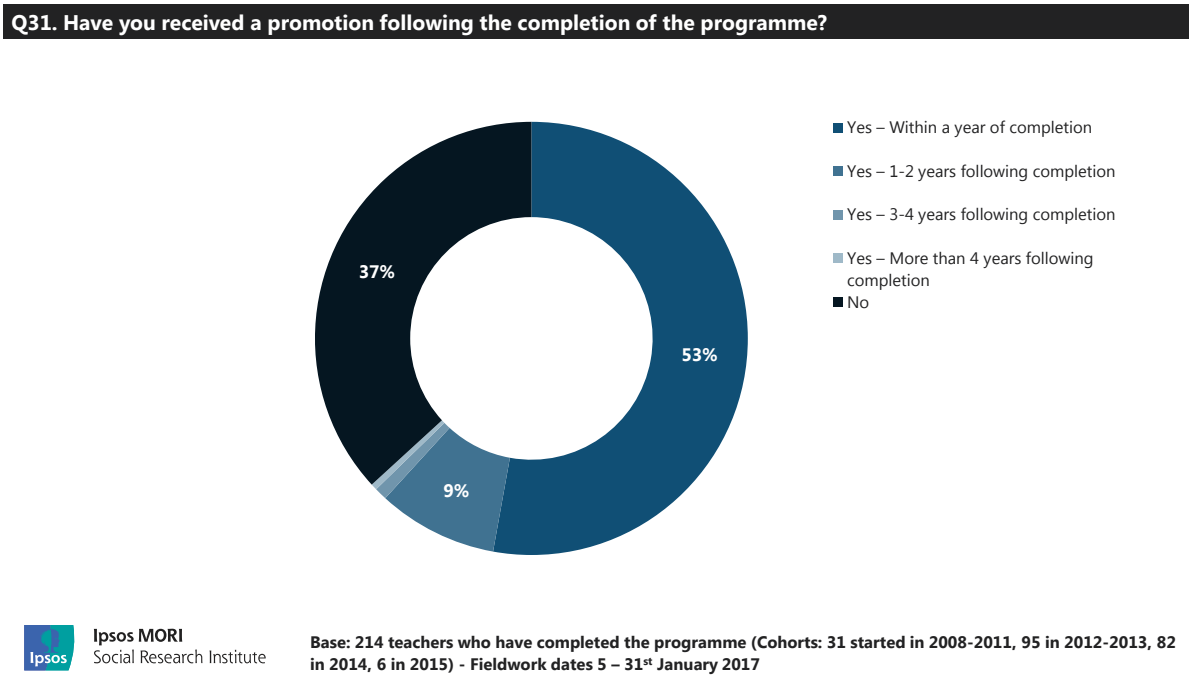


Figure 4.1 looks at the proportion of survey respondents who received a promotion following the completion of the HPML secondary programme, based on findings from the

[49] Note: Stat Sig Difference shows the results from a t-test of whether the means of the two groups are equal or not, at the 95% confidence level. Pay is measured in pounds and pay rank is measured as the percentile of the pay distribution in which the teacher ranks.

online survey. In this instance, over three-fifths of respondents (63%) had since been promoted. Of those who have received a promotion, 84% were within a year of completing the programme. Furthermore, of those who have received a promotion, 59% were still at the same school in which they had completed the training, 32% had moved to a different school they perceived as challenging, 6% had moved to a different school they perceived as not challenging, and 3% had left the teaching profession.

4.2.3 Evidence from interviews

Among the programme participants interviewed, some had already become senior leaders and others felt equipped and driven to move on to a senior leadership role:

> "I'll be applying after Easter and if I don't get the job, I'll leave the school."

> "I feel very equipped. I have a bank of strategies and loads of experience to draw on. I'm thinking another year in this position and then moving to senior leadership."

For one respondent, they felt that the programme had equipped them with tools to become a senior leader and that it was their 'duty' to do so:

> "In fact I think it's my duty to become a senior leader now and to take the TL[50] mind-set and skillset and have the biggest influence I can over people. I think I have to."

Several headteachers also reported that they expected to see these participants go on to become senior leaders.

4.3 Impact on Retention

4.3.1 Retention of participating middle leaders

4.3.1.1 What is the relationship between participation and retention?

Evidence from Education Datalab

One of the benefits claimed for the HPML programme is that it can improve retention[51]. The Education Select Committee, among others, have recently highlighted this as a particularly important goal[52]. The analysis in this section therefore focuses on the

[50] Now known as Ambition School Leadership (Ambition)
[51] http://www.norfolkeducationleaders.org.uk/media/originals/0/201/teaching-leaders.pdf
[52] https://www.publications.parliament.uk/pa/cm201617/cmselect/cmeduc/199/199.pdf

association between participation on the programme, and whether a participant stays at their school and in the profession overall.

The main concern was that HPML participants and non-participants have systematically different levels of turnover, even before the programme. For example, it may be the case that middle leaders who are willing to participate on the HPML programme are particularly committed to teaching, or that headteachers only select those who they know are committed to teaching, meaning that HPML participants are more likely than non-participants to stay in the profession anyway.

We use propensity score matching to try and account for these differences. Evidence on the quality of the match can be found in the Appendix 1.1.

In the last section, on progression, we matched participants with non-participants who do participate but not until a future date. However, this is not possible here because future participants are retained in the profession by definition. This leaves one obvious difference between participants and non-participants: some have chosen (and been chosen) to participate and some have not. Nevertheless, the detailed dataset mean that matching on a rich set of characteristics is possible, including: participant age, whether they have qualified teacher status, their middle leadership responsibility, sex, pay, experience, tenure, school department, school attainment, deprivation of the school intake, ethnicity of the school intake, whether the school is in an urban area, the type of school e.g. academy and the region in which the school is located. Results are therefore informative about the association between participation and retention, across individuals who are otherwise similar in all these respects.

Table 4.4 shows the percentage of participants and statistically-matched non-participants who have moved school or left the profession.

Table 4.4: Comparing the retention of matched participants and non-participants[53]

	% that had moved school		% that had left profession	
	By final year of programme	By year after programme	By final year of programme	By year after programme
Participants	27%	49%	8%	14%
Matched Non-Participants	36%	43%	15%	23%
Statistically Significant Difference at 95% Level?	Yes	No	Yes	Yes
Observations (N)	1,340	720	1,340	720

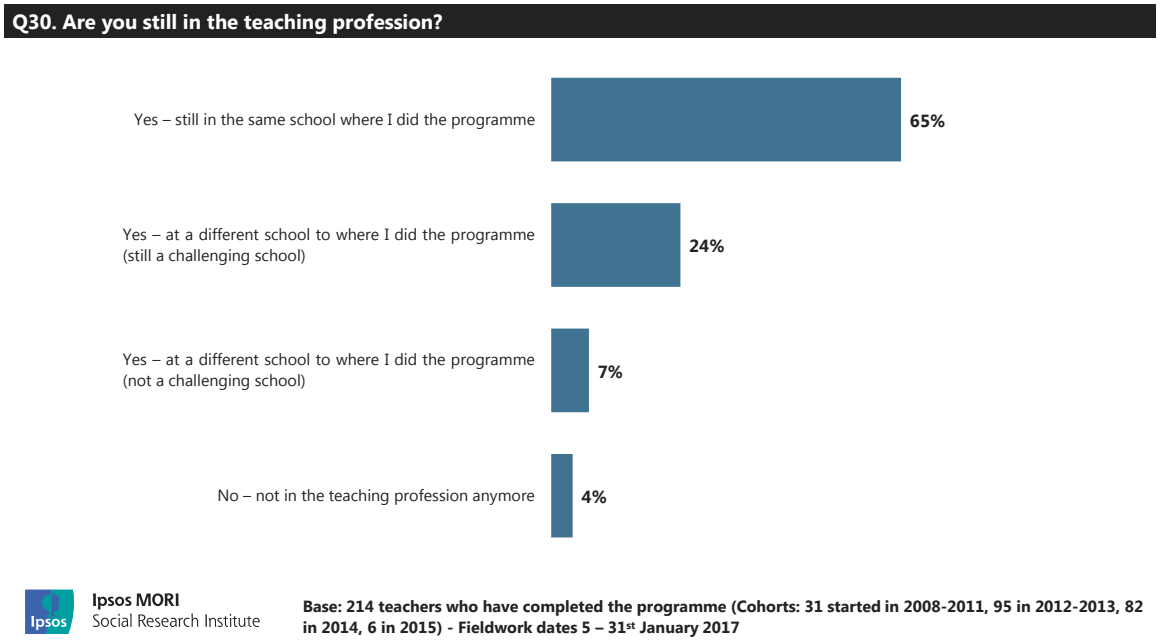
Source: HPML Management Data and School Workforce Census.

As displayed in table 4.4, participation in the programme was associated with fewer people leaving their school in the final year, but not in the year after the programme (where the difference is no longer statistically significant). We also find that participants are significantly less likely to move to a non-eligible school (i.e. one that is more affluent or higher performing) after the programme has completed (results not shown in table). The results for leaving the profession are more stable however, showing that participation was associated with a reduced chance of leaving the profession in both the final year of the programme and the year afterwards.

[53] Note: Stat Sig Difference shows the results from a t-test of whether the means of the two groups are equal or not, at the 95% significance level. “Left profession” is measured as no longer being listed as a teacher in the School Workforce Census for that year.

4.3.1.2 Evidence from the online survey

Figure 4.2: Proportion of respondents still in the teaching profession



As demonstrated in figure 4.2, nearly all respondents (96%) who have completed the HPML secondary programme and who took part in the survey are still in the teaching profession. Specifically, two-thirds of (65%) are still in the same school where they did the programme, whereas a quarter (24%) have moved to a different, challenging school, and fewer than one in ten respondents (7%) have moved to a different school that is not in challenging circumstances.

4.3.2 Retention of teachers in participants' departments

4.3.2.1 Evidence from Education Datalab

The HPML secondary programme is a leadership development programme that has been designed to help middle leaders have an impact through teachers in their department. Recent research suggests leaders, and the working conditions they create, can have a powerful effect on turnover[54]. This section therefore examines whether participation in the HPML programme helps improve retention of teachers within a participant's department.

[54] Simon, N. S., & Johnson, S. M. (2015). Teacher turnover in high-poverty schools: What we know and can do. *Teachers College Record*, *117*(3), 1-36.

Analysing outcomes at the departmental level allows for the use of more sophisticated statistical methodology:

- HPML participants and non-participants were statistically-matched based on the available variables ('matched to never-treated')
- HPML participants and future participants of the programme were statistically-matched based on the available variables ('matched to future-treated')
- Panel data models were used to control for differences between participating and non-participating departments that are not included in our data.

Combining these techniques allows us to get closer to estimating the causal impact of the programme.[55]

For this analysis, retention at a departmental level is measured in two ways:

1. The proportion of teachers in the department that leave the department each year.
2. Average tenure (time since arrival) in the department.

These two measures are quite similar. Anything that reduces the first measure will also reduce the second measure. However, the second measure puts greater emphasis on long term or cumulative retention, i.e. retaining an experienced teacher for an extra year increases the average tenure of the department more than retaining a less experienced teacher for an extra year. The two measures also rely on different variables from the School Workforce Census, which are affected by missing data in different ways. As such, including both measures of retention in the analysis has the benefit of acting as a robustness test.

Table 4.5 shows the results from four different regression models relating to the proportion of teachers in the department that leave the department each year. Models (1) and (2) look at teacher retention in participants' teaching departments, and models (3) and (4) look for an effect in the departments where participants have a middle leadership responsibility[56]. Figures in the table show the percentage point increase in departmental teacher retention (e.g. 0.15 equates to 15 percentage points).

Readers wishing to see the full output for the regression analysis in this section (including the standard errors), can find them in Appendix 3.

[55] Please see Appendix A.1.1 for more detail on the methodology.
[56] Participants' main teaching departments differ from the departments in which they have a middle leadership responsibility for around 19% of participants.

Table 4.5: Modelling the effect of participation on teacher retention[57]

	Retention in Participants' Main Teaching Department		Retention in Participants' Middle Leadership Department	
	Matched to Never-Treated	Matched to Future-Treated	Matched to Never-Treated	Matched to Future-Treated
	(1)	(2)	(3)	(4)
Effect in 1st year of programme	0.015	0.037**	0.005	0.039*
Effect in 2nd year of programme	-0.006	-0.007	0.010	0.003
Effect in year after programme	-0.008	-0.008	-0.005	-0.005
Effect in 2nd year after programme	-0.044	-0.056*	-0.060*	-0.058*
% pupils in school ethnic minority	-0.691***	-0.945***	-0.713***	-0.746***
% pupils in school FSM	0.251***	0.136*	0.229***	0.268***
% pupils in school female	-0.074	0.063	-0.014	-0.014
School intake prior attainment	-0.047**	-0.088***	-0.008	-0.050
R-Squared	0.111	0.085	0.107	0.078
N	1,108	360	929	266

Source: HPML Management Data and School Workforce Census.

Statistically significant findings (as indicated by asterisks)

Retention in participants' main teaching department

- Comparing HPML participants' departments with matched future participants' departments, there is a four-percentage point increase in departmental retention in the first year of the programme, and a six-percentage point decrease in departmental retention in the second year after completion of the programme.

[57] Notes: Each column shows a different match/regression. *** = statistically significant at the 99% level, ** = statistically significant at the 95% level, * = statistically significant at the 90% level.

Retention in departments where participants have a middle leadership responsibilities

- Comparing HPML participants with matched non-participants, there is a six-percentage point decrease in departmental retention in the second year after completion of the programme.
- Comparing HPML participants with matched future participants, there is a four-percentage point increase in departmental retention in the first year of the programme, and a six-percentage point decrease in departmental retention in the second year after completion of the programme.

Taken together, these findings are suggestive of a decrease in departmental retention in the second year after completion of the programme. However all three of these findings are statistically significant only at the 90% level and should therefore be treated with some caution.

Table 4.6 shows the results from repeating this analysis but looking at the impact on tenure rather than retention. Models (1) and (2) look at tenure in participants' teaching departments, and models (3) and (4) look for an effect in the departments where participants have a middle leadership responsibility[58]. Figures in the table reflect the percentage point increase in average departmental tenure (e.g. 0.15 equates to 15 percentage points).

[58] Participants' main teaching departments differ from the departments in which they have a middle leadership responsibility for around 19% of participants.

Table 4.6: Modelling the Effect of Participation on Teacher Tenure[59]

	Tenure in Participants Main Teaching Department		Retention in Participants' Middle Leadership Department	
	Matched to Never-Treated (1)	Matched to Future-Treated (2)	Matched to Never-Treated (3)	Matched to Future-Treated (4)
Effect in 1st year of programme	-0.0817	-0.0498	-0.178	-0.154
Effect in 2nd year of programme	-0.132	0.146	-0.229*	0.0249
Effect in year after programme	-0.00971	0.127	-0.0772	0.149
Effect in 2nd year after programme	-0.0844	0.00308	0.0313	0.131
% pupils in school ethnic minority	-3.558***	-2.235*	-4.349***	-2.872**
% pupils in school FSM	0.603	-1.502*	0.658	0.900
% pupils in school female	1.815*	5.827***	2.804***	5.123***
School intake prior attainment	0.656***	0.263	0.296	0.270
R-Squared	0.408	0.375	0.426	0.367
N	1095	356	921	262

Source: HPML Management Data and School Workforce Census. Note: N falls within columns as outcomes are measured further from the end of the programme.

Statistically significant findings (as indicated by asterisks)

- Comparing HPML participants with matched non-participants, there is a small decrease in average departmental tenure in the first year of the programme. However there is no consistent pattern of findings across the four models.

In summary, the findings indicate that there are small but consistent negative effects on departmental retention in the second year after the programme has finished, but these are not replicated using the measure of average departmental tenure. We therefore caution against drawing firm conclusions about the effect of participation on departmental retention.

One plausible interpretation of this finding is that middle leaders who have participated on the HPML programme are more effective at handling performance management issues,

[59] Notes: Each column shows a different match/regression. *** = statistically significant at the 99% level, ** = statistically significant at the 95% level, * = statistically significant at the 90% level.

which may lead to lower-performing teachers leaving the department. Further research would however be required to explore this issue. It is also worth pointing out that the decrease in turnover found in the second year of the programme is balanced out to some extent by increases in retention early in the programme.

4.3.3 Impact on working with other schools

Table 4.7 looks at whether the programme had an impact on the extent to which participants work with other schools; this is based on participants who have completed the HPML secondary programme and took part in the online survey.

Table 4.7: The extent to which respondents are working with other schools in their local authority, multi-academy trust or similar category schools as a result of the programme

	Much more	A little more	The same	A little less	Much less	Don't know
Other schools in local authority (LA)	14%	32%	42%	3%	3%	7%
Similar category schools	14%	29%	42%	2%	6%	7%
Other schools in multi-academy trust (MAT)	19%	27%	40%	4%	4%	5%

Base: Survey respondents who have completed the HPML secondary programme, excludes 'N/A' responses (in order) – 137, 130, 99 (Q23 of the online survey)

Overall, over two in five survey respondents reported that they are now working more with other schools in their local authority (46%), similar category schools (43%), or other schools in their multi-academy trust (46%) as a result of the programme. Similar levels reported that the extent to which they work with other schools has remained the same (42%, 42% and 40% respectively) following the programme. Fewer than one in ten said that the extent to which they work with other schools is less (6%, 8% and 8% respectively) as a result of the programme.

4.4 Impact on attainment

Ambition claim that the HPML programme can improve attainment.[60] By improving participants' leadership skills, the programme is intended to improve conditions and support for teachers, allowing them to deliver improved teaching in their classrooms. This

[60] https://www.ambitionschoolleadership.org.uk/programmes/teaching-leaders/

section evaluates the relationship between participation on the programme and pupil attainment in participants' departments.

The following methodology was employed to explore this relationship:

- HPML participants and non-participants were statistically-matched based on the available variables ('matched to never-treated')
- HPML participants and future participants of the programme were statistically-matched based on the available variables ('matched to future-treated')
- Panel data models were used to control for differences between participating and non-participating departments.

Combining these techniques allows us to get closer to estimating the causal impact of the programme.[61]

Pupil attainment was measured using departments' GCSE average point score.[62] Each examination result for which the department is responsible is allocated a score based on the grade achieved (A* = 58, A = 52, and so on…). The department average point score for a given year is then the average of all these scores.

Table 4.8 shows the results from four different regression models. Models (1) and (2) look at pupil attainment in participants' teaching departments, and models (3) and (4) look for an effect in the departments where participants have a middle leadership responsibility[63]. Figures in the table reflect the percentage point increase in departmental GCSE average point score (e.g. 0.15 equates to 15 percentage points), with the standard error for these estimates provided below in parentheses.

[61] Please see Appendix A.1.1 for more detail on the methodology.
[62] Each examination result within the department is allocated a score based on the GCSE grade achieved (A* = 58, A = 52, and so on…). The department average point score for a given year is then the average of all these scores.
[63] Participants' main teaching departments differ from the departments in which they have a middle leadership responsibility for around 19% of participants.

Table 4.8: Modelling the effect of participation on pupil attainment[64]

	Average GCSE Point Score in Participants' Main Teaching Department		Average GCSE Point Score in Participants' Middle Leadership Department	
	Matched to Never-Treated (1)	Matched to Future-Treated (2)	Matched to Never-Treated (3)	Matched to Future-Treated (4)
Effect in 1st year of programme	0.021 (0.135)	0.012 (0.242)	-0.056 (0.150)	0.057 (0.282)
Effect in 2nd year of programme	0.188 (0.135)	0.222 (0.241)	0.069 (0.150)	0.214 (0.282)
Effect in year after programme	0.288 (0.162)	-0.020 (0.242)	0.392* (0.183)	0.066 (0.282)
Effect in 2nd year after programme	0.633** (0.217)	0.593* (0.245)	0.554* (0.253)	0.643* (0.286)
% pupils in school ethnic minority	8.857*** (0.933)	7.611*** (1.379)	8.742*** (1.016)	3.588* (1.569)
% pupils in school FSM	-4.944*** (0.596)	-3.494*** (0.997)	-4.917*** (0.645)	-3.767*** (1.085)
% pupils in school female	2.486* (1.148)	0.661 (1.843)	1.883 (1.156)	-0.189 (1.982)
School intake prior attainment	0.442* (0.225)	0.574 (0.360)	0.569* (0.249)	0.280 (0.409)
R-Squared	0.378	0.365	0.377	0.351
N	1,186	408	986	308

Source: HPML Management Data and School Workforce Census.

Pupil attainment in participants' main teaching department

Statistically significant findings (as indicated by asterisks)

- Comparing HPML participants with matched non-participants, there is a 0.63 point increase in departmental pupil attainment in the second year after completion of the programme.
- Comparing HPML participants with matched future participants, there is a 0.59-point increase in departmental pupil attainment in the second year after the completion of the programme.

[64] Note: This is an unbalanced panel, meaning fewer cohorts enter the model as we look at longer follow up periods. N is therefore the maximum number of observation included in the model, which occurs in the first year of the programme. *** = statistically significant at the 99% level, ** = statistically significant at the 95% level, * = statistically significant at the 90% level.

Pupil attainment in departments where participants have a middle leadership responsibility

- Comparing HPML participants with matched non-participants, there is a 0.39 point increase in departmental pupil attainment in the first year after the completion of the programme, and a 55-point increase in departmental pupil attainment in the second year after completion of the programme.
- Comparing HPML participants with matched future participants, there is a 0.64 point increase in departmental pupil attainment in the second year after the completion of the programme.

Overall, the size of the coefficients for the effect of participation in the second year after the programme are similar across models, at around 0.6 of a grade point[65]. This is equivalent to approximately one-twelfth of a GCSE grade per pupil, per qualification.

While this is a positive finding, there are several reasons to be cautious about these estimates. First, some of the findings are only statistically significant at the 90% level. It is also important to recognise that as we look at outcomes further out from the programme (e.g. two years after completion) sample size drops off because there are more cohorts that do not yet have follow up data that long after the programme.

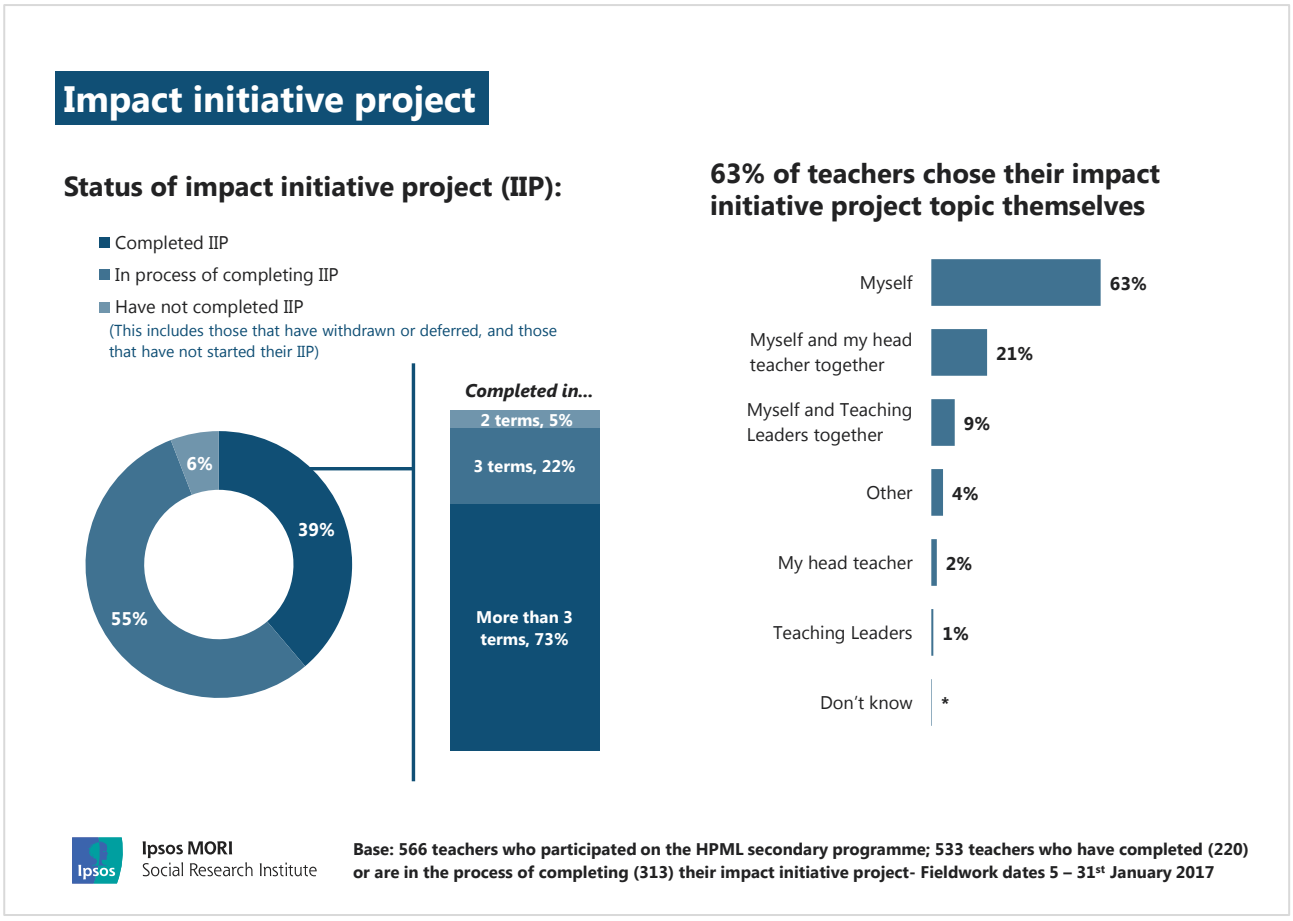
Taken together, this evidence is suggestive of a small positive impact on attainment two years after the programme has ended. The results are an important reminder that leadership interventions that target complex processes - changes must be implemented at a management level to facilitate change for teachers and subsequently pupils - typically take a long time to have effect. For this reason, data for an additional two years following the completion of the programme would provide a more definitive conclusion about the impact of participation on pupil attainment. Nevertheless, the results reported are promising.

4.5 Impact initiative project

The impact initiative project is designed to increase pupil attainment across participants' areas of responsibility by putting the skills they have learned from their training into practice. The impact initiative project should be evidence-based, monitored and evaluated to ensure optimum impact on pupils.

[65] This is equivalent to 0.6 of a grade point. There are six grade points between each GCSE grade classification. For example, an A is 52 grade points while an A* is 58 grade points. Please note that this increase in attainment is per pupil, per subject within the department. As such, a maths department may offer GCSEs in maths and statistics. In this case, pupils would, on average, see an 0.6 increase in both their maths and statistic grade points.

Figure 4.3: Summary of impact initiative projects findings from the online survey

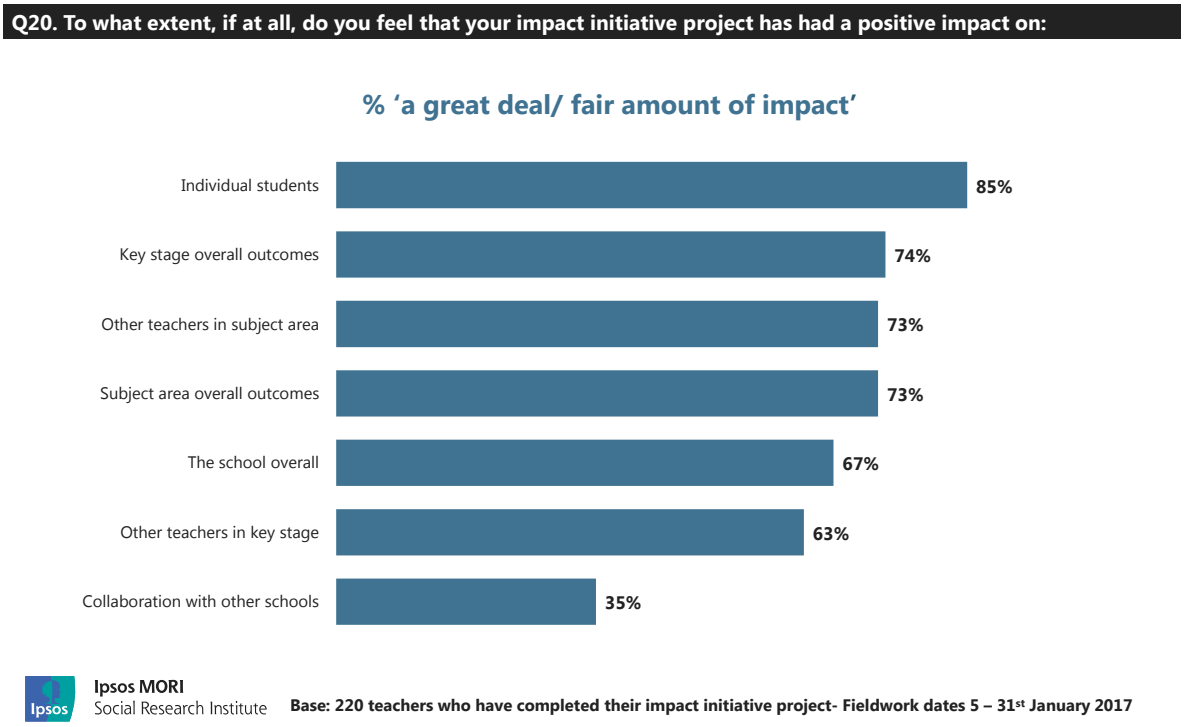


Based on the online survey, two-fifths of respondents (39%) have completed their impact initiative projects. Of these, nearly three-quarters (73%) took more than three school terms to complete their project.

In addition, over half (55%) of the respondents in the online survey were currently in the process of completing their impact initiative projects, and the remainder (6%) had not completed an impact initiative project – this included those that had withdrawn or deferred from the programme, and those that had not started their project.

Respondents who had either completed or were in the process of completing their impact initiative project were asked who chose the topic of their project. It was most common for respondents to choose the topic themselves (63%), followed by choosing the project jointly between them and their headteacher (21%).

Figure 4.4: The extent to which the impact initiative project had a positive impact



As demonstrated in figure 4.4, the most common area the impact initiative project was perceived to have a positive impact upon was individual students: 85% of respondents who had completed their project and took part in the online survey reported that they felt that their impact initiative project had had a great deal or fair amount of positive impact on individual students. On the other hand, the least common area the impact initiative project was said to have a great deal or fair amount of positive impact on was their collaboration with other schools (35%)[66].

Among the participants interviewed, some reported that their initiative projects were very effective:

> "It's made an enormous impact – [the year] is doing extremely well. There has been a 34% decrease in students not making progress in this specific cohort. They are really well prepped for GCSEs next year. It's been largely down to the middle leaders programme because I wouldn't have been able to do this otherwise. It's

[66] Participants are not explicitly asked to collaborate with other schools in order to complete their initiative. They are asked to set goals that are achievable within their area of responsibility, as opposed to being required to make the project relevant to the whole school and are also asked to link their goals to school expectations and priorities. They are expected to delegate at least some of the actions in their project, which should therefore impact on other teachers within their area of responsibility, which could be a key stage, subject area or pastoral responsibility

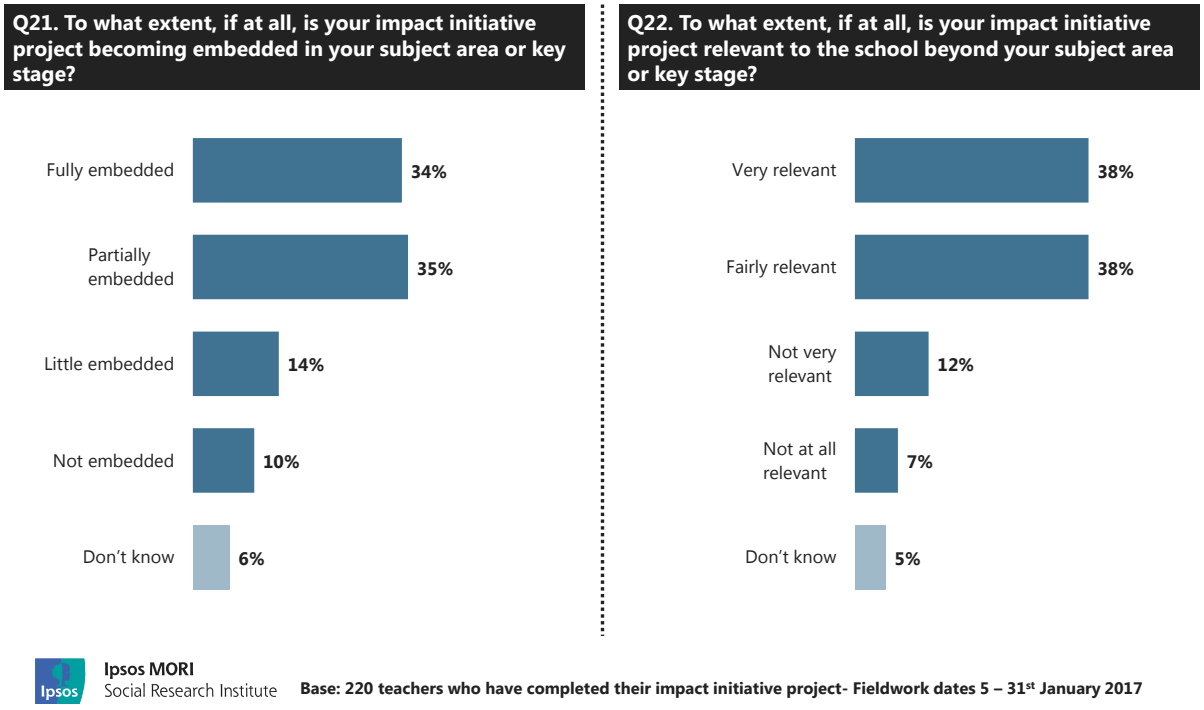
also raised standards across the whole department because [the year] have improved so much."

"The students are far more positive about the subject and more willing to say it is their favourite subject. The impact on results have been huge… Last week we had an Ofsted inspection and one of the key strengths they identified was [my] department."

Others, especially those who had not yet finished their project, were unsure what the effects would be due to certain barriers in the school:

"I'm not sure it will work out as well as on paper to be honest – I'm not sure we will see the results we want. It's a weak year, there are new GCSE requirements to prep for, and there are not enough teachers."

Figure 4.5: The extent to which respondents' impact initiative projects have become embedded in their subject area or key stage, and relevant to the school beyond this



As displayed in figure 4.5, over four-fifths of participants (83%) who had completed their impact initiative projects and took part in the online survey reported that their project had become embedded in their subject area or key stage, and 88% of respondents considered their project to be relevant to their school beyond their subject area or key stage.

When asked about the sustainability of their initiative project, participants often felt that their particular project had become embedded; however there were mixed views about whether it would continue in the future or spread to other departments:

> “It is definitely something that can be rolled out in the future, it's not specific to these particular students. There is nothing specific to me and can continue to be used by someone else.”

> “I developed a coaching department to challenge in a positive way and share good practice. It was to challenge both yourself and the students. All departments are middle leaders. Coaching is embedded in practice. In the new building there's a working and lunch area. We spend all day together as a department.”

> “One department asked about what I've done and another asked about costs. I don't think it'll be rolled out…others don't have that collaboration.”

4.6 Value for money: Perceptions from headteachers

Overall, headteachers reported that they felt the programme was reasonable or good value for money. Several explained that the programme is expensive and noted that they were aware of other programmes that were less expensive but that they did not see the same kind of impact from those compared to Ambition:

> “It was expensive, these projects always are. We are feeling financial pressure. The question is, is this investment sustainable?“

> “It is reasonable value for money, not great value for money. 6.5 out of 10. I just think it's quite expensive.”

> “Good value for money - it's very professional and provides expert knowledge. Better than a £700 a day consultant.”

One headteacher also noted that the value for money depends on the success of the programme for that individual middle leader. The headteacher had seen excellent outcomes for some participants going through the programme and mediocre outcomes for others, thus they considered it good value for money for some and not for others.

Another headteacher noted that the programme was not only valuable for building leadership skills but also to aid retention:

> “I think it’s good value for money because not only does it give people skills but it also shows commitment and retention. Recruitment is a huge challenge in education right now and to lose good teachers is hard.”

The senior leader and in-school mentor for the participant was able to reflect on the different perspectives around the programme's value for money, and the importance for the school, especially the headteacher to see the impact that the programme is having on the participant and wider effects on the school:

> "I think it is good value because I've seen it and worked with the person and know the effect it's had on that person. However it is difficult to sell it to someone who just comes from a financial point of view, principals tend to see it from a financial perspective and think 'well that's a lot of money'. I see it as 'it costs a lot but one programme is having an effect and another programme is not having an effect'. I think it's hard to judge value for money if you don't see the impact on the person."

5. Conclusion

The available data suggests that the HPML programme is reaching the intended target middle leaders and schools.

The overall perceptions of the HPML programme participants and head teachers are generally positive. Participants perceive the programme to be a significant time commitment; however, felt the benefits outweighed the drawbacks.

Participation on the HPML programme is having an impact on teacher retention, with an increased chance of participants still working in a state-funded school in England in the year after the programme. Participation is also having an impact on teachers' career progression, with participants receiving higher pay increases by both the final year of the programme, and the year after the programme. Finally, the HPML programme has a positive impact on pupil attainment two years after completion of the programme.

6. Appendix

A.1 Technical note on methodology

A.1.1 Education Datalab

Methods and assumptions for the impact evaluation

There are important differences in the methodology used across different parts of the measured impact evaluation in this report. When evaluating the impact on individual participants' progression and retention, propensity score matching is used. This involves finding a group of non-participants which look as similar as possible to those who do participate, to enable a fair comparison. The validity of the analysis depends on a "selection on observables" assumption. This means that, for the estimates to be an accurate assessment of the impact of the programme, the dataset must include all factors which determine whether somebody participates on the programme. This is a strong assumption which cannot be tested empirically.

Concerns about not having data on all factors that determine participation are to some extent mitigated by the strategy of matching participants to those who have not yet taken part in the programme but do so in later years: by comparing participants with future participants, an important potential source of unobserved factors that determines the probability of participation is eliminated. Nevertheless, the estimates of the effect of the programme on individual outcomes cannot be interpreted as causal.

By contrast, when evaluating the impact on departmental outcomes, such as retention of teachers within participating departments and the attainment of pupils within participating departments, the estimates do not rely on such strong assumptions. This is because panel-data techniques are used to strip out a range of factors that are not included in the data. Using departmental fixed effects, i.e. comparing outcomes within the same department before and after participation rather than comparing different departments to each other, controls for any time-invariant (factors that do not change with time) factors that are not included in the data.

The double-difference aspects of the model, i.e. comparing the change within departments across departments, means that time-varying factors that are common across departments in different schools are also controlled for, even when they are not in the data. Finally, the triple-difference aspects of the model specification controls for time-varying factors that are common across departments within participating schools. The estimates therefore rely only on the assumption that there are no time-varying factors that are not common across participating and non-participating departments. The

estimates of the impact of the programme on departmental outcomes, including attainment, are therefore able to get closer to causality.

Allocating participants to departments

To look at department-level outcomes HPML participants needed to be allocated to a department within the school. This involved a four-step process.

First, a set of standard school departments were created. This is necessary to provide a consistent approach for allocating participants and examinations to departments. Six standard departments were agreed: English, maths, science, design and technology, humanities, and modern foreign languages.

In the second step, each participant was allocated to one of these departments. This was done using two different methods, both of which are reported where relevant. The first uses the middle leadership job title listed by the participant at the point they join the HPML programme. This is a free text field with a very high number of unique answers. As such, a set of conventions for allocating participants based on their stated job title was adopted:

- Any individual whose middle leadership responsibility was entirely non-departmental, such as Head of Key Stage X, was assigned as “None”.
- Any individual who was Head of, Deputy Head of, or had another obviously departmental leadership role in one of the six standard departments listed above was allocated to that department.
- Anyone with a similar role not in one of the six standard departments was coded as having an “Other” departmental role.
- Those with departmental leadership roles in e.g. media studies were allocated to English unless their job title revealed that media was grouped with another department. Statistics was grouped with maths in the same way.
- Where two standard departments were listed in the middle leaders’ job title e.g. Head of Science and Technology, they were allocated to the department listed first.

The second approach used the School Workforce Census curriculum module, which records how many hours of teaching each teacher does using set of standard subject descriptors. These subject descriptors were allocated using a set of conventions similar to those above (the full table is available on request). Participants were then allocated to the department in which they do most of their timetabled hours of teaching.

Appendix table 1.1: Allocation for programme roles to codes

Programme Role	Coded as
Teacher of X plus whole school responsibility	None
Deputy head in department containing other subject	Other
KS3/KS5	None
Head of Science and technology	Science
NQT mentor maths	Maths
Teacher of maths	None
Media (unless listed as grouped with non-English)	English
History, geography, religious studies, integrated humanities, sociology, politics, philosphy, psychology	Humanities
STEM (science, technology, engineering and mathematics)	Science
Design	Other

Source: Datalab

In the third step, to evaluate the effect of the programme on attainment, a comprehensive list of GCSE examinations taken by secondary school pupils in England were allocated to the set of standard departments. The EBACC rules were used as a starting point, and then built upon using a similar set of conventions to those outlined above. The full table allocating examinations to departments is available on request.

In the fourth step, to evaluate the effect of the programme on retention of teachers in the participants' department, all teachers in the school were allocated to one of the six standard departments or to "Other". This was done using the School Workforce Census data as described in step two above.

Eligibility

Eligibility for the HPML programme is dependent on meeting at least one of up to three criteria. These criteria have changed from year to year, as can be seen in the table below. Ambition School Leadership (Ambition) are required to determine eligibility during the academic year before the participants would start the programme, using the most recent data available at that point in time. Examination data would generally be from one year prior to this and is sometimes subsequently revised. Demographic data is generally available for the academic year in which the decision is made. This has all been taken into account in the analysis.

Appendix table 1.2: Criteria for eligibility for the programme

	Poverty indicator	Attainment indicator	Joint indicator
2008 - 2011	≥15% of students are in receipt of free school meals	N/A	N/A
2012	>50% of pupils are living in the lowest 30% of the IDACI[67] Or ≥15% of students are in receipt of free school meals	GCSE attainment is in the lowest 30% of the national distribution (5 A*-C incl. English and maths), which is equivalent to ≤50% of pupils.	N//A
2013	>50% of pupils are living in the lowest 30% of the IDACI Or ≥15% of students are in receipt of free school meals	Fewer than 40% of pupils achieving 5A*-C at GCSE (incl. E&M)	N/A
2014	Ever 6 FSM[68] of ≥50%	Under 40% of your pupils gain 5A*-C GCSE (including English and maths)	Ever 6 FSM of 25%-50% AND fewer disadvantaged pupils achieving 5A*-C at GCSE (incl. E&M) than national average for all pupils, equivalent to 59% of pupils.
2015	Ever 6 FSM of ≥50%	Under 40% of your pupils gain 5A*-C GCSE (including English and maths)	Ever 6 FSM of 25%-50% AND fewer disadvantaged pupils achieving 5A*-C at GCSE (incl. E&M) than national average for all pupils, equivalent to 57% of pupils.

[67] Income Deprivation Affecting Children Index
[68] Free School Meals

	Poverty indicator	Attainment indicator	Joint indicator
2016	Ever 6 FSM of ≥50%	Under 40% of your pupils gain 5A*-C GCSE (including English and maths)	Ever 6 FSM of 25%-50% AND fewer disadvantaged pupils achieving 5A*-C at GCSE (incl. E&M) than national average for all pupils, equivalent to 57% of pupils.

Source: Ambition

Individual progression and retention match

The matching at this stage of analysis begins by estimating a propensity score for every individual in the dataset, which is an estimate of the likelihood of them participating.

For the non-participant match, Datalab took the 2010 cohort of participants and, for each participant, found the non-participant who has the closest propensity score (nearest neighbour). Where a non-participant with a propensity score that is within 0.2 of the participant's (Datalab's caliper) could not be found, the participant was dropped. We then drop all unmatched non-participants. The process was repeated for the 2011, 2012 and 2013 cohorts until there was a matched non-participant for every participant for whom a match could be found. The dataset was then expanded so that any non-participants that are a nearest neighbour for more than one participant are given due weight in the subsequent analysis.

For the future-participant match, Datalab repeat this entire process but instead of looking for the non-participant with the closest propensity score, an individual with the closest propensity score that did not participate in that cohort, but participates at least three cohorts later, was looked for. For example, for the 2010 cohort it was possible to look for somebody who does participate in the programme, but not until 2013. This allows for the comparison of participants who have already taken part, to participants who have not yet taken part.

The table below shows balance tests for the binary and continuous variables included in the match. The Participant and Controls columns show the mean characteristics for each of these groups. Columns 4 and 7 show p values for t tests of differences in the means between these two groups. In the non-participant match, there are some residual differences in pay which could not be eliminated by the matching process but the remaining variables are reasonably well balanced. In the future-participant match all variables appear well balanced. The p value for age is below 0.05 but the substantive difference is small at just one year.

Appendix table 1.3: Matched variables for non-participants and future participants

	Any Non-Participant			Untreated Future Participant		
	Participants	**Controls**	**P Value**	**Participants**	**Controls**	**P Value**
Age	32	32	0.74	32	33	0.02
Female	63%	62%	0.78	63%	65%	0.46
Pay	39,711	34,890	0	39,444	39,655	0.60
Tenure	4.0	3.6	0.06	3.9	3.8	0.36
Experience	6.8	6.6	0.48	6.8	7.0	0.46
FSM	32%	32%	0.69	32%	31%	0.13

Source: School Workforce Census

Balance tests for departmental retention and attainment match

The matching methods for the departmental outcome models differs in important ways from the matching method for the individual outcome models. As department is likely to be a very important determinant of whether or not a middle leader is chosen and supported to go on the programme, a strict match on department was conducted. To do this, all participating maths departments were taken and matched to their never-participating (and then, subsequently, future-participating) maths departments. This process was then repeated for the other types of department. As with the individual matches, the nearest neighbour matching within a caliper of 0.2 was taken, dropping all unmatched participants and unmatched non-participants. Trying to do strict matching on subject and year resulted in too few observations for each match, so unlike in the individual matching, Datalab simply conducted all the matching on participants and non-participants characteristics in 2009, the year immediately prior to the first cohort that analysed in this report.

The table below shows balance tests for all continuous variables included in the match. The “Part” column shows the mean value for participants and the “Cont” column shows the same for controls. The “P” column shows the p value for a t test of equality between the groups. As can be seen from the p values we cannot reject the null that any of groups are unbalanced on these criteria, at the 95% level.

Appendix table 1.4: Matched variables for teaching and middle leadership departments

	Participants' Main Teaching Dept						Participants' Middle Leadership Dept					
	Never-Participant			Future-Participant			Never-Participant			Future-Participant		
	Part	Cont	P	Part	Cont	P	Part	Cont	P	Part	Cont	P
School Best 8	320	319	0.81	335	332	0.22	320	320	0.77	336	331	0.12
School FSM	0.30	0.29	0.06	0.31	0.29	0.10	0.30	0.29	0.11	0.31	0.32	0.60
School BME	0.43	0.39	0.11	0.47	0.45	0.48	0.42	0.40	0.32	0.48	0.51	0.53
Dept Relative Performance	0.13	0.15	0.88	0.07	0.17	0.72	0.08	0.14	0.74	-0.14	-0.22	0.79
Dept No. Pupils	149	143	0.12	150	152	0.75	146	142	0.36	149	144	0.47

Source: School Workforce Census

A.1.2 Ipsos MORI

Online survey

Sample

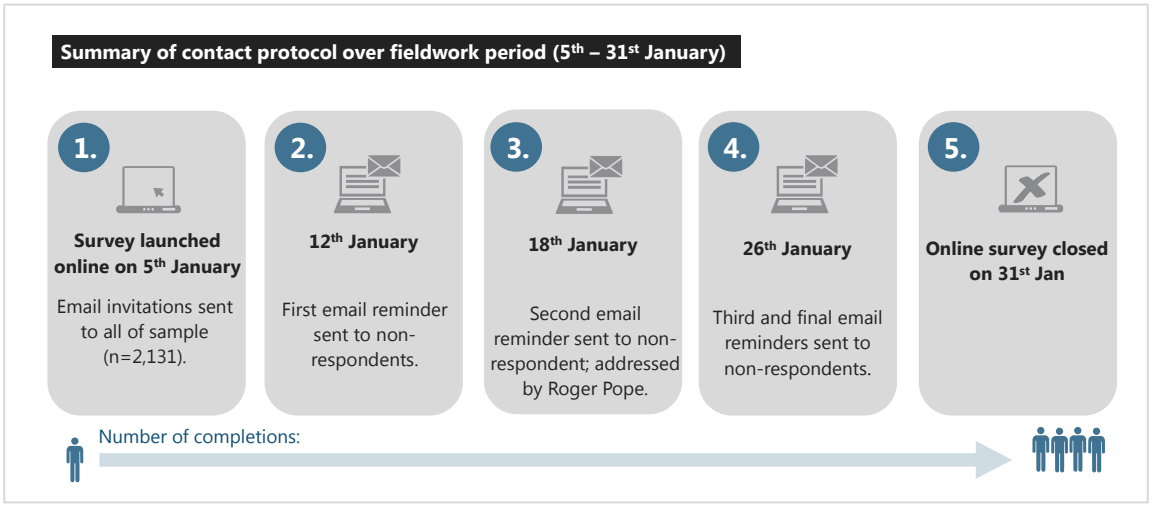
Ambition School Leadership (Ambition), formerly known as Teaching Leaders, provided a database of all eligible programme participants who had enrolled onto the HPML secondary programme between 2008 and 2016 and provided an email address. In total the database contained 2,131 records, with email addresses. All 2,131 eligible participants were sent an invitation email with a unique link to participate in the survey. 2,026 emails were reported as delivered, a bounce-back rate of 5%.

Fieldwork

Fieldwork was conducted between 5th and 31st January 2017.

Appendix figure 1.1 gives an overview of the contact protocol followed for the survey.

Appendix figure 1.1: Contact protocol for the Survey of HPML Programme participants

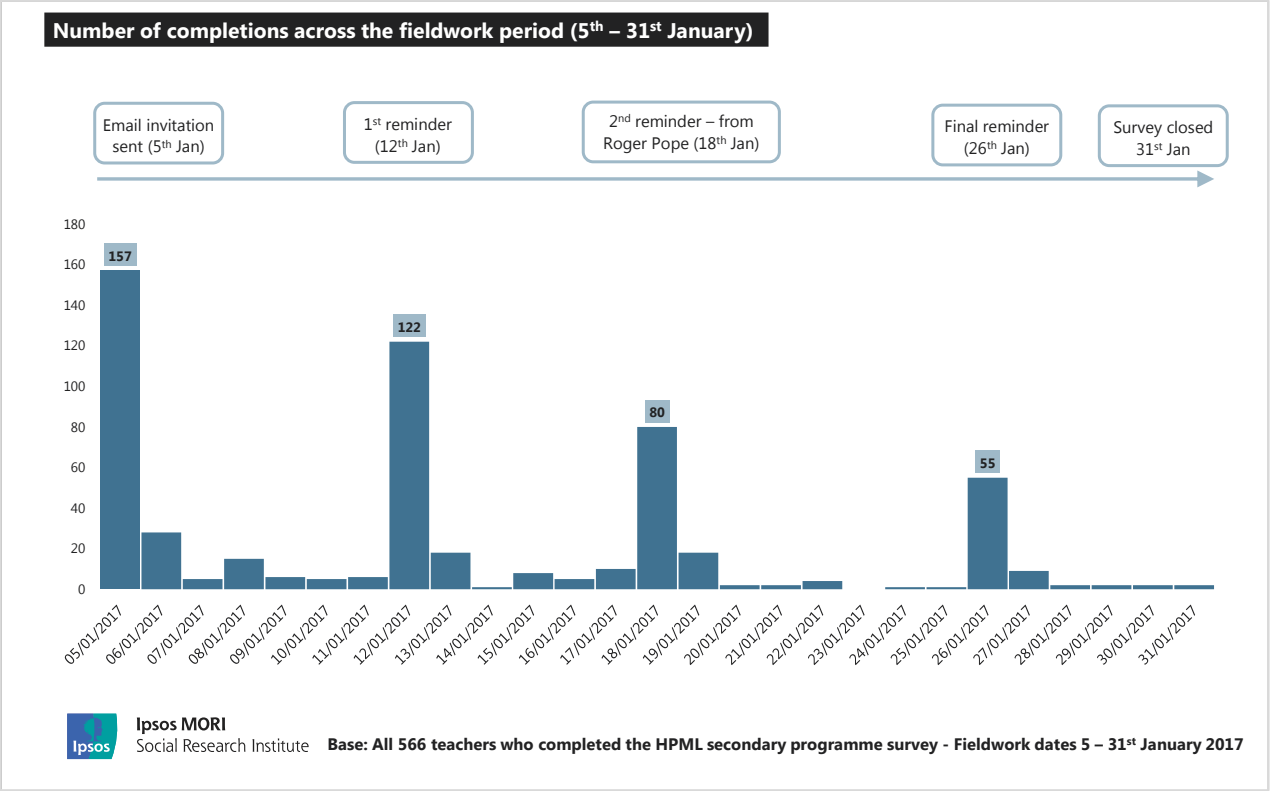


Response rates

In total, complete survey responses were received from 566 respondents. Based on the number of delivered emails, a response rate of 28% was achieved.

Annex figure 1.2 displays the number of survey completions per day across the fieldwork period (5th – 31st January).

Appendix figure 1.2: The number of survey completions across the fieldwork period



There are evident spikes in the number of survey completions on days where email communications were sent to respondents – this includes the email invitation, followed by three email reminders. Only non-respondents, as identified through an assigned unique identifier, received reminders to take part in the survey. The reminders were designed as a package, with each reminder providing a different message, with a view to maximising the response rate achieved.

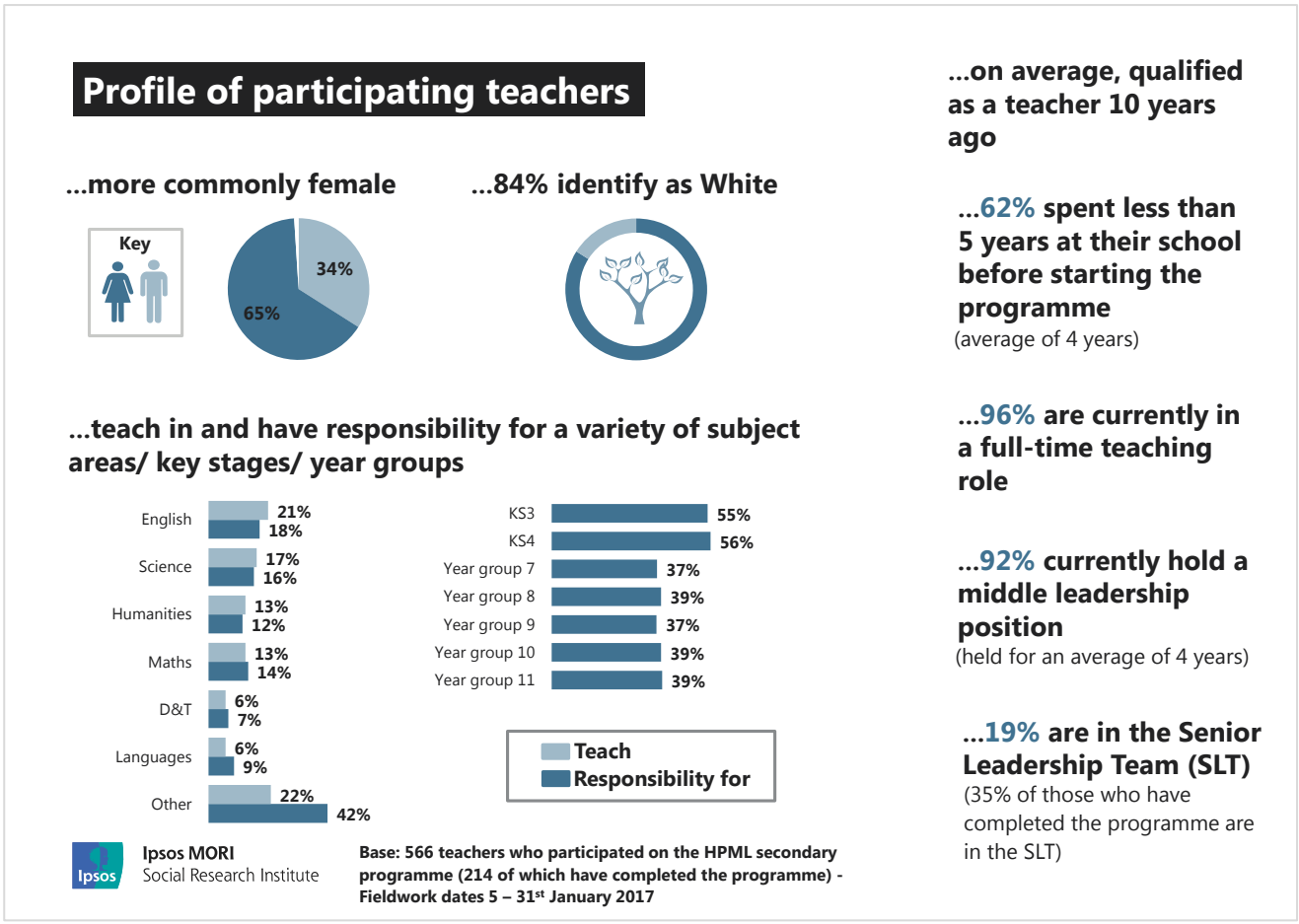
The survey was designed to be device-agnostic, with 73% of participants completing the survey on a desktop, 22% completing the survey on a smartphone, and 5% completing the survey on a tablet.

The median completion time was 9 minutes 50 seconds.

Profile of participants who took part in the online survey

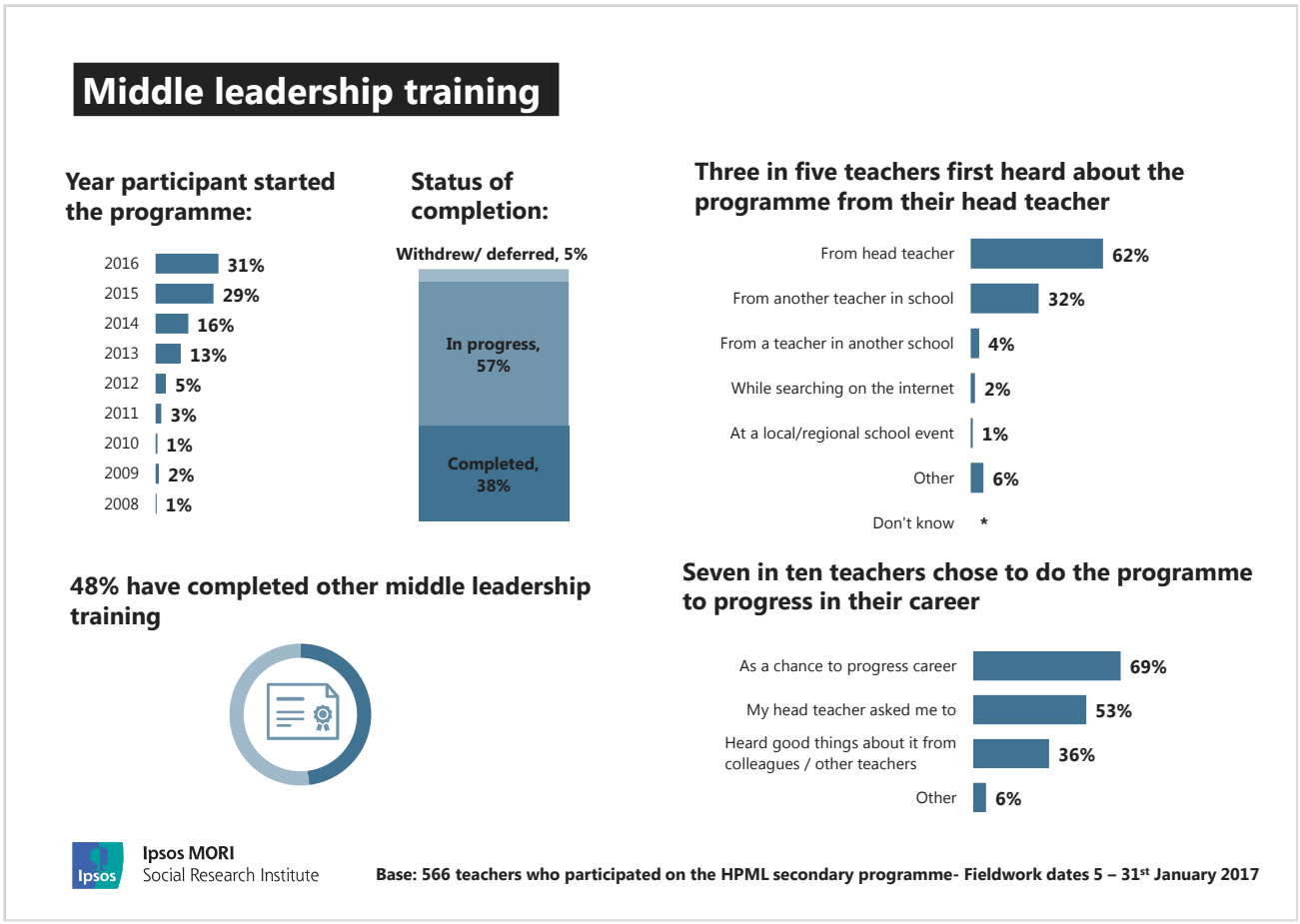
Appendix figures 1.3 and 1.4 summarise the key characteristics of the participants who took part in the online survey.

Appendix figure 1.3: Profile of participants who took part in the online survey



Notably, HPML secondary programme participants who took part in the online survey were more commonly female (65%), and identified themselves as White (84%) than participants overall. These secondary teachers teach in, and have responsibility for, a variety of subject areas, key stages and year groups. Nearly all survey respondents (96%) are currently in a full-time teaching role, and on average, qualified as teachers 10 years ago. They had spent an average of four years at their schools when they started on the programme. The majority (92%) currently hold a middle leadership position, while one-fifth (19%) are in their school's Senior Leadership Team. This rises to 35% among survey respondents who have completed the programme.

Appendix figure 1.4: Summary of middle leadership training



Appendix figure 1.4 demonstrates that participants from more recent HPML secondary cohorts were more likely to take part in the online survey, with 60% starting the programme in either 2015 or 2016[69]. As such, the majority of respondents are still in the process of completing the programme (57%), compared to those that have completed it (38%) and those that have withdrawn or deferred their participation (5%).

The most common way that respondents heard about the programme was through their headteacher (62%), but the most common reason for choosing to do the programme was to progress their own careers (69%).

Nearly half of respondents (48%) have completed other middle leadership training – this includes local programmes (27%) and the National Professional Qualification for Middle Leadership (NPQML, 12%).

[69] Participants who started the HPML secondary programme in 2015 or 2016 account for 41% of the sample provided by Ambition for the online survey. Notably, all email addresses were generally up-to-date; an overall bounce-back rate of 5% was recorded for the whole sample.

Reporting

Throughout this report, the findings for the online survey are rounded to the nearest whole integer. Where percentages do not add up to 100, this may be due to computer rounding or multiple responses.

Statistical reliability

In total, only a proportion (a sample of 566) of the total population (2,131 participants in Ambition's provided database) completed the survey. As such, we cannot be certain that the figures obtained are the same as those we would have obtained if all 2,131 completed the survey ("the true values"). We can, however, predict the variation between the sample results and the true values from knowledge of the size of the samples on which the results are based and the number of times a particular answer is given. The confidence with which we can make this prediction is usually set at 95% - that is, the chances are 95 in 100 that the true value will fall within a specified range.

Appendix table 1.5 illustrates the predicted ranges for different sample sizes and percentage results at the 95% confidence interval:

Appendix table 1.5: Statistical reliability (95% confidence interval)

Survey sample base size	Survey estimates		
	10% or 90%	30% or 70%	50%
	+/-	+/-	+/-
50	8.2	12.6	13.7
100	5.7	8.8	9.6
250	3.5	5.3	5.8
566 (i.e. all teachers who participated in the survey)	2.1	3.2	3.5

For example, where 566 responded and where 30% give a particular answer, there is a 95% likelihood that the true value (which would have been obtained if the whole population had been interviewed) will fall within the range of +/-3.2% percentage points from that question's result (i.e. between 26.8% and 33.2%).

When results are compared between separate groups within a sample, the difference may be "real" or it may occur by chance (because not everyone in the population has been interviewed). Confidence intervals will be wider when comparing groups, especially

where there are small numbers. These findings should be regarded as indicative rather than robust.

Session evaluation feedback

This report uses the average score for each measure to one decimal place.

A.2. Full data tables for the evaluation session scores

A.2.1 Residentials

Appendix table 2.1: Individual session scores for the 2014 residential (ranked chronologically)

Session	Objectives	Applicability
Becoming an inspirational leader	9.1	8.5
Middle Leadership: The Engine Room of Improvement	8.5	8.3
Pupil Premium: Using Funding Wisely	8.0	8.1
Leadership Case Study	8.3	8.3
Impact Initiative 1	8.0	8.3
Heads Panel	8.1	7.3
My Vision, My Story	8.0	7.8
Using evidence: Raising the Attainment of Children Facing Disadvantage	8.3	8.4
Data Case Study	7.8	8.1
Why is Great CPD Important?	8.1	8.1
Leadership Plain and Simple	8.8	8.6
Impact Initiative 2	8.2	8.4
Leadership Plain and Simple	8.8	8.6
Resilience Session	7.2	7.2
Don't Call it Literacy!	9.5	9.4
Programme overview and Introduction to 360 Framework	7.8	7.9
Impact Initiative 3	8.2	8.4
Transformation	9.4	8.9
Making a Difference	8.5	8.3

Base: secondary participants scores for session objectives (146) and applicability (145)

Appendix table 2.2: Individual session scores for the 2015 residential (ranked chronologically)

Session	Objectives	Applicability
Leadership Plain and Simple	9.3	9.2
Reflections Session	7.1	7.3
Contender Charlie. Lessons from Henry V	8.8	7.8
My Vision My Story	8.4	8.3
The Engine Room of Middle Leadership	8.9	8.9
What causes wellness?	9.2	8.2
EEF. Using Evidence: Raising the Attainment of Children Facing Disadvantage	8.9	8.9
Strategies for Change	8.7	8.9
Data Case Study	7.9	8.0
Leadership Case Study	8.3	8.3
Networking Skills	6.4	6.4
Impact Initiative 1 session	7.8	8.1
Impact Initiative 2 session	8.0	8.2
Impact Initiative 3 session	8.2	8.4
The Seven Stages of Leadership	8.1	7.8
Literacy and Leadership	9.7	9.4
Reflections	8.4	8.1
Transformation	9.5	8.7

Base: secondary participants scores for session objectives (151) and applicability (148)

Appendix table 2.3: Individual session scores for the 2015 alternative residential (ranked chronologically)

Session	Objectives	Applicability
The Mind-set of the Leader	9.0	8.5
Shakespeare Schools Festival	8.7	8.0
My Vision My Story	8.1	7.7
EEF	8.5	8.3
Contender Charlie. Lessons from Henry V	9.3	8.7
Impact Initiative 1	8.3	8.3
Strategies for Change	8.0	8.0
Don’t Call it Literacy	9.6	9.4
Data Case Study	7.1	7.3
Reflections	7.7	7.0
Transformation and Return	5.4	5.2

Base: secondary participants’ scores for alternative residential sessions (51)

Appendix table 2.4: Individual session scores for the 2016 residential (ranked chronologically)

Session	Objectives	Applicability
Leadership Plain and Simple	8.9	8.7
Shakespeare Schools Festival	7.7	7.0
Contender Charlie. Lessons from Henry V	9.0	8.2
The Engine Room of Middle Leadership	8.6	8.5
Strategies for Change	8.1	8.2
My Vision, My Story	7.9	8.1
Data Case Study	7.8	8.2
Leadership Case Study	8.1	8.3
EEF. Using Evidence: Raising the Attainment of Children Facing Disadvantage	8.1	8.4
'The Call' Welcome and Intro	8.3	8.3
Gender and Achievement Myths and Realities	6.4	6.5
Literacy and Leadership	9.3	9.2
The Seven Stages of Leadership	8.1	7.8
'Transformation and Return'	9.6	9.3
Area Impact Strategy Session	8.0	
Peer AIS time	7.8	

Base: secondary participants scores for session objectives (123) and applicability (121)

Appendix table 2.5: Individual session scores for the 2016 alternative residential (ranked chronologically)

Session	Objectives	Applicability
The Mind-set of the Leader	8.4	8.1
Shakespeare Schools Festival	8.5	8.0
Contender Charlie. Lessons from Henry V	8.0	7.4
The Engine Room of Middle Leadership	8.7	8.6
Strategies for Change	8.4	8.6
Visioning	8.1	8.4
Data Case Study	7.6	8.1
#Iwill, Empowering your students to lead positive change	6.6	6.7
Literacy and Leadership	9.3	9.3
Area Impact Strategy Session	8.0	

Base: secondary participants' scores for the alternative residential sessions (65 for all sessions, with the exception of 64 for 'Literacy and Leadership', and 64 for the applicability of '#Iwill, Empowering your students to lead positive change')

A.2.2 Evening seminars

Appendix table 2.6: Individual seminar sessions for participants of the 2012 year two cohort

Session	Quality	Objectives	Challenge	Change	Relevance	Knowledge
Building Learning Power	8.5	8.7	8.1	8.7	8.9	+2.0
Coaching[70]	8.8	8.8	8.1	8.6	9.0	+1.5
Coaching Skills	7.7	7.8	7.3	7.6	8.2	+1.4
Emotional Resilience	9.2	9.2	9.1	9.3	9.3	+2.3
Excel Skills	8.1	8.4	9.2	8.3	8.1	+2.2
Facilitation in Action	8.9	8.7	8.1	8.4	8.9	+1.9
Facilitation Skills	8.8	8.9	8.3	8.5	8.9	+1.8
Literacy	7.1	7.1	7.3	7.4	7.4	+1.6
Mindfulness Elective	7.5	8.0	6.7	7.7	6.8	+2.8
Navigating your team through change	7.2	7.2	6.4	7.1	7.6	+1.4
SEND	9.5	9.4	8.8	9.0	9.5	+2.5
Teach Meet	9.0	9.0		9.7	9.7	+3.0
Understanding Student Behaviour	9.9	9.7	8.9	9.6	9.6	+2.0
Whole School Strategic Thinking	8.5	8.4	8.0	7.7	8.6	+1.8
Overall	**8.3**	**8.3**	**7.8**	**8.0**	**8.5**	**+1.8**

Base: participants that attended each session (in order) – 79, 61, 32, 27, 14, 141, 114, 16, 22, 194, 22, 3, 7, 241

[70] Includes 'Coaching' catch up sessions (n=8)

Appendix table 2.7: Individual seminar sessions for participants of the 2013 year one cohort

Session	Quality	Objectives	Challenge	Change	Relevance	Knowledge
Eat the Frog: Time management	8.2	8.2	6.7	7.5	8.2	+1.3
How to have conversations you dread	8.3	8.4	7.6	8.0	8.5	+1.5
In the shoes of Ofsted	8.5	8.5	7.7	8.2	8.8	+1.4
Influencing Beyond Authority	8.2	8.4	7.8	8.1	8.6	+1.7
Numeracy Elective	7.5	8.8	8.0	9.0	8.5	+3.0
Removing Barriers to Learning	8.1	8.2	7.1	7.8	8.4	+1.3
Teach Meet	8.0	7.9		7.7	8.4	+0.7
Transactional Analysis	8.5	8.5	8.1	7.7	8.4	+2.5
What does it mean to be a Middle Leader?	8.5	8.5	7.7	8.2	8.8	+1.5
Overall	**8.3**	**8.4**	**7.5**	**8.0**	**8.5**	**+1.5**

Base: participants that attended each session (in order) – 197, 182, 224, 192, 4, 233, 7, 13, 253

Appendix table 2.8: Individual seminar sessions for participants of the 2013 year two cohort

Session	Quality	Stretch	Applicability
Coaching	8.5	7.8	8.1
Coaching Skills	8.4	7.5	8.0
Facilitation in Action	8.9	8.7	8.8
Facilitation Theory	8.4	7.6	8.2
Navigating your team through change	7.9	6.9	7.5
Whole School Strategic Thinking	8.1	8.0	7.7
Overall	**8.3**	**7.7**	**7.9**

Base: participants that attended each session (in order) – 75, 230, 72, 198, 215, 344

Appendix table 2.9: Individual seminar sessions for participants of the 2014 year one cohort

Session	Quality	Stretch	Applicability
Coaching	8.3	7.5	8.2
Coaching Skills	8.7	8.1	8.2
Effective Monitoring and Feedback	8.0	7.2	7.5
Facilitation Skills	8.8	8.3	8.6
Great Expectations	8.6	7.9	8.6
Holding to Account	8.8	8.4	8.8
Overall	**8.6**	**8.0**	**8.4**

Base: participants that attended each session (in order) – 117, 47, 165, 451, 326, 147

Appendix table 2.10: Individual seminar sessions for participants of the 2014 year two cohort

Session	Quality	Stretch	Applicability
Coaching Skills	8.5	8.0	8.2
Constructing a Whole School Curriculum	8.7	8.0	7.6
Managing and Influencing Others	7.7	6.9	7.3
Project Management	7.8	7.3	7.8
Whole School Approach to Data	8.1	8.3	8.0
Overall	**8.2**	**7.7**	**7.8**

Base: participants that attended each session (in order) – quality: 216, 221, 259, 191, 216; stretch and applicability: 229, 230, 276, 203, 233

Appendix table 2.11: Individual seminar sessions for participants of the 2015 year one cohort

Session	Quality	Stretch	Applicability
Coaching Skills	8.4	7.9	8.4
Effective Monitoring and Feedback	8.0	7.6	8.1
Facilitation Skills	8.6	8.1	8.4
Great Expectations	8.8	7.9	8.7
Holding to Account	8.3	7.9	8.4
Overall	**8.5**	**7.9**	**8.4**

Base: participants that attended each session (in order) – 229, 258, 554 (552 for facilitation skills), 230, 260

A.3. Full Regression Outputs

Appendix Table 3.1: Modelling the effect of participation on teacher retention

	Retention in Participants' Main Teaching Department		Retention in Participants' Middle Leadership Department	
	Matched to Never-Treated	Matched to Future-Treated	Matched to Never-Treated	Matched to Future-Treated
	(1)	(2)	(3)	(4)
Effect in 1st year of programme	0.015 (0.008)	0.037** (0.014)	0.005 (0.009)	0.039* (0.017)
Effect in 2nd year of programme	-0.006 (0.010)	-0.007 (0.014)	0.010 (0.012)	0.003 (0.017)
Effect in year after programme	-0.008 (0.014)	-0.008 (0.014)	-0.005 (0.017)	-0.005 (0.017)
Effect in 2nd year after programme	-0.044 (0.023)	-0.056* (0.023)	-0.060* (0.027)	-0.058* (0.029)
% pupils in school ethnic minority	-0.691*** (0.079)	-0.945*** (0.096)	-0.713*** (0.086)	-0.746*** (0.113)
% pupils in school FSM	0.251*** (0.046)	0.136* (0.068)	0.229*** (0.051)	0.268*** (0.078)
% pupils in school female	-0.074 (0.089)	0.063 (0.134)	-0.014 (0.091)	-0.014 (0.172)
School intake prior attainment	-0.047** (0.017)	-0.088*** (0.024)	-0.008 (0.019)	-0.050 (0.028)
R-Squared	0.111	0.085	0.107	0.078
N	1,108	360	929	266

Source: HPML Management Data and School Workforce Census.

Notes: Each column shows a different match/regression. *** = statistically significant at the 99% level, ** = statistically significant at the 95% level, * = statistically significant at the 90% level.

Appendix Table 3.2: Modelling the effect of participation on teacher tenure

	Tenure in Participants Main Teaching Department		Retention in Participants' Middle Leadership Department	
	Matched to Never-Treated (5)	Matched to Future-Treated (6)	Matched to Never-Treated (7)	Matched to Future-Treated (8)
Effect in 1st year of programme	-0.0817	-0.0498	-0.178	-0.154
	(0.0923)	(0.170)	(0.0996)	(0.193)
Effect in 2nd year of programme	-0.132	0.146	-0.229*	0.0249
	(0.0924)	(0.169)	(0.100)	(0.192)
Effect in year after programme	-0.00971	0.127	-0.0772	0.149
	(0.112)	(0.170)	(0.123)	(0.192)
Effect in 2nd year after programme	-0.0844	0.00308	0.0313	0.131
	(0.159)	(0.173)	(0.178)	(0.194)
% pupils in school ethnic minority	-3.558***	-2.235*	-4.349***	-2.872**
	(0.655)	(0.982)	(0.704)	(1.084)
% pupils in school FSM	0.603	-1.502*	0.658	0.900
	(0.418)	(0.696)	(0.440)	(0.726)
% pupils in school female	1.815*	5.827***	2.804***	5.123***
	(0.780)	(1.242)	(0.753)	(1.292)
School intake prior attainment	0.656***	0.263	0.296	0.270
	(0.158)	(0.255)	(0.167)	(0.277)
R-Squared	0.408	0.375	0.426	0.367
N	1095	356	921	262

Source: HPML Management Data and School Workforce Census. Note: N falls within columns as outcomes are measured further from the end of the programme.

Notes: Each column shows a different match/regression. *** = statistically significant at the 99% level, ** = statistically significant at the 95% level, * = statistically significant at the 90% level.

Appendix Table 3.3: Modelling the effect of participation on pupil attainment

	Average GCSE Point Score in Participants' Main Teaching Department		Average GCSE Point Score in Participants' Middle Leadership Department	
	Matched to Never-Treated (1)	**Matched to Future-Treated (2)**	**Matched to Never-Treated (3)**	**Matched to Future-Treated (4)**
Effect in 1st year of programme	0.021 (0.135)	0.012 (0.242)	-0.056 (0.150)	0.057 (0.282)
Effect in 2nd year of programme	0.188 (0.135)	0.222 (0.241)	0.069 (0.150)	0.214 (0.282)
Effect in year after programme	0.288 (0.162)	-0.020 (0.242)	0.392* (0.183)	0.066 (0.282)
Effect in 2nd year after programme	0.633** (0.217)	0.593* (0.245)	0.554* (0.253)	0.643* (0.286)
% pupils in school ethnic minority	8.857*** (0.933)	7.611*** (1.379)	8.742*** (1.016)	3.588* (1.569)
% pupils in school FSM	-4.944*** (0.596)	-3.494*** (0.997)	-4.917*** (0.645)	-3.767*** (1.085)
% pupils in school female	2.486* (1.148)	0.661 (1.843)	1.883 (1.156)	-0.189 (1.982)
School intake prior attainment	0.442* (0.225)	0.574 (0.360)	0.569* (0.249)	0.280 (0.409)
R-Squared	0.378	0.365	0.377	0.351
N	1,186	408	986	308

Source: HPML Management Data and School Workforce Census.

Notes: Each column shows a different match/regression. *** = statistically significant at the 99% level, ** = statistically significant at the 95% level, * = statistically significant at the 90% level.

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