



University of the
West of England



The impact of the pursuit of ASDAN's *Certificate of Personal Effectiveness (CoPE)* on GCSE attainment

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A. Executive summary

1. **The completion of the ASDAN Certificate of Personal Effectiveness (CoPE) at Level 2 has a statistically significant association with improved attainment in GCSE qualifications.**
2. This finding is based on analysis of data from the National Pupil Database (NPD), comprising over 500,000 young people who completed Key Stage 4 (KS4) in 2010, and illuminated by qualitative data collected from four schools currently offering CoPE.
3. The analysis is mainly based on a distinction between two approaches to offering CoPE within schools, linked to the proportion of the overall cohort undertaking CoPE:
 - a. 'Thin usage' schools are those where CoPE is offered, but to less than 25% of the cohort. Evidence from schools suggests that in these instances, the pupils selected to undertake CoPE are most likely to be those with serious educational challenges, including behavioural issues, persistent absenteeism, missed schooling for chronic ill-health or personal reasons and/or other situational factors that are likely to predispose them towards underachievement at KS4 relative to Key Stage 3 (KS3).
 - b. 'Wide usage' schools are those where CoPE is offered to more than 25% of the cohort, up to and including 100%. In these schools, CoPE is undertaken by a much wider cross-section of individuals, although this group still has more educational challenges, on average, than those schools not offering CoPE at all. Among those undertaking CoPE in these schools, the young people with mild or no specific educational challenges generally outnumber those with serious educational challenges.
4. In 'wide usage' schools, undertaking CoPE at Level 2 is associated with a statistically significant increase in the likelihood of achieving (i) GCSE English at A* to G, (ii) GCSE English at A* to C, and (iii) five GCSEs at A* to C including English and Maths (excluding equivalents). These findings are derived from analysis which accounts for differences in KS3 attainment in English and a range of factors associated with educational outcomes; see Section D3 of the main report for details of the methodology used.
5. **Specifically, undertaking CoPE at Level 2 in a 'wide usage' school is associated with an estimated 10% increased likelihood of achieving GCSE English at A* to C and an estimated 5% increased likelihood of achieving five GCSEs at A* to C including English and Maths (excluding equivalents), compared to similar young people in schools not offering CoPE.**
6. CoPE appears to be associated with a stronger impact among those young people (i) with low KS3 attainment in English, (ii) with special educational needs, (iii) who are eligible for free

school meals, and (iv) from Black and Minority Ethnic (BME) communities, especially those with English as a second language.

7. An analysis of 400 random paired individuals who had either (a) not undertaken CoPE, or (b) had done so within the context of a 'wide usage' school, provided additional support for the findings of the main study, suggesting that CoPE is associated with an average rise in attainment in GCSE English of around one-fifth of a grade, all else being equal.
8. In contrast, in 'thin usage' schools, the GCSE attainment of those young people undertaking CoPE at Level 2 is significantly lower than similar individuals in schools not offering CoPE for most of the measures investigated. The exception is the achievement of GCSE English at A* to G, where those individuals undertaking CoPE at Level 2 in a 'thin usage' school are associated with an increased likelihood of achieving this outcome compared to similar individuals in schools not offering CoPE. This is largely due to an increased propensity to attempt the qualification among young people with low attainment in English at KS3.
9. A similar finding was reported in regard to Key Stage 2 (KS2) attainment in an earlier Emerging Findings report produced in December 2011, with CoPE being associated with higher GSCE passes at A* to G in English and other subjects for young people with low attainment.
10. In 'thin usage' schools, the decreased likelihood of young people achieving GCSE English at A* to C and/or five GCSE passes at A* to C including English and Maths is hypothesised to be a result of the disproportionately challenging circumstances of the young people selected to undertake CoPE in such schools. The factors at stake here, such as classroom behaviour, would not be captured by the quantitative analysis conducted. In addition, this group is unlikely to be even attempting five GCSEs, reducing their chances of reaching this benchmark further still; they may, however, find success through other qualifications.
11. There is, nevertheless, good evidence from the qualitative data collected from such 'thin usage' schools, that the young people undertaking CoPE in these circumstances do benefit from the experience. In particular, teachers and young people report that CoPE boosts confidence, self-esteem, motivation and attendance. It is likely that these benefits feed back into KS4 outcomes, with these young people doing better than they would have done had they not undertaken CoPE. Unfortunately, it is not possible to test this statistically.
12. The same boosts to confidence, self-esteem, motivation and attendance are likely to be found in 'wide usage' schools and among those young people with less severe educational challenges, although limited qualitative data were collected from such schools in this study. These boosts are likely to account for the statistically improved likelihood of achievement in these schools and by these young people.

13. In other words, the evidence suggests that CoPE mitigates the underachievement of individuals with serious educational challenges, while markedly improving the achievement of those without such challenges. As the former predominate in the 'thin usage' schools and the latter in the 'wide usage' schools, this would explain the different apparent outcomes for the CoPE cohorts in the two contrasting types of school.
14. There is evidence that some schools may offer CoPE in a way which does not conform to ASDAN's expectations of good practice. We would tentatively suggest that the professional autonomy which CoPE allows may, in some cases, permit less than optimal provision. For example, insufficient timetabling, understaffing and/or underutilisation of learner interests may contribute to the lower impact of CoPE in some schools. This appears to be less of an issue in schools where CoPE is more mainstreamed and afforded a higher priority.
15. This difference in the impact of CoPE between 'thin usage' and 'wide usage' schools reflects, to some degree, a different philosophy or ethos both between these two types, and between schools that offer CoPE and those that do not. This study is unable to determine whether the differences in outcome are due to CoPE itself or to underlying school factors outside the scope of the research. In more colloquial terms: is it that CoPE has a positive impact, or is it that schools that are more generally effective are also more likely to offer CoPE? A cohort study or an experimental study would be needed to examine this.
16. This study was not tasked to explore in detail the mechanisms by which CoPE might lead to improved KS4 outcomes. From the limited qualitative data collected, it seems that factors such as a personalised learner-centred approach, the 'Plan-Do-Review' process, a culture of achievement based on milestones, dedicated staff resources, curricular flexibility and a commitment to engaging with the individual may all be components. Educational research suggests that such factors are crucial in developing the most productive learning orientations which in turn lead to high performance. Further research on CoPE could focus on such pedagogic themes, moving from *if* CoPE works to *why* CoPE works.
17. The findings herein are particularly significant in the light of recent government policy which removes CoPE from headline performance measures. This shift is likely to have the unintended consequence of downward pressure on GCSE outcomes, such as those included in the English Baccalaureate, for a wide group of young people.
18. **In conclusion, the research evidence presented in this report supports a positive role for CoPE, both in terms of individuals' development and their GCSE outcomes; this impact is especially strong for certain subgroups. Overall, this report draws no firm conclusions about the mechanisms by which CoPE may impact upon GCSE outcomes, but it is nevertheless probable that a causal link exists and the report suggests possible avenues for future research.**

B. Project outline

The study reported herein was commissioned by ASDAN from the **Bristol Centre for Research in Lifelong Learning and Education** (BRILLE) at the University of the West of England. A copy of the approved project plan can be found at Appendix I, outlining the quantitative and qualitative approaches used. The five research questions that the research team were asked to address were:

- 1. Do pupils who undertake CoPE achieve a higher grade at GCSE English Language than comparable pupils who do not?*
- 2. Are pupils who undertake CoPE more likely to achieve five GCSE passes than comparable pupils who do not?*
- 3. Are there any identifiable subgroups of pupils (e.g. in terms of social deprivation or gender) for whom the impacts above are particularly marked or absent?*
- 4. Do pupils and staff identify relationships between CoPE and other KS4 study with respect to pupil engagement, attendance and motivation?*
- 5. If so, what is the nature of experiences, perceptions, impressions and claims about such relationships?*

Initial work began in September 2011, but was delayed by the unwillingness of schools to share data on their pupils. Following a review of the plan culminating in the use of National Pupil Database data, work began in earnest in December 2011 and concluded in March 2012.

The project was initially conceived by **Professor David James**. After his move to Cardiff University, responsibility for project management was passed to **Neil Harrison** (Senior Research Fellow) who also performed the quantitative analysis. David James retained a role within the project through a contractual arrangement between Cardiff University and the University of the West of England. **Kathryn Last** (Research Fellow) has contributed to the qualitative data collection and analysis.

There were two substantive changes from the agreed project plan:

1. The decision was taken to limit statistical analysis to one cohort only – namely that in which young people reached KS3 in 2008 and KS4 in 2010. This was due to changing definitions within the National Pupil Database that made direct comparison between cohorts difficult. An initial analysis of the cohorts that reached KS4 in 2009 and 2011 did

not suggest any meaningful differences between these cohorts and the 2010 cohort in terms of the principal findings presented in this report.

2. It was intended that six schools should be visited to collect qualitative data. However, teacher illness and other issues prevented two schools from being visited. Efforts were made to replace these schools, but this did not prove possible within the timeframe of the project.

An 'emerging findings' report was presented to ASDAN in December 2011. This covered outcomes at KS4 relative to KS2 attainment as a prelude to the analysis of the KS3 dataset. The principal findings of this report were that CoPE was associated with improved outcomes in GCSE for young people with low attainment in English at KS2. These young people were more likely to get a pass at A* to G and more likely to gain that pass at grades D and E rather than F, G and U, with no difference within A* to C. This group was also more likely to achieve five GCSE passes than their peers not taking CoPE. As the 'emerging findings' were effectively overtaken by the findings in relation to the more proximal KS3 attainment, these are presented in any more detail here. However, this stage of the project did suggest the distinction between 'thin usage' and 'wide usage' schools which is developed in detail herein.

C. Policy context

This research project took place in a particularly complicated and rapidly changing policy context. Although there is not the space here for a comprehensive account, it is nevertheless helpful to signal the features of this policy context that do most to frame the research questions and that are likely to affect the interpretation of the findings.

C1. The quality of learning

For many commentators, we have reached a point at which the purposes of education have become distorted or confused, and many of the processes of schooling are of questionable educational value. In a recent and rigorous meta-analysis of over 100 international classroom-based research studies, Watkins demonstrates that *“... learning-centred school improvement... remains in tension with the dominant discourse about classroom learning and with the current policy interventions in England”* (Institute of Education [IoE], 2010, p. 1).

Watkins shows that schooling is increasingly performance- and goal-focused (rather than learning-oriented) as young people progress through the years. Furthermore:

“(A)s educational institutions become more selective and the culture becomes more performance oriented, high learning orientation remains central to achievement, but it is not supported by the classroom culture. So a more limited group of students than could be the case are those who will succeed. If performance orientation is dominant in the culture without a developed learning orientation, there is an increase in strategic behaviour rather than learning behaviour, a focus on looking good rather than learning well, and a tendency to perceive education as a process of jumping through hoops, rather than something more transferable and lasting. This is not a strategy for success” (Watkins, 2010, p. 5).

Watkins argues that in the current policy climate, it is increasingly difficult for schools and all those that spend time in them *“to recognise that passing tests is not the goal of education, but a by-product of effective learning”* (IoE, 2010, p. 2). In signalling this problem, he draws attention to a much broader one, namely that a narrowly technocratic view of purpose is now widespread, and compliance with it is secured by a fear of falling (or of not being seen to climb) on the part of teachers, schools and local authorities.

The design and practice of CoPE, and in particular its reliance on a ‘Plan-Do-Review’ approach, make it very likely that the programme positively develops a learning orientation, which the research evidence shows is pivotal in enhancing performance. As Watkins notes:

“Effectiveness as a learner hinges on the ability to be versatile as a learner, to have a rich view of learning and a learning orientation which is in turn linked to the ability to plan, monitor and review one’s learning” (Watkins, 2010, p. 7)

C2. GCSEs and the quality of schooling

Over the last decade or so, one measure has come to dominate perceptions of the nature and quality of secondary schooling, at least amongst many politicians and policymakers and in many media portrayals. The measure we refer to is the proportion of the relevant cohorts that achieve 5 or more passes at GCSE in the A* to C grades. This is sometimes referred to as the ‘threshold’. This measure was augmented within the last few years to provide a second indicator, regarded by some as having greater validity, namely ‘five GCSEs at A* to C including English and Maths’.

Given the history of GCE O levels, CSEs and GCSEs, it is highly illogical to use the attainment of GCSE A* to C as an indicator of the quality of what schools offer all their learners. (For a good, evidence-based discussion of the development of these public examinations since the 1950s and of the remarkable changes over time in assumptions about the ability ranges they encompass, see Torrance, 2009.) Unfortunately the assumption is now widespread that this indicator provides some sort of ‘bottom line’ for parents and others when comparing schools or even teachers, though some groups of parents do treat it as mythical and of no help in their choice-making (see Reay, Crozier and James, 2011). Most educational thinkers would agree that dominant uses of the ‘threshold indicator’ are at best mistaken and at worst, dangerous. However there is less agreement about how to help teachers, schools and the public to escape from its clutches. For some very experienced educationalists the obsession with league tables is but one symptom of a serious anti-democratic malaise in education policy and culture, particularly in England (e.g. Fielding and Moss, 2011; Coffield and Williamson, 2012). Others argue for greater breadth and variety in curriculum, pedagogy and assessment than core GCSE subjects commonly permit, whilst a few suggest that because these core GCSE subjects have the highest value and status, the ongoing exclusion or failure of many young people to achieve them must be due to the quality of teaching or the tolerance of ‘low standards’. In such debates, it is very helpful to know whether there are established elements of practice – such as ASDAN’s CoPE – that have some impact on GCSE outcomes.

For those in government, the popularity of appeal of the ‘five GCSEs at A* to C’ measure is probably mainly due to its promotion of quasi-markets and competition, and its apparent fit with certain economic models and human capital theory, in the context of international comparisons. In short, there is a widespread assumption that the indicator is a proxy for a major part of the skills supply in ‘UK plc, and furthermore, that it is highly causal in the economic competitiveness or productivity of ‘UK plc’. Stephen Ball noted in 2008 that *“the social and economic purposes of education have been collapsed into a single, overriding emphasis on policy making for economic*

competitiveness and an increasing neglect or sidelining (other than rhetoric) of the social purposes of education” (Ball, 2008, pp. 11-12). This focus has been prominent in policy for at least a decade, and was at the heart of the Leitch Review which argued for a step-change in skill development (Leitch, 2006). The perspective does however remain questionable because it usually relies on the assumption that the UK can regain ground in international competition by nurturing a ‘knowledge economy’ (see for example Brown, Lauder and Ashton, 2011).

C3. Breadth and headline measures

The drive to ‘up-skill’ (or in reality, ‘up-qualify’), together with the increasing use of league tables, boosted the demand for alternatives to GCSE which could be regarded as equivalent. There was also an affinity, in policy, with a drive to promote ‘breadth through choice’ and with the progressive relaxation of the curriculum at KS4. The early 2000s were therefore characterised by an increase in the appeal and attractiveness of various alternatives to GCSE, including BTEC qualifications and ASDAN’s educational processes. ASDAN was already well-established in many secondary schools and very highly regarded for its capacity to promote learning, engagement and achievement (James and Simmons, 2007; Raphael Reed *et al*, 2007). ASDAN processes were also celebrated for ‘exemplary contemporary practice’ in their approach to educating young people in the broader sense, including wider key skills and personal qualities (Pring *et al*, 2009, p. 82), and cited positively for similar reasons in the Tomlinson Review (Tomlinson, 2004).

Recognition of equivalence to public examinations in headline measures meant that ASDAN’s CoPE quickly became of more direct interest to headteachers, teachers and others wishing to enable more of their pupils to attain a so-called ‘threshold’ level. Most importantly, this would help schools to add percentage points to the very ‘headline’ measures of success mentioned above. However, as we carried out the research, the government announced that from 2014, CoPE would no longer be included in headline performance measures. This shift can be expected to have a major impact on how and whether some schools regard CoPE as a course for significant numbers of their students.

The removal of this role in headline performance measures can be attributed to a strong contemporary policy direction, clearly visible in the introduction of the English Baccalaureate, the recommendations of the Wolf Review and in government reception of those recommendations. The English Baccalaureate is not a distinct curriculum entity in the sense of the International Baccalaureate, but rather a further augmentation of the ‘threshold’ measure discussed above so that it would include five GCSE A* to C passes comprising English, maths, science, a language and a humanities subject. The English Baccalaureate was presented by government as defending breadth and as a way of addressing a perceived decline in standards, though for many commentators it remains highly problematic. A parliamentary Education Select Committee came to the view that it had been introduced with inadequate consultation and insufficient research,

and that the major current review of the National Curriculum should have been used to inform such a policy. Many of the organisations giving evidence to the Select Committee had concerns that the English Baccalaureate would effectively narrow the curriculum and would have a detrimental effect on the standards of education for the many young people who do not respond well to academic subjects. The English Baccalaureate was also presented as a counter to a ‘perverse incentive’: in the view presented by government, schools were denying many of their students a broad curriculum in the run-up to their first significant public examinations because they put many of their students through qualifications that were ‘easier’ and which did not offer high prospects of progression, at least in terms of recognition by other higher level courses – but which nevertheless ‘counted’ in league tables.

The Wolf report (Wolf, 2011) highlighted young people’s pursuit of many vocational qualifications that did not offer progression, recognition or a route into employment. Its first recommendation states

“The DfE should distinguish clearly between those qualifications, both vocational and academic, which can contribute to performance indicators at Key Stage 4, and those which cannot. The decision criteria should be explicit and public. They will include considerations of depth and breadth (including consultation with/endorsement by relevant outside bodies), but also assessment and verification arrangements which ensure that national standards are applied to all candidates” (Wolf, 2011, p. 13).

C4. The significance of this research

This present research report attends directly to the task signalled by Wolf in the recommendation quoted above, in that it examines the contribution of CoPE to *“performance indicators at Key Stage 4”*. To our knowledge, this has not been attempted before. We are not aware of any research evidence that would provide grounds for arguing that CoPE does *not* contribute in a meaningful way to the achievement of young people at Key Stage 4. The recent removal of CoPE’s established role in headline measures is puzzling in this regard, and may be the product of a mistaken classification of CoPE as a ‘vocational’ qualification. It seems both unfair and unfortunate, because CoPE is neither vocational nor academic in any normal characterisation of those categories: it is instead a skills-based process that is compatible with either vocational or academic qualifications or combinations of the two. Given the pressures on schools, the removal of CoPE’s role in headline measures may inadvertently deny thousands of young people access to a programme that is demonstrably supportive of their learning (as learners in general and as citizens in particular) and which, as the research reported here shows, also makes a tangible contribution to their achievements in more mainstream terms, namely the most valued outcomes of compulsory secondary schooling.

D. Quantitative analysis – full dataset

D1. Construction of dataset

The starting point for the dataset used in this report were the 651,309 young people entered in the National Pupil Database having reached KS4 in summer 2010 (and therefore reached KS3 in summer 2008).

From these were isolated those 573,773 individuals who attended mainstream state schools falling into the following categories: Community School, Voluntary Aided/Controlled School, Foundation School, City Technology College or Academy. This excluded those in independent schools, special schools, pupil referral units and further education colleges as these were felt to be atypical of the wider cohort.

A further 39,115 individuals were excluded as they lacked usable data about their KS3 attainment which was judged to be vital in understanding outcomes at KS4, leaving 534,658 individuals. The reason for this missing data was not always given, but is likely to have included absence from school, recent inward migration, test discrepancies, delayed progression and data matching errors. The nature of this excluded group bears some reflection as they were notably different to those for whom usable data at KS3 and KS4 was available. Proportionally over-represented were persistent absentees, those claiming free school meals, those from BME communities, those from deprived neighbourhoods, those with special educational needs and those not attempting GCSE English.

Fourteen records were removed at this stage as they were duplicates within the dataset, apparently caused by individuals taking KS4 examinations at two different schools. In each case, the record with the more complete data was used. Finally, 1,719 individuals were removed as they were defined within the National Pupil Dataset as 'early takers' – i.e. that they attempted GCSE qualifications at the age of 15 – and therefore their KS4 attainment profile is likely to be incomplete.

The final dataset used for the analysis in this report therefore comprised **532,925 individuals**. Of these, 29,432 records (5.5%) were missing some personal or attainment data, but were retained within the dataset as they provided sufficient data to add value to some aspects of the analysis. However, these individuals are necessarily absent from those cross-tabulations and regression models which use the variables for which their data is missing.

Within this dataset, 14,690 individuals had achieved CoPE: 5,213 at Level 1 and 9,477 at Level 2. This comprised 2.8% of the total population (1.0% at Level 1 and 1.8% at Level 2). The focus of this report is the Level 2 CoPE cohort.

D2. Definition of variables

The following variables are used throughout this report and are presented here with their definitions, the possible values and the abbreviations that will be used in tables and the text:

Table 1: Variables used in this report

Variable	Abbrev.	Description	Values
Gender			<i>female / male</i>
Special Education Needs	SEN	Those individuals who are recorded as having special educational needs, either 'statemented' or designated for 'school action'. No data is available concerning the individual's actual needs, so this is a necessary aggregation.	<i>yes / no</i>
Free School Meals	FSM	Those individuals known to be eligible for free school meals, noting that this is likely to be an underestimate due to reluctance to claim among some families. This is a proxy for household income.	<i>yes / no</i>
Income Deprivation Affecting Children Index	IDACI	A indicator for child poverty for the neighbourhood in which the individual lived at the end of KS4, published by the Department for Communities and Local Government. The neighbourhood size is around 1,000 households.	<i>ranging from 0 (non deprived) to 1 (deprived)</i>
IDACI bottom 20%	IDACI 20%	A dichotomous variable recording whether the neighbourhood in which the individual lived at the end of KS4 was in the bottom 20%, representing the most deprived neighbourhoods.	<i>yes / no</i>
KS3 Absentee		Those individuals meeting the Department for Education criteria for a persistent absentee in the final year of Key Stage 3.	<i>yes / no</i>
Ethnicity		A three-way categorisation based on the declared ethnicity of the individual. While more detailed data does exist, this was not felt to be a primary thrust for analysis, so a simple aggregation was used.	<i>white / black and minority ethnic (BME) group / unknown</i>
English as a second language	ESL	Those individuals speaking English as a second (or subsequent) language.	<i>yes / no</i>

KS3 English attainment		The individual's attained level in KS3 English tests. Those individuals not entered into KS3 tests as they were below the required standard have been included in a '<3' category.	<i>below testable level (<3) / 3 / 4 / 5 / 6 / 7</i>
KS3 English attainment (fine)		An expanded continuous version of the above measure, providing 'fine grained' scores within Levels.	<i>Between 3.50 and 7.94</i>
GCSE English grade		The actual grade achieved in GCSE English. Note that only full GCSEs have been analysed in this report and that this does not include any equivalent qualifications.	<i>A* / A / B / C / D / E / F / G / U</i>
Any GCSE pass in English		A dichotomous variable recording whether or not the individual passed English at grades A* to G.	<i>yes / no</i>
Good GCSE pass in English		A dichotomous variable recording whether or not the individual passed English at grades A* to C.	<i>yes / no</i>
Top GCSE pass in English		A dichotomous variable recording whether or not the individual passed English at grades A* or A.	<i>yes / no</i>
Good GCSE passes in English and Maths		A dichotomous variable recording whether or not the individual passed both English <u>and</u> Maths at grades A* to C. This measure <u>excludes</u> passes in equivalent qualifications.	<i>yes / no</i>

[Note : data on school type (e.g. academy or community school) was initially included in the analysis, but as the variable had little explanatory power, it was removed for simplicity.]

D3. Quantitative methodology – full dataset

The primary form of statistical analysis used in this section is **binary logistic regression**. This is a technique that attempts to explain differences in a categorical dependent variable through a set of independent variables which may be continuous or categorical in nature. The technique effectively holds each independent variable constant in relation to the others, providing an insight into the individual contribution that each makes to the dependent variable.

In this instance, the dependent variable is one of the measures of KS4 outcomes detailed in the definition of variables table above: (a) a pass in GCSE English at A* to G, (b) a pass in GCSE English at A* to C, (c) a pass in GCSE English at A* or A, or (d) five GCSE passes at A* to C including English

and Maths. Each of these can be expressed for an individual as 'yes' or 'no' depending on whether or not they achieved these particular outcomes. Hence, the appropriate model is 'binary'.

In simple terms, what the logistic regression process then attempts to do is to predict whether each individual is a 'yes' or 'no' for that particular outcome measure, using the data captured by the independent variables. The output is a model which provides an estimate of the relative effects of each of the independent variables such that the correct predictions of the dependent variable are maximised.

It is important to recognise that logistic regression is based on an assumption that all the relevant independent variables are included in the model. If there are other predictor variables that are omitted (e.g. because they have not been considered or data is not available), this can cause logistic regression analysis to produce spurious results that may change when the missing variable is included. One possibility is that there may be a confounding variable which is related to both the dependent and an independent variable. The inclusion of this variable could then invalidate any supposed relationship between the existing predictor and the dependent variable. This caveat holds for any form of statistical analysis, but it is important to reflect on this in relation to the results presented below.

Throughout this analysis, the **5% significance level** will be used. This is conventional for exploratory research in social science contexts. It represents a 5% chance that any finding reported as significant is in fact due to chance rather than a real relationship between variables – i.e. that the wrong conclusion has been drawn. It is broadly analogous to the commonly understood concept of 'beyond reasonable doubt'. For clarity, the word 'significant' is only used in this report to mean a statistically significant relationship at the 5% level.

In the construction of this report, a balance has been sought between statistical rigour and accessibility for non-specialist readers. For each outcome measure, the results of the regression analysis will be presented in a table, either in the main text or in an appendix. Each regression model is then illustrated with a graphical and tabular representation of the basic thrust of the relationship in regard to CoPE, although it must be remembered that this does not correspond exactly to the regression analysis itself as these types of representation are not able to reflect the multidimensional relationships encapsulated by regression analysis – in other words, they cannot hold all other variables to be constant at once in the way that logistic regression analysis can.

D4. Approach to analysis

As can be seen from the tables presented in Appendix II, the dominant predictor of GCSE English results is attainment in English at KS3. For simplicity, the analysis in this report will therefore be

primarily based around an investigation of the how CoPE and other factors impact within a three-way division based on attainment at KS3:

- 'Low' : **below testable level, Level 3 and Level 4** – 22% of cohort
- 'Average' : **Level 5** – 41% of cohort
- 'High' : **Level 6 and Level 7** – 37% of cohort

An important variable that will be developed in more detail in the coming analysis is the proportion of young people in each school who completed CoPE at one of the two levels. In total, 1,094 schools contained at least one pupil who had completed CoPE at either Level 1 or Level 2, comprising just over one-third of the total of 3,101 schools within the dataset. Needless to say, the pursuit of CoPE was concentrated in certain schools, with the proportion ranging from 0% to 100%. Almost exactly half of the schools offering CoPE had a proportion of under 5%. At the other end of the scale, 54 schools offered CoPE to 25% or more of their pupils, comprising around 5.0% of all schools offering CoPE and 1.7% of all schools.

Table 2: Relative size of CoPE cohort by school

Proportion of pupils completing CoPE	Number of schools	% of total schools
None	2,007	64.7%
Less than 5.0%	549	17.7%
5.0% to 9.9%	310	10.0%
10.0% to 14.9%	98	3.2%
15.0% to 19.9%	50	1.6%
20.0% to 24.9%	33	1.1%
25.0% to 29.9%	7	0.2%
30.0% to 39.9%	10	0.3%
40.0% to 59.9%	16	0.5%
60.0% to 79.9%	7	0.2%
80.0% or more	14	0.5%
ALL	3,101	100.0%

For the purposes of this report, schools were allocated into one of three groups: No CoPE, 'thin usage' CoPE (less than 25% of the cohort) and 'wide usage' CoPE (25% or more of the cohort). The bifurcation at 25% was based on exploratory analysis which suggested that specific differences in the outcomes associated with CoPE arose at this point, although the actual proportion is clearly a continuum and other 'splits' were possible. It might be hypothesised that 25% is the approximate point at which the CoPE cohort has a roughly equal mix of young people with serious and mild educational challenges, whereas in the 'thin usage' schools, the former predominate.

Table 3: Young person profiles between 'No CoPE', 'thin usage' and 'wide usage' schools (%)

Variable	Group	'No CoPE' school	'thin usage' school	'Wide usage' school
KS3 attainment	< Level 3	5.1	6.2	7.9
	Level 3	3.1	3.6	4.2
	Level 4	12.4	13.8	13.5
	Level 5	40.8	42.5	42.6
	Level 6	27.7	25.9	23.5
	Level 7	10.9	8.0	8.3
SEN	Yes	22.2	24.8	30.1
	No	77.8	75.2	69.9
FSM	Yes	12.4	13.3	16.5
	No	87.6	86.7	83.5
IDACI 20%	Yes	21.2	23.1	27.1
	No	78.8	76.9	72.9
KS3 Absentee	Yes	3.3	3.8	4.3
	No	96.7	96.2	95.7
Ethnicity	White	81.9	84.5	85.1
	BME	16.7	14.4	13.6
	Unknown	1.4	1.0	1.3
ESL	Yes	9.3	8.0	8.3
	No	90.7	92.0	91.7

The 'wide usage' CoPE schools accounted for just 1.4% of the total cohort of young people, but 39.4% of those completing CoPE at Level 2. The 'thin usage' CoPE schools accounted for 35.8% of the total cohort, including 60.6% of those completing CoPE at Level 2. From this point, we will focus purely on those young people undertaking CoPE at Level 2 and any reference to 'CoPE' will be to this group alone.

There was an association between the proportion of young people taking CoPE in a school and the nature of the student body in the school. The 'wide usage' CoPE schools tended to contain more young people with special educational needs, those receiving free school meals, those living in deprived neighbourhoods, those who had been persistent absentees, those from White communities and those with lower KS3 attainment than schools not offering CoPE; the 'thin usage' CoPE schools fell between the two extremes. In other words, CoPE was somewhat more likely to be offered in those schools with more educational challenges, though not exclusively so.

The profile of which individuals undertook CoPE varied markedly between the ‘thin usage’ and ‘wide usage’ schools. As can be seen below, CoPE in the ‘thin usage’ schools was directed strongly at young people who presented some of the most educationally challenging situations, whereas the ‘wide usage’ schools offered CoPE to a much broader cross-section of their pupil base, to the point of being a slightly above average group in terms of attainment and markers for KS4 success.

Table 4: Young person profiles between ‘No CoPE’, ‘thin usage’ and ‘wide usage’ schools, by CoPE cohort (%)

Variable	Group	No CoPE	Not CoPE in a ‘thin usage’ school	CoPE in a ‘thin usage’ school	Not CoPE in a ‘wide usage’ school	CoPE in a ‘wide usage’ school
KS3 attainment	< Level 3	5.1	5.9	18.0	10.1	5.7
	Level 3	3.1	3.4	9.2	4.3	4.2
	Level 4	12.4	13.4	27.7	13.7	13.3
	Level 5	40.8	42.6	36.9	42.2	43.0
	Level 6	27.7	26.5	6.7	22.2	24.8
	Level 7	10.9	8.2	1.5	7.5	9.0
Gender	Female	50.7	49.7	50.8	46.6	55.3
	Male	49.3	50.3	49.2	53.4	44.7
SEN	Yes	22.2	23.9	55.6	32.5	27.7
	No	77.8	76.1	44.4	67.5	72.3
FSM	Yes	12.4	13.1	20.3	16.3	16.8
	No	87.6	86.9	79.7	83.7	83.2
IDACI 20%	Yes	21.2	22.9	29.9	25.2	29.0
	No	78.8	77.1	70.1	74.8	71.0
KS3 Absentee	Yes	3.3	3.8	5.3	5.8	2.8
	No	96.7	96.2	94.7	94.2	97.2
Ethnicity	White	81.9	84.5	84.2	87.1	83.1
	BME	16.7	14.4	14.6	11.7	15.5
	Unknown	1.4	1.0	1.2	1.3	1.3
ESL	Yes	9.3	8.0	8.1	6.2	10.4
	No	90.7	92.0	91.9	93.8	89.6

In ‘thin usage’ schools, the young people undertaking CoPE were more likely to have low KS3 attainment in English and to have special educational needs. They were also more likely to be in

receipt of free school meals and to be drawn from a deprived neighbourhood. On contrast, those in 'wide usage' schools were more likely to be female, slightly above average in terms of KS3 attainment and to not have special educational needs. Similar to those in 'thin usage' schools, they were more likely to be drawn from a deprived neighbourhood, but in this instance they were also slightly more likely to be from a BME community and to speak English as a second language, but less likely to be a persistent KS3 absentee. It is important to remember that while those undertaking CoPE in 'wide usage' schools are a less challenged group than their peers in similar schools, they are still generally more challenging than those in 'no CoPE' schools. The issue of which young people within a school undertake CoPE is investigated in more detail in Appendix II.

Combining the two categorisations developed in this section, Table 5 below shows the number of young people in each of the 15 cells around which the analysis below is based. The analysis therefore focuses on differences between these cells and specifically whether those individuals undertaking CoPE are significantly more or less likely to achieve certain benchmarks at KS4 than those in similar circumstances – both in similar schools and contrasting ones.

Table 5: Numbers of young people in each KS3 attainment and CoPE/school cell

	'No CoPE' school	Not CoPE in a 'thin usage' school	CoPE in a 'thin usage' school	Not CoPE in a 'wide usage' school	CoPE in a 'wide usage' school	ALL
Low KS3 attainment	68,777	41,930	3,149	1,072	867	115,795
Average KS3 attainment	136,506	78,994	2,120	1,618	1,607	220,845
High KS3 attainment	129,085	64,326	470	1,140	1,264	196,285
ALL	334,368	185,250	5,739	3,830	3,738	532,925

Aside from this primary thrust, a number of secondary factors are also included in the analysis as likely predictors for outcomes at KS4. These are detailed in Table 1 above, but comprise:

1. Gender
2. Ethnicity
3. Eligibility for Free School Meals
4. Living in a deprived neighbourhood (IDACI)
5. Speaking English as a second/subsequent language
6. Being a persistent absentee at KS3

D5. Analysis of full dataset

D5i. GCSE English at A* to G

Table 6 : Binary logistic regression model for GCSE English A* to G

Variable	Group	B	SE	OR	p
KS3 English attainment (ref = Level 5)	<Level 3	-2.502	.032	.082	.000
	Level 3	-1.464	.041	.231	.000
	Level 4	-.895	.034	.409	.000
	Level 6	1.212	.066	3.359	.000
	Level 7	1.818	.148	6.159	.000
Gender (ref = Male)	Female	.108	.023	1.114	.000
SEN (ref = No)	Yes	-.990	.027	.372	.000
FSM (ref = No)	Yes	-.144	.026	.866	.000
IDACI score (continuous)		-.982	.060	.375	.000
KS3 absentee (ref = No)	Yes	-1.582	.027	.206	.000
Ethnicity (ref = White)	BME	.253	.042	1.288	.004
	Unknown	-.247	.086	.781	.000
ESL (ref = No)	Yes	.590	.056	1.804	.000
School/CoPE type (ref = No CoPE)	Thin – Not CoPE	-.093	.022	.912	.000
	Thin – CoPE	.493	.081	1.638	.000
	Wide – Not CoPE	-.187	.099	.829	.057
	Wide – CoPE	1.528	.242	4.607	.000
Constant		5.326	.033	205.709	.000

$R^2 = 0.312$

The table above presents the regression model for individuals achieving a GCSE English pass at grades A* to C. It is useful at this point to provide the reader with a brief guide to understanding the results of a binary logistic regression analysis:

- The first column contains the list of independent variables and the identification of the reference group on which comparisons are made. For example, for KS3 English attainment, those assessed at Level 5 have been selected as the reference group as this represents the average. In most instances, the reference group is those young people who do not have a particular trait – e.g. not eligible for free school meals.
- The second column contains the comparison groups, such that the statistics presented show the difference between outcomes for this group relative to the reference group. For example, the 'Female' row represents the difference relative to male individuals, other variables being held constant.

- The third column ('B') contains the estimated coefficient for this variable. This is not easily interpreted in a logistic regression model, but is presented here for completeness.
- The fourth column ('SE') contains the standard error for this group. This is a measure of the accuracy of the estimate of the coefficient, being a function of the variability within the group and the number of members.
- The fifth column ('OR') contains the 'odds ratio' for this group. This is a measure of the size of effect that being a member of the group exerts on the likelihood of achieving the outcome in the dependent variable (i.e. achieving GCSE English at A* to G in this example), other variables being held equal. It is the most usefully interpreted measure within a logistic regression model; see Appendix III for a methodological note on the meaning of the odds ratio, its interpretation and its relationship to 'relative risk'.
- The sixth column ('p') contains the significance level for this variable within the model. This is compared with the prevailing significance level (in this case 5% or 0.05) to determine whether the relationship between the comparison group and the reference group is statistically significant.
- The additional note at the bottom right of the table ('R²') records the 'goodness of fit' of the model, representing the proportion of the variability in the dependent variable captured by the independent variables. In this instance, the R² records that around 31% of the variability has been captured, which is fair to good for a social science model.

Unsurprisingly, the most marked predictor was attainment in English at KS3, as demonstrated by the odds ratios. For example, those achieving Level 6 had odds of over three times higher than those achieving Level 5, while those achieving Level 4 had odds of around two and a half times lower, other variables being held constant. The higher the odds ratio, the greater the effect of that variable on the outcome measure, all else being held equal.

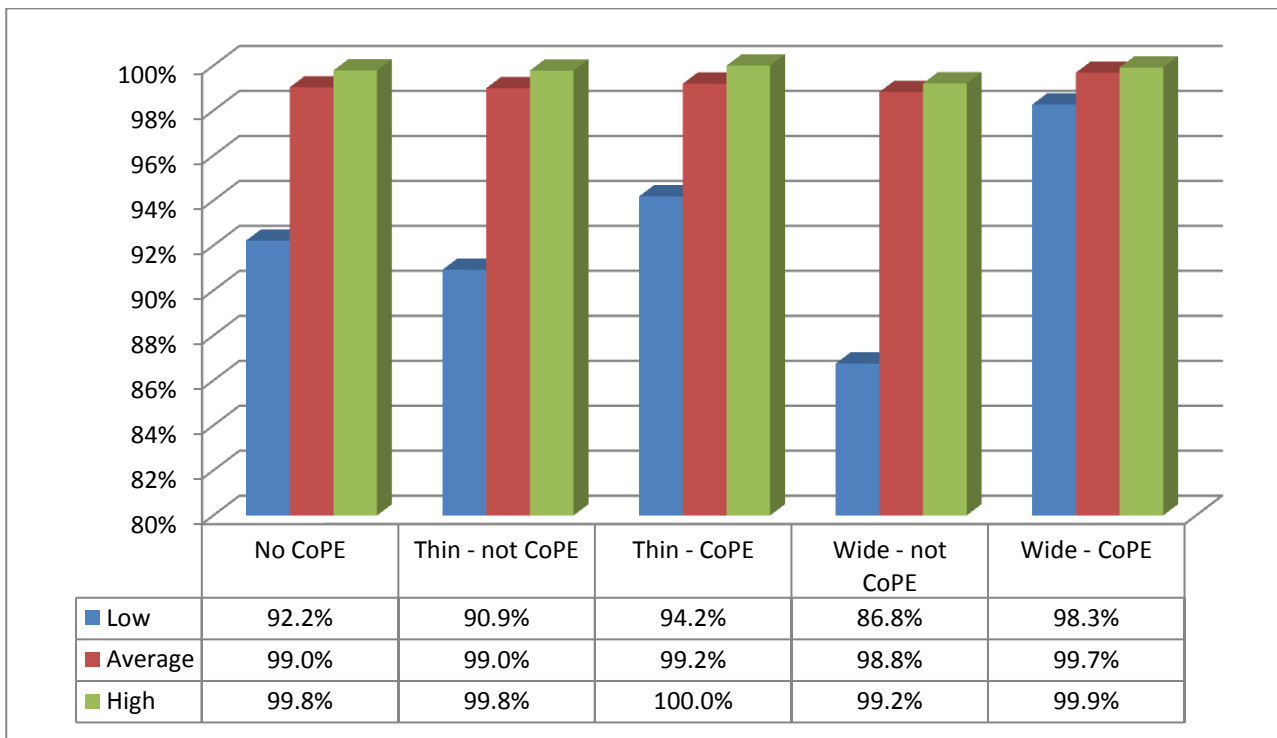
All the other independent variables also exerted a statistically significant effect on the GCSE outcome. Females had an odds ratio of 1.11, with individuals from BME communities and those speaking English as a second language also being more likely to achieve this standard; odds ratios of 1.29 in the former instance and 1.80 in the latter. Conversely, those with special education needs, those receiving free school meals and persistent absentees were significantly less likely to achieve pass GCSE English at A* to G, as were those living in more deprived neighbourhoods.

The main interest, however, is in the role of the interaction between school type and whether or not an individual undertook CoPE. Relative to individuals in schools not offering CoPE, those not undertaking CoPE in 'thin usage' schools did slightly worse (odds ratio of 0.91) but the difference for those in 'wide usage' schools was not significant ($p = 0.057$ i.e. greater than 0.05).

In the 'thin usage' schools, those undertaking CoPE were significantly more likely to achieve a GCSE pass in English, with an odds ratio of 1.64, while the equivalent figure for those undertaking CoPE in 'wide usage' schools was 4.61. Using Zhang and Yu's estimation (see Appendix III), these odds ratios can be interpreted as a 1.7% increased chance of passing in a 'wide usage' school and

0.8% in a 'thin usage' school. However, it should be remembered that the pass rate at A* to G grade is very high (around 98% of the dataset), so, in this instance, the simplest interpretation is to invert the analysis and consider the failure to achieve an GCSE English pass. As this is very rare (around 2%), the odds ratios now give a reasonable estimate of likelihood. In other words, those young people undertaking CoPE in a 'wide usage' school are over four times less likely to not pass than those in 'no CoPE' schools, with those in 'thin usage' schools being 64% less likely to fail.

Figure 1: GCSE English pass rate at A to G, by KS3 attainment, school type and CoPE*



This is illustrated in a simplified graphical form in Figure 1 above. Each of the five school/CoPE combinations is represented by a series of three coloured bars; blue for low KS3 attainers, red for average and green for high. The red and green bars are very similar heights in each instance, reflecting the high overall pass rate, especially among higher KS3 attainers. However, there is considerable difference in the heights of the blue bars.

In all instances, CoPE is associated with a higher pass rate than for those individuals not undertaking it, regardless of school type. The effect of CoPE is most marked for those with low KS3 attainment and those in 'wide usage' schools. Within 'wide usage' schools, the pass rate for this group (98.3%) is nearly as high as for average and high attainment individuals and considerably higher than in 'no CoPE' schools (92.2%). Even among young people with average and high attainment at KS3, there is a positive impact associated with undertaking CoPE.

As noted, Figure 1 strongly suggests that the impact of CoPE may be highest among low KS3 attainers as the difference in the blue bars is greatest for this group. This will be explored in more detail in the following section which analyses subgroups of the main dataset in more detail.

It is important to remember that Figure 1 does not take account of the secondary variables that underpin school profiles. On these measures (e.g. SEN and FSM), the ‘wide usage’ and ‘thin usage’ schools generally have a slightly more challenging profile in terms of attainment. This suggests that the relative performance of the ‘wide usage’ schools is even more marked than it appears, supported by the regression model in Table 6.

D5ii. GCSE English at A* to C

Table 7 : Binary logistic regression model for GCSE English A to C*

Variable	Group	B	SE	OR	p
KS3 English attainment (ref = Level 5)	<Level 3	-4.455	.052	.012	.000
	Level 3	-3.711	.041	.024	.000
	Level 4	-2.166	.011	.115	.000
	Level 6	2.691	.019	14.741	.000
	Level 7	4.933	.094	138.760	.000
Gender (ref = Male)	Female	.240	.009	1.272	.000
SEN (ref = No)	Yes	-.801	.010	.449	.000
FSM (ref = No)	Yes	-.341	.013	.711	.000
IDACI score (continuous)		-.856	.026	.425	.000
KS3 absentee (ref = No)	Yes	-.906	.023	.403	.000
Ethnicity (ref = White)	BME	.368	.016	1.444	.000
	Unknown	-.019	.039	.981	.624
ESL (ref = No)	Yes	.401	.020	1.493	.000
School/CoPE type (ref = No CoPE)	Thin – Not CoPE	-.027	.009	.973	.003
	Thin – CoPE	-.588	.040	.555	.000
	Wide – Not CoPE	-.042	.049	.958	.386
	Wide – CoPE	.348	.052	1.416	.000
Constant		1.162	.009	3.196	.000

$R^2 = 0.603$

Table 2 is in the same format as Table 1 above. In general, most of the same trends found for passes at GCSE English A* to G are also seen for those at A* to C; e.g. that KS3 attainment is important, that females and those from BME communities do better, while those with special educational needs, receiving free school meals or from deprived neighbourhoods do worse.

The role of CoPE has changed slightly, for this outcome measure, however. Undertaking CoPE now only has a positive impact on attainment in the context of ‘wide usage’ schools, with an odds ratio of 1.42. This corresponds with an estimated 9.8% increased likelihood of these young people achieving a good GCSE English pass, compared to similar individuals in ‘no CoPE’ schools. In ‘thin usage’ schools, CoPE is associated with a significantly lower likelihood of achieving a good pass in GCSE English, with an odds ratio of 0.56.

Figure 2: GCSE English pass rate at A to C, by KS3 attainment, school type and CoPE*

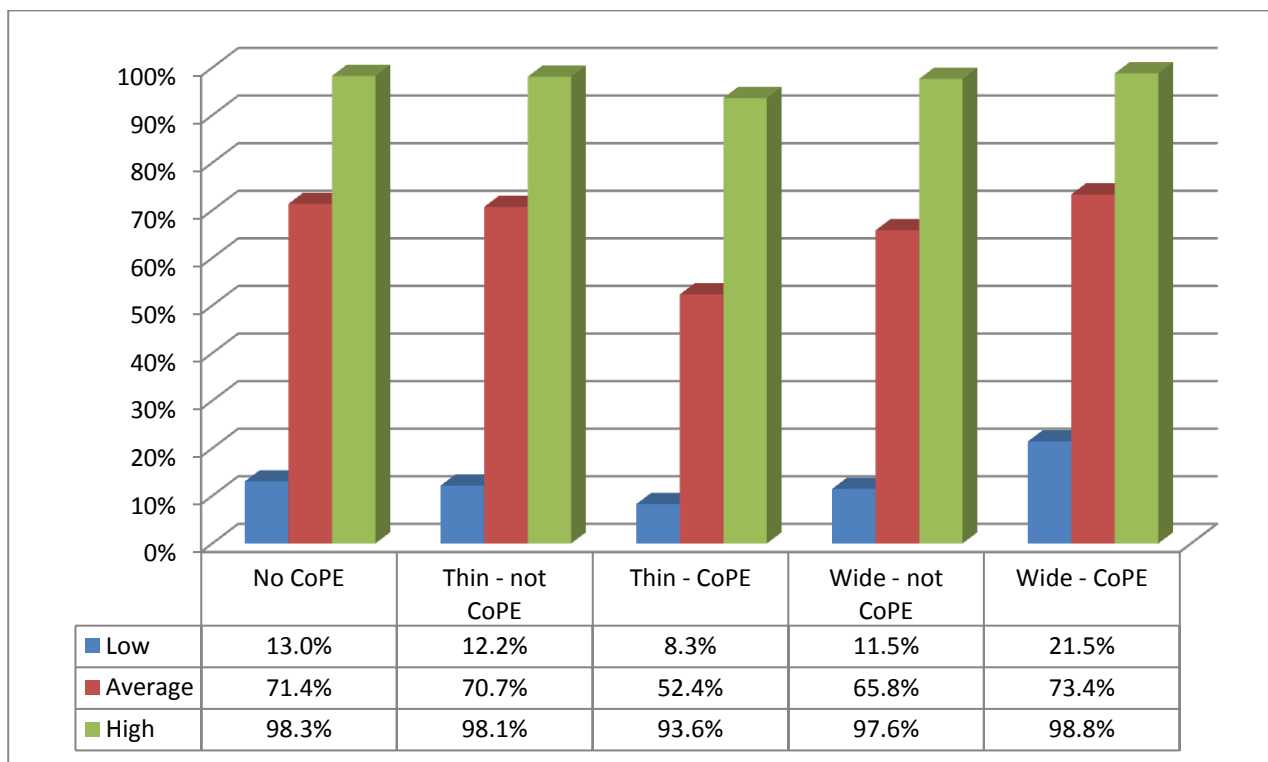


Figure 2 presents these relationships in the same form as Figure 1. As can be seen, individuals taking CoPE in ‘wide usage’ schools outperform both those in the ‘no CoPE’ and ‘thin usage’ schools, as well as those in the ‘wide usage’ schools not taking CoPE; this holds across all three KS3 attainment categories. For example, 21.5% of the low KS3 attainment group taking CoPE in ‘wide usage’ schools passed GCSE English with an A* to C grade, which is around twice the pass rate as similar individuals in other types of school or those not undertaking CoPE. A similar, but less marked, pattern exists within the average KS3 attainment group, where individuals undertaking CoPE in a ‘wide usage’ school have a 2.0% higher pass rate than those in ‘no CoPE’ schools (73.4% compared to 71.4%).

Conversely, CoPE in ‘thin usage’ schools is associated with lower GCSE outcomes compared to both ‘no CoPE’ schools and individuals not doing CoPE in other ‘thin usage’ schools. For example, the average KS3 attainment group had a pass rate at A* to C of 52.4%, in comparison to 71.4% in ‘no CoPE’ schools and 70.7% among those in ‘thin usage’ schools not undertaking CoPE.

D5iii. GCSE English at A* or A

Table 8: Binary logistic regression model for GCSE English A to G*

Variable	Group	B	SE	OR	p
KS3 English attainment (ref = Level 5)	<Level 3	-3.581	.354	.028	.000
	Level 3	-16.883	312.023	.000	.957
	Level 4	-4.152	.243	.016	.000
	Level 6	2.698	.016	14.848	.000
	Level 7	4.788	.018	120.030	.000
Gender (ref = Male)	Female	.282	.010	1.326	.000
SEN (ref = No)	Yes	-.553	.021	.575	.000
FSM (ref = No)	Yes	-.357	.023	.700	.000
IDACI score (continuous)		-1.520	.037	.219	.000
KS3 absentee (ref = No)	Yes	-.606	.054	.545	.000
Ethnicity (ref = White)	BME	.296	.019	1.345	.000
	Unknown	-.021	.047	.979	.654
ESL (ref = No)	Yes	.334	.024	1.396	.000
School/CoPE type (ref = No CoPE)	Thin – Not CoPE	-.087	.011	.917	.000
	Thin – CoPE	-.536	.103	.585	.000
	Wide – Not CoPE	-.047	.066	.954	.475
	Wide – CoPE	-.029	.063	.971	.643
Constant		-3.568	.018	.028	.000

$R^2 = 0.526$

Table 8 presents data for high achievement in GCSE English, represented by grades A* and A. Once again, the same trends are found by KS3 attainment and the secondary variables as is outlined above for the A* to G and A* to C outcome measures. The slightly anomalous finding for young people with KS3 attainment at Level 3 is due to a very small number of individuals falling into this category and achieving a top pass in GCSE English, as evidenced by the high standard error. No importance should be placed on this finding.

However, the impact of CoPE is found to differ compared to the previous analyses. ‘Thin usage’ schools follow a similar pattern, with individuals pursuing CoPE doing significantly worse both than others in similar schools and those in ‘no CoPE’ schools. On this measure, ‘wide usage’ schools show a slight propensity for poorer performance both for young people undertaking CoPE and those not, but this does not achieve statistical significance ($p > 0.05$ in both cases). There is therefore no evidence that CoPE has an effect on top pass rates for GCSE English, which is understandable as these will be driven more by specialist subject knowledge than the more general personal skills around which CoPE is based.

Figure 3: GCSE English pass rate at A* and A, by KS3 attainment, school type and CoPE

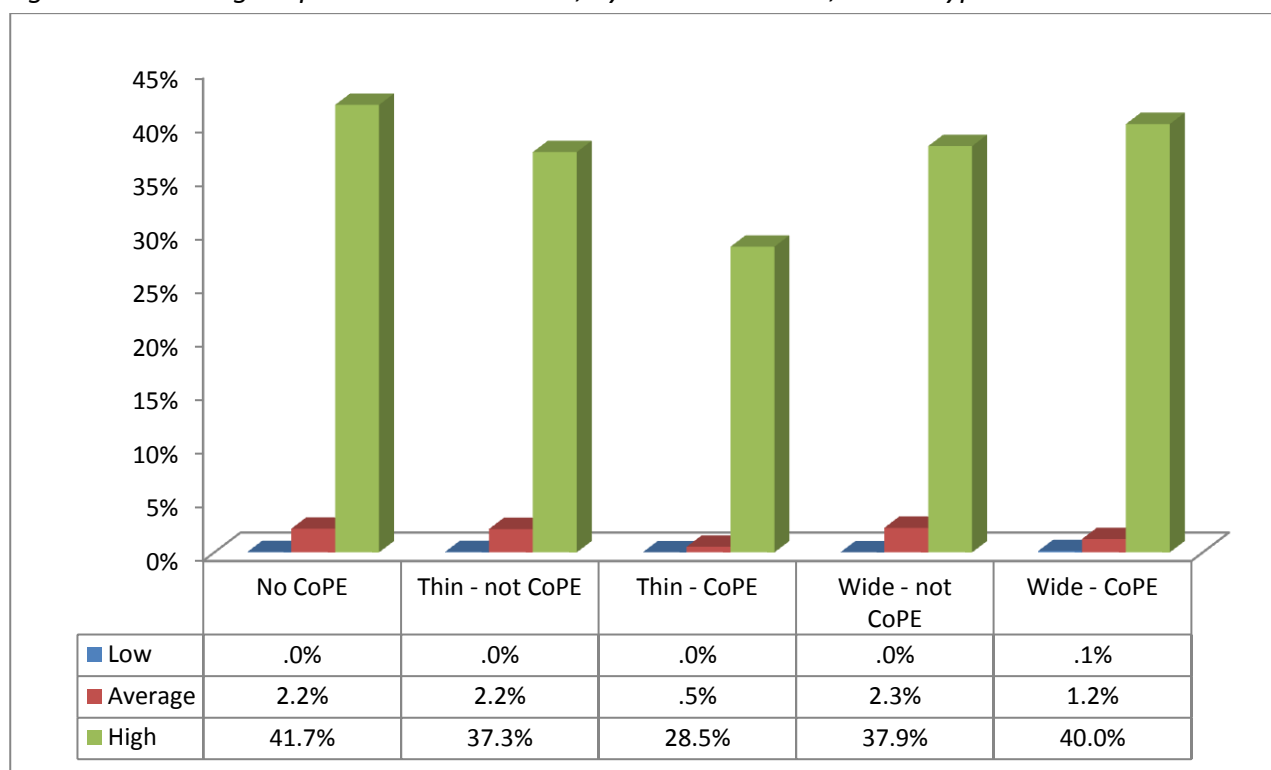


Figure 3 shows that achieving the highest grades in GCSE English is very strongly associated Level 6 or Level 7 in English at KS3. Around 40% of individuals doing so go on to get A* or A grades at GCSE, compared to around 2% of those getting Level 5 and hardly any of those below this.

There is some evidence that young people pursuing CoPE are slightly less likely to achieve the top grades at GCSE. Specifically, those with high KS3 attainment in undertaking CoPE in a 'wide usage' school have a pass rate of 40.0%, compared to 28.5% for their peers in 'thin usage' schools, but 41.7% for those in 'no CoPE' schools. It is out of keeping to find CoPE associated in 'wide usage' schools with lower performance, albeit at a non-significant level as demonstrated in Table 8. This may be due to young people with high attainment in English at KS3 being selected for CoPE in these schools due to factors outside those captured by the NPD dataset – e.g. behavioural issues.

Nevertheless, it is important to remember the more challenging pupil profiles of the 'thin usage' and 'wide usage' schools, with the lower outcomes in these schools potentially being explained in whole or part by factors not reflected in Figure 3.

D5iv. Five GCSEs passes at A* or C including English and Maths (excluding equivalents)

Table 9: Binary logistic regression model for five GCSEs passes at A* or C including English and Maths (excluding equivalents)

Variable	Group	B	SE	OR	p
KS3 English attainment (ref = Level 5)	<Level 3	-4.379	.073	.013	.000
	Level 3	-3.941	.066	.019	.000
	Level 4	-2.212	.015	.109	.000
	Level 6	1.999	.010	7.380	.000
	Level 7	3.715	.033	41.043	.000
Gender (ref = Male)	Female	-.374	.008	.688	.000
SEN (ref = No)	Yes	-.884	.010	.413	.000
FSM (ref = No)	Yes	-.357	.012	.699	.000
IDACI score (continuous)		-.974	.024	.377	.000
KS3 absentee (ref = No)	Yes	-1.108	.026	.330	.000
Ethnicity (ref = White)	BME	.250	.014	1.284	.000
	Unknown	-.069	.035	.934	.050
ESL (ref = No)	Yes	.576	.018	1.780	.000
School/CoPE type (ref = No CoPE)	Thin – Not CoPE	-.016	.008	.984	.050
	Thin – CoPE	-.867	.044	.420	.000
	Wide – Not CoPE	-.137	.045	.872	.002
	Wide – CoPE	.123	.045	1.131	.007
Constant		.659	.008	1.934	.000

$R^2 = 0.557$

The regression model in Table 9 extends the same approach into a wider measure of KS4 outcome, namely the achievement of five or more GCSE passes at grades A* to C including English and Maths. This analysis specifically excludes ‘equivalent qualifications’ and records only those achieving the threshold with full GCSEs, avoiding the ‘self-fulfilling prophecy’ of including CoPE as both an independent variable and a component in the dependent variable.

The basic pattern observed in the previous regression models is maintained, with KS3 attainment continuing to exert the largest influence, but with a range of secondary variables also continuing to do so. The most notable change is that females are now significantly less likely to achieve the five GCSE threshold than males; this is likely to be a reflection of the inclusion of Maths in the measure, where nationally females have a lower pass rate.

In general, young people in schools offering CoPE but not pursuing it are less likely to achieve the threshold. As in the previous models, those undertaking CoPE in ‘thin usage’ schools performed

particularly poorly compared those in ‘no CoPE’ schools, with an odds ratio of 0.42. However, this pattern is reversed within the ‘wide usage’ schools, such that individuals undertaking CoPE have an odds ratio of 1.13. This can be translated into this group being an estimated 5.0% more likely to achieve five GCSEs at A* to C, including English and Maths, all else being held equal.

Figure 4: Pass rate for five GCSEs at A to C including English and Maths, by KS3 attainment, school type and CoPE*

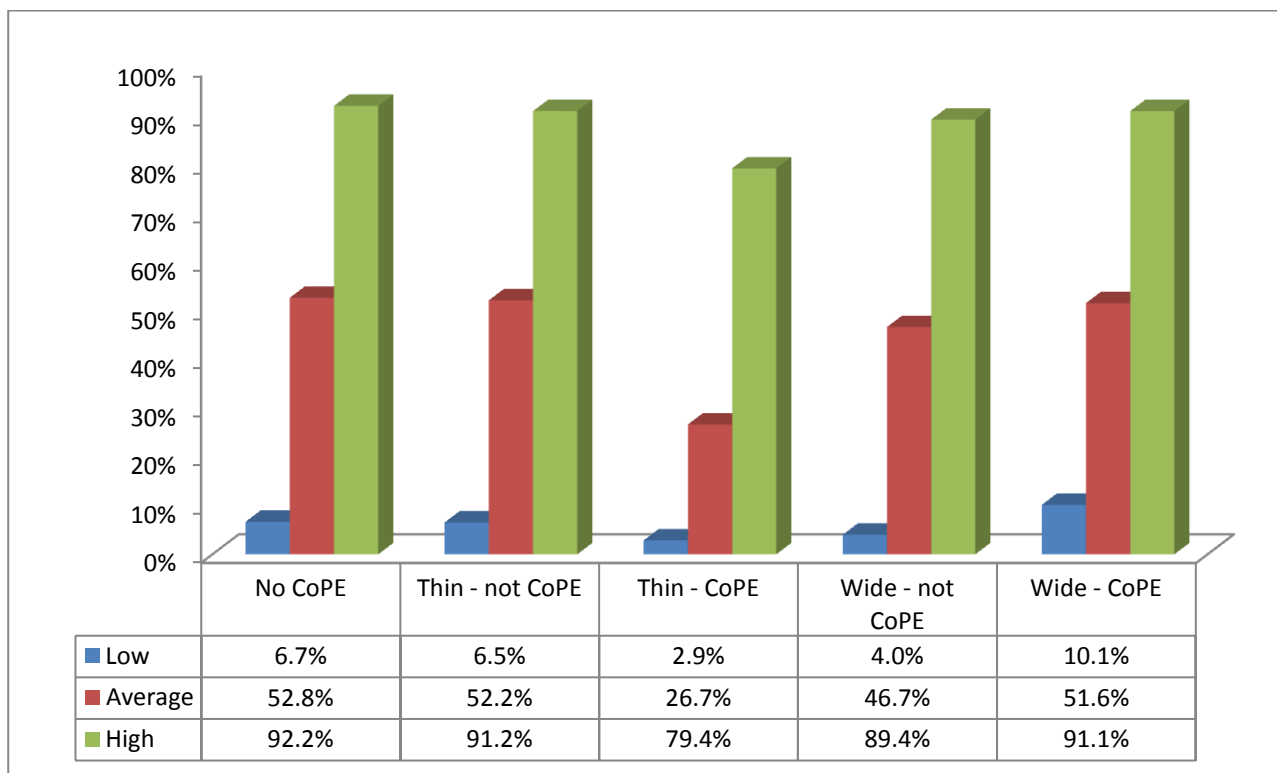


Figure 4 shows that individuals in the ‘wide usage’ schools undertaking CoPE had a very similar pattern of attainment on this measure to those in the ‘no CoPE’ schools, despite the difference in pupil profiles. The most marked difference is that individuals in the low KS3 attainment group, with 10.1% of these achieving the threshold in the ‘wide usage’ schools if they were taking CoPE, compared to 6.7% in the ‘no CoPE’ schools.

D5v. Summary (1)

From these analyses, we can draw the following conclusions:

1. The models presented above exhibit a fair to strong ‘goodness of fit’, suggesting that the variables set includes the most important factors in determining KS4 attainment outcomes.
2. The most significant factor in predicting the GCSE outcome measures used in this report is KS3 attainment in English.

3. That across all four outcome measures, factors exerting a positive impact were: being drawn from a BME community and speaking English as a second language. In all cases, these factors exerted separate effects when the others were controlled for.
4. Similarly, factors exerting a negative impact were: receiving free school meals, living in a deprived neighbourhood and having been a persistent absentee at KS3. Once again, these factors exerted separate effects.
5. Being female exerted a positive impact on the three measures of GCSE English outcome, but a negative one on the five GCSE passes including English and Maths.
6. Within the 'thin usage' schools, CoPE was associated with significantly poorer outcomes at KS4 across three of the four measures. On the measure of GCSE English passes at A* to G, CoPE in 'thin usage' schools was associated with a higher likelihood of passing.
7. Within the 'wide usage' schools, CoPE was associated with significantly better outcomes at KS4 across three of the four measures; the measure on which it had no effect was GCSE English passes at A* or A. Notably, individuals taking CoPE in a 'wide usage' school had an estimated 10% higher chance of passing GCSE English at A* to C and a 5% higher chance of getting five GCSE passes at A* to C including English and Maths (excluding equivalents).
8. Further examination of the effect of CoPE in the 'wide usage' schools suggests that its impact was most keenly felt among individuals with low attainment as KS3, but that there was a modest positive effect for average and higher attainers too once other factors were taken into account. This will be explored in more detail in the next section.
9. A further finding from the data, details of which are not presented here for reasons of space, is that CoPE was associated with an increased likelihood of attempting GCSE English in both 'wide usage' and 'thin usage' schools. The non-attempting of GCSE English is generally a feature of the low KS3 attaining group, but proportions were lower across all attainment groups where the individual was also undertaking CoPE.

D6. Analysis of subgroups

This section will examine the impact of CoPE against seven relevant subgroups of the dataset (by the three groups of KS3 attainment, gender, special educational needs, ethnicity and free school meals) to determine whether these groups are more or less likely to see a positive impact on their GCSE outcomes through undertaking CoPE. It will focus in on the two outcome measures which showed a consistent relationship with CoPE, namely (a) the attainment of GCSE English A* to C, and (b) the attainment of five GCSE passes at A* to C, including English and Maths (excluding equivalents). For readability, the regression models are to be found in Appendix IV, with only the bar charts being presented in the main report.

D6i. Low KS3 attainment

Logistic regression models were constructed for the subgroup within the main dataset comprising only those young people with low KS3 attainment in English: these can be found as Tables 21 and 22 in Appendix IV. The young person's actual KS3 English test scores were used in the model in place of the categories used in the main regression models detailed above to provide a fine-grained measure of prior attainment within the low subgroup.

The same group of variables exercised a significant impact on GCSE outcomes as for the main dataset, across both GCSE English at A* to C and the five GCSEs at A* to C including English and Maths. So, having a higher KS3 English score, coming from a BME community and having English as a second language exerted positive effects, while having special educational needs, being a persistent absentee in KS3, coming from a deprived neighbourhood and being eligible for free school meals had negative effects; being female was positive for GCSE English, but negative for five GCSEs including English and Maths.

Turning to CoPE, those undertaking it in 'thin usage' schools did significantly worse than those in 'no CoPE' schools on both outcome measures. Those young people undertaking CoPE in 'wide usage' schools, however, did significantly better on both measures, with an odds ratio of 2.15 for GCSE English at A* to C and 1.79 for five GCSEs at A* to C including English and Maths. These odds ratios correspond to estimated increased likelihoods of 87% and 70% respectively – these are considerably higher than for the main dataset (10% and 5% respectively). In other words, young people with low KS3 attainment undertaking CoPE in a 'wide usage' school are approaching twice as likely to pass GCSE English at A* to C and five GCSEs at A* to C including English and Maths, compared to similar young people in 'no CoPE' schools.

D6ii. Average KS3 attainment

The approach for the average KS3 attainment subgroup is identical to that for the low subgroup outlined above; the regression models can be found in Tables 23 and 24 in Appendix IV. The same set of predicted variables exert a significant effect, with the same mix of positive and negative impacts as for the low subgroup.

Young people undertaking CoPE in 'thin usage' schools continue to have significantly lower attainment as with the low subgroup and main dataset. Their peers in 'wide usage' schools have a significantly higher likelihood of attaining a good GCSE English pass, with an odds ratio of 1.21. This corresponds to an estimated 5% improved likelihood of achieving GCSE English at A* to C, compared to similar young people in 'no CoPE' schools. While there was a small positive impact on the five GCSE at A* to C including English and Maths measure for those undertaking CoPE in a 'wide usage' school, this was not statistically significant ($p = 0.281$).

D6iii. High KS3 attainment

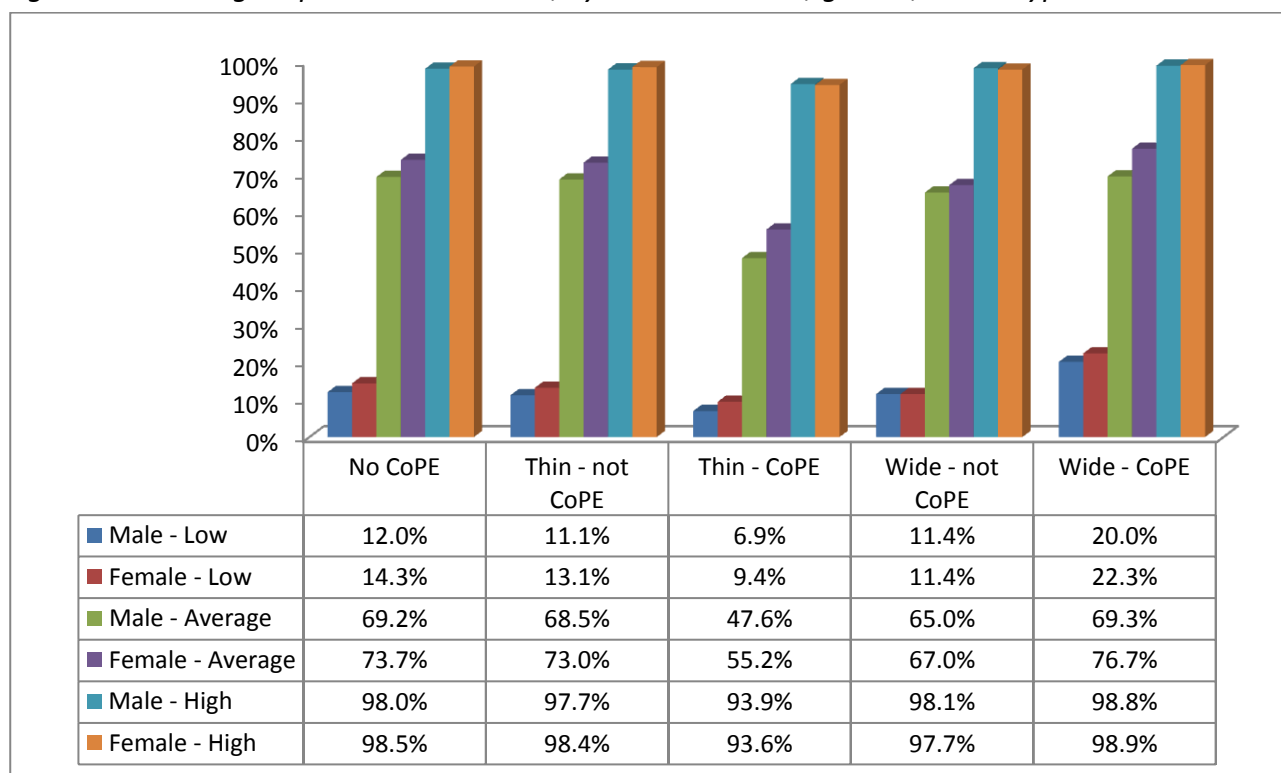
The approach for the high KS3 attainment subgroup is identical to that described for the previous two subgroups; the regression models can be found in Tables 25 and 26 in Appendix IV. The same set of predicted variables exert a significant effect, with the same mix of positive and negative impacts as for the low subgroup.

Once again, young people undertaking CoPE in ‘thin usage’ schools continue to have significantly lower attainment as with the other subgroups and main dataset. Their peers in ‘wide usage’ schools have a significantly higher likelihood of attaining a good GCSE English pass, with an odds ratio of 1.89. This corresponds to an estimated 0.8% improved likelihood of achieving GCSE English at A* to C (or nearly twice the likelihood of not doing so); this should be contextualised in respect of an overall pass rate of 98.2% for the high KS3 attainment subgroup. While there was a small positive impact on the five GCSE at A* to C including English and Maths measure for those undertaking CoPE in a ‘wide usage’ school, this was not statistically significant ($p = 0.423$).

D6iv. Gender

The regression models in Tables 27 to 30 in Appendix IV show relatively little difference by gender in the odds ratios for young people undertaking CoPE in ‘thin usage’ or ‘wide usage’ schools. This suggests that gender is unlikely to exert a strong effect on the efficacy of CoPE in relation to GCSE outcomes. We now turn to possible patterns combining gender with KS3 attainment.

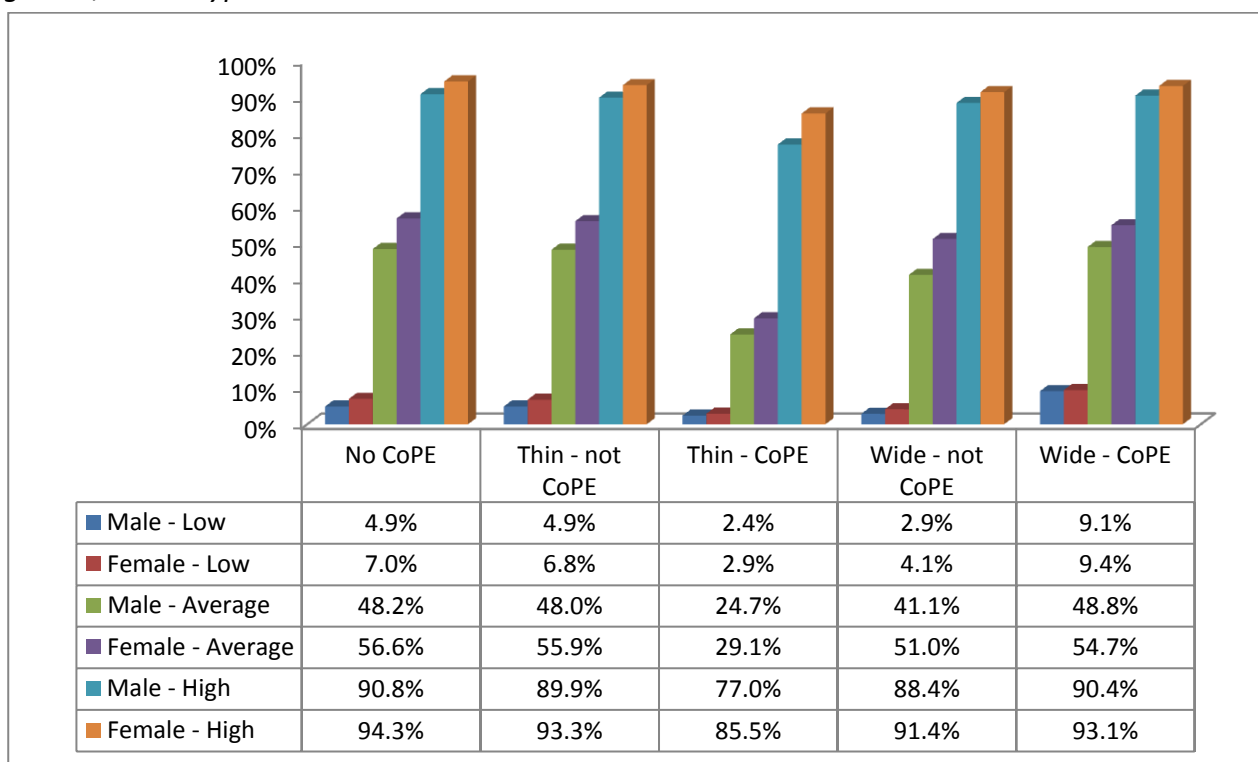
Figure 5: GCSE English pass rate at A* to C, by KS3 attainment, gender, school type and CoPE



The key feature examined here is whether the difference between the male and female GCSE English pass rates at A* to C varies between those individuals undertaking CoPE and those not. This is most easily achieved by visual examination of the coloured bars in Figure 5 above.

In this instance, there appears to be little difference between the bars for low and high KS3 attainment in Figure 5. However, there is some difference within the average KS3 attainment group, with the green and purple bars having a greater gaps among the CoPE groups than the group of individuals not undertaking CoPE. For example, among the CoPE group in the ‘wide usage’ schools, the difference in pass rate between males and females is 7.4%, compared to 2.0% for other individuals in ‘wide usage’ schools and 4.5% in ‘no CoPE’ schools. This suggests that CoPE may have slightly more positive impact on outcomes for females in the average KS3 attainment group, though the difference is small.

Figure 6: Pass rate for five GCSEs at A to C including English and Maths, by KS3 attainment, gender, school type and CoPE*



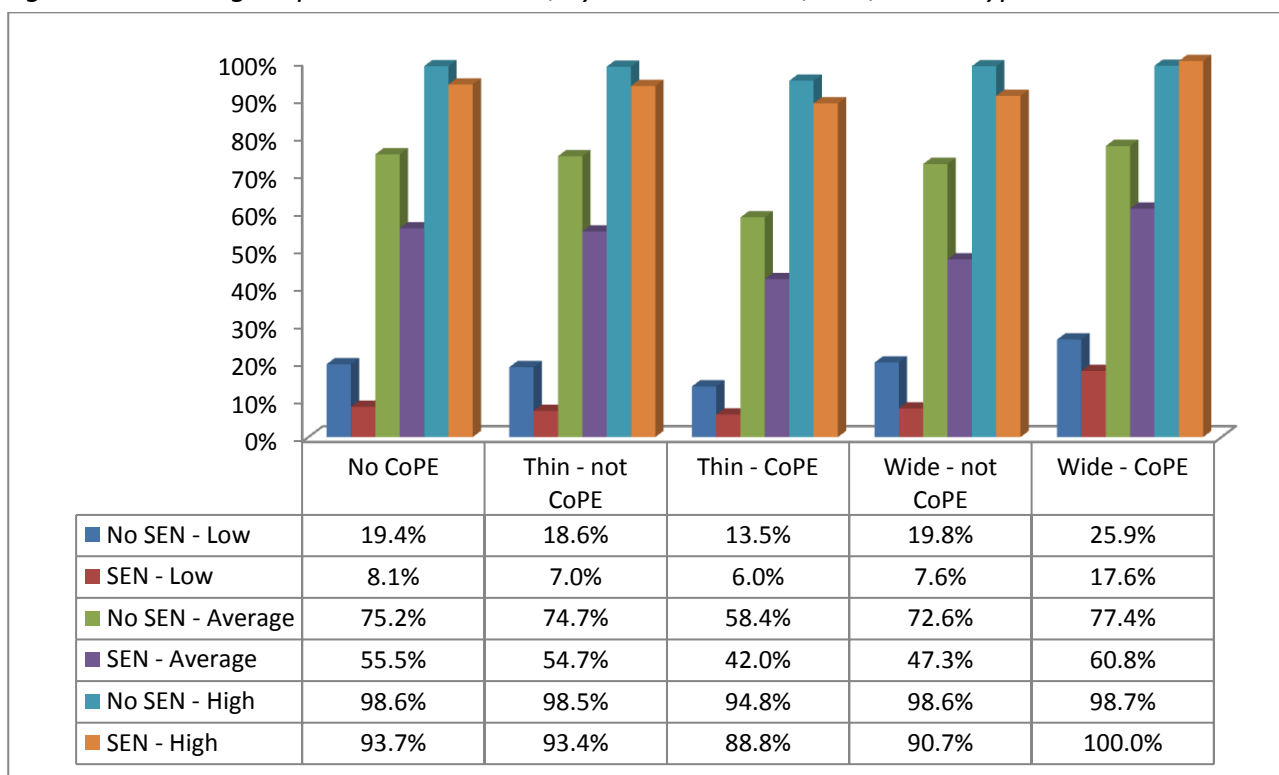
In the case of five GCSE passes at A* to C including English and Maths, females tend to outperform males. In this instance, CoPE appears to show some role in reducing this difference, although the pattern is not entirely straightforward. Among low and average attainers at KS3, the gap between male and female outcomes is lower among those individuals undertaking CoPE. For example, it is 0.3% for low KS3 attainers undertaking CoPE in ‘wide usage’ schools, compared to 1.2% for similar individuals in ‘wide usage’ schools and 2.1% in ‘no CoPE’ schools; this can be seen in the red and blue bars. Among high KS3 attainers, there appears to be a different impact between ‘thin usage’ and ‘wide usage’ schools.

Overall, this is a difficult pattern to interpret with any certainty. There is some evidence for an additional positive effect for females undertaking CoPE for GCSE English outcomes, but for males for the five good GCSE measure. This may reflect a role for CoPE in closing the gender gap for five GCSE passes at A* to C including English and Maths, by boosting the English performance of males. However, this is not well-evidenced and any effect is small.

D6v. Special educational needs (SEN)

The regression models in Tables 31 to 34 in Appendix IV show quite a large difference in the odds ratios for young people undertaking CoPE between the subgroups of those with and without special educational needs. For example, the odds ratio for the achievement of GCSE English at A* to C for those with special educational needs undertaking CoPE in a ‘wide usage’ school is 1.76, compared to 1.27 for those without special educational needs. The equivalent figures for five GCSEs at A* to C including English and Maths are 1.19 and 1.12 respectively. This suggests that CoPE may have a stronger relative effect for young people with special educational needs.

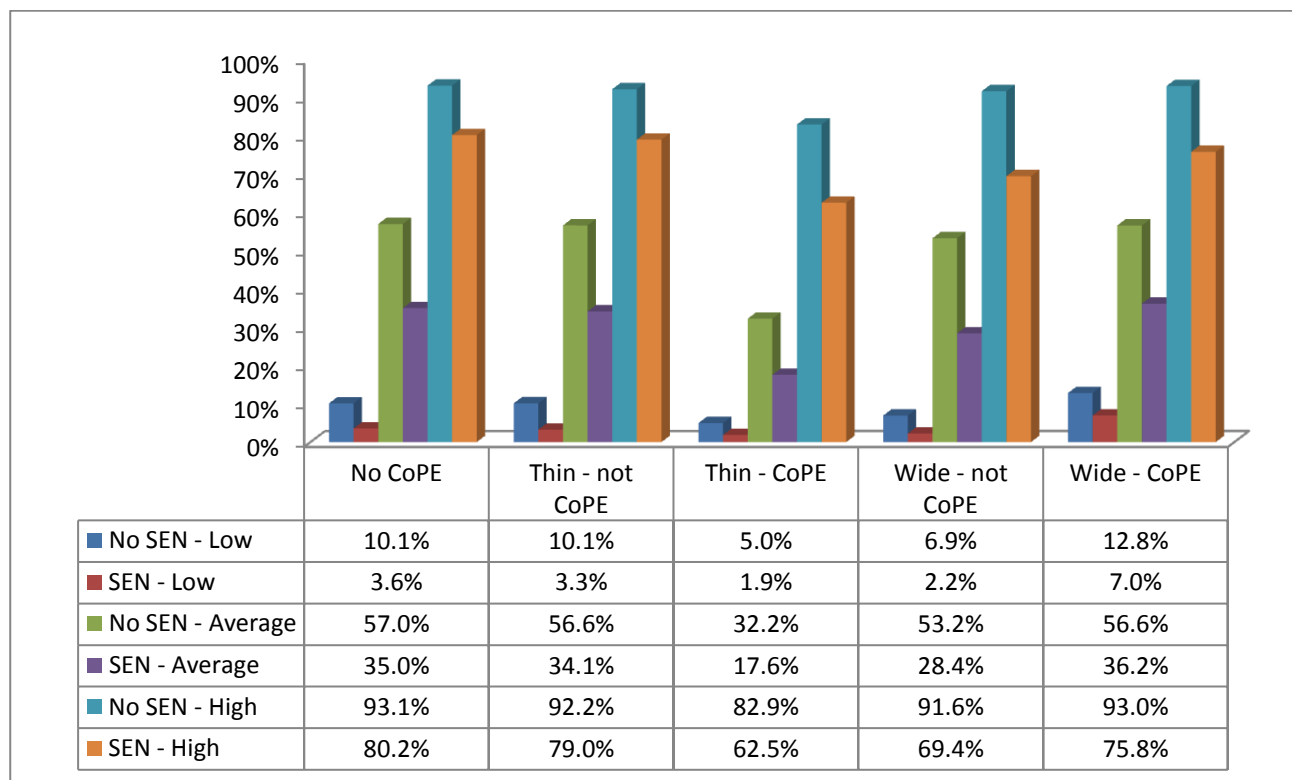
Figure 7: GCSE English pass rate at A to C, by KS3 attainment, SEN, school type and CoPE*



A comparison of the proportion of individuals passing GCSE English at A* to C by whether or not they had special educational needs reveals a marked pattern across nearly every combination of school type, whether they were pursuing CoPE and across all KS3 attainment levels. For example, among those with low KS3 attainment, the gap in pass rate between those with special

educational needs and those without was 8.3%, compared with 12.2% for other individuals in 'wide usage' schools and 11.3% for those in 'no CoPE' schools.

Figure 8: Pass rate for five GCSEs at A to C including English and Maths, by KS3 attainment, SEN, school type and CoPE*



Using the outcome measure of five GCSEs at A* to C including English and Maths, there is little evidence from Figure 8 for a particularly distinct effect of CoPE by special educational need. In summary, therefore, there is evidence that CoPE is associated with a greater impact on GCSE English outcomes among individuals with special educational needs compared to those without, but that this pattern does not transfer with the same strength to the five GCSE threshold.

D6vi. Free school meals

The regression models in Tables 35 to 38 in Appendix IV show very strong differences in the odds ratios for young people undertaking CoPE between the subgroups of those eligible and ineligible for free school meals. For example, the odds ratio for the achievement of GCSE English at A* to C for those eligible for free school meals undertaking CoPE in a 'wide usage' school is 1.86, compared to 1.32 for those who are ineligible. The equivalent figures for five GCSEs at A* to C including English and Maths are 1.60 and 1.06 respectively.

Higher odds ratios are associated with undertaking CoPE in ‘thin usage’ schools too. These figures suggest a very strong interaction between eligibility for free school meals and undertaking CoPE, with this group seeing considerably more effect than those from more affluent households.

Figure 9: GCSE English pass rate at A to C, by KS3 attainment, free school meals, school type and CoPE*

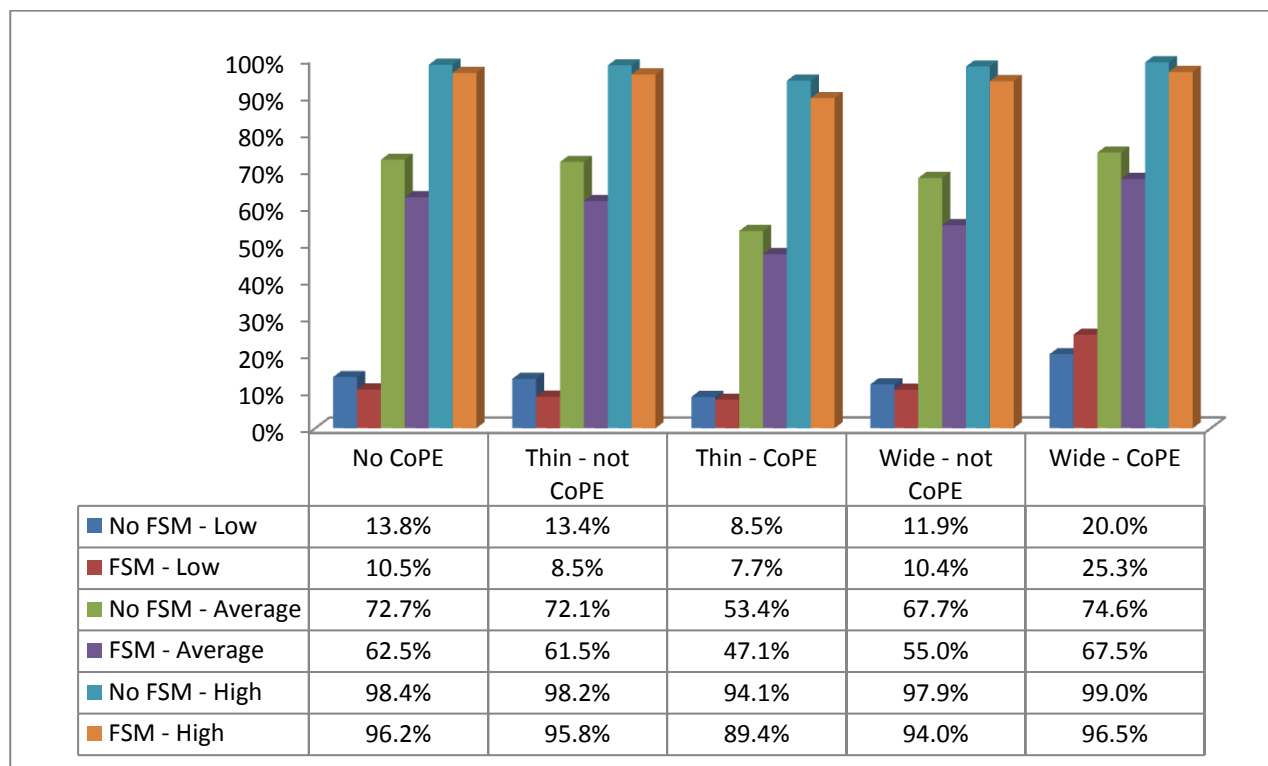


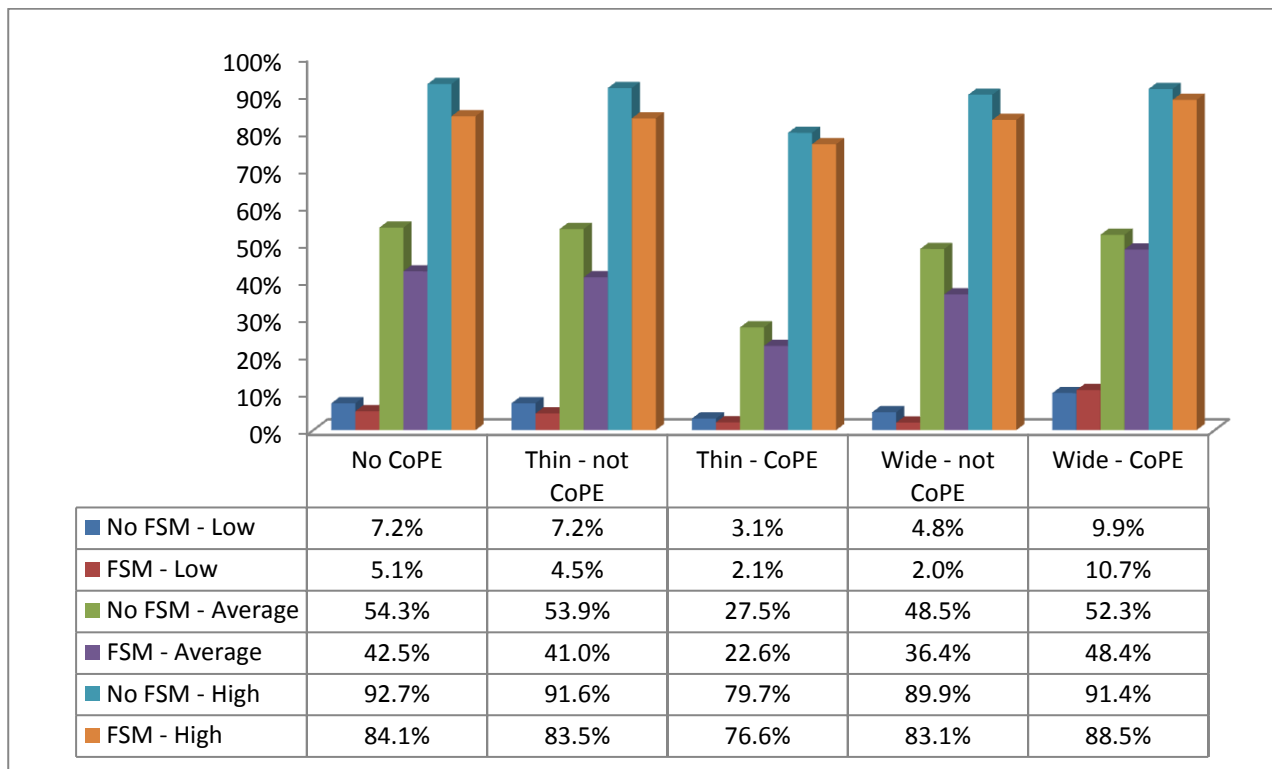
Figure 9 suggests a large difference in the relative impact of CoPE by whether or not the individual is eligible for free school meals. For example, among average KS3 attainers undertaking CoPE in a ‘wide usage’ school, the gap in pass rate for GCSE English at A* to C between those eligible for free school meals and those not is 7.1%. This compared with 12.7% for their peers not undertaking CoPE in ‘wide usage’ schools and 10.2% for those in ‘no CoPE’ schools.

This pattern is even more marked among low KS3 attainers; in ‘wide usage’ schools, those receiving free school meals and undertaking CoPE actually outperform, on average, their peers from more affluent households. Their pass rate is 25.3%, compared to 20.0% for those not eligible for free school meals and just 10.5% for those receiving free school meals in ‘no CoPE’ schools. This strong pattern is consistent with the odds ratios in the regression model.

Switching to the threshold of five GCSE passes at A* to C including English and Maths, Figure 10 below lends further supporting evidence. CoPE is associated with relatively stronger positive impacts for individuals eligible for free school meals, compared to those not receiving them. This pattern is consistent across the KS3 attainment range in this instance. For example, among high KS3 attainers, there is a 2.9% gap among those undertaking CoPE in a ‘wide usage’ school between

those receiving free school meals and those not. This compares with 6.8% among other high KS3 attainers in 'wide usage' schools and 8.6% among individuals in 'no CoPE' schools.

Figure 10: Pass rate for five GCSEs at A to C including English and Maths, by KS3 attainment, free school meals, school type and CoPE*

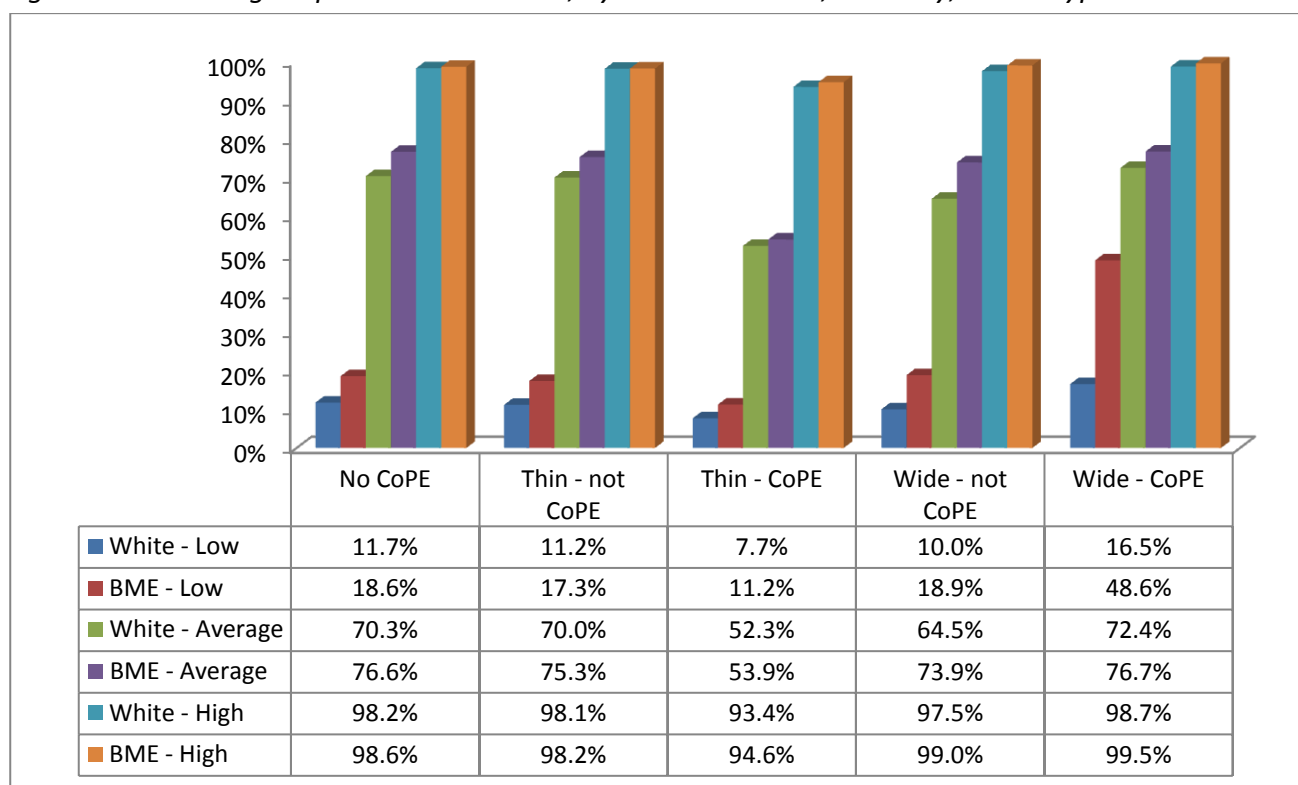


D6vii. Ethnicity

In the following analysis, the 'unknown' group has been removed for simplicity; this is a small group of individuals for whom ethnicity data is not available, but there is little indication that their patterns of KS4 outcomes are very distinct from the White group.

The regression models in Tables 39 to 42 in Appendix IV show a mixed pattern in the odds ratios for young people undertaking CoPE between the subgroups of those from White and BME communities. Perhaps the most striking difference is that between GCSE English pass rates, where young people from Black communities undertaking CoPE in 'wide usage' schools have an odds ratio of 2.17, compared to a figure of 1.33 for those from White communities. This suggests that CoPE may have a stronger impact for young people in BME communities, though it is notable that their odds ratios are notably lower in 'thin usage' schools, suggesting a mixed picture.

Figure 11: GCSE English pass rate at A* to C, by KS3 attainment, ethnicity, school type and CoPE



The most marked feature of Figure 11 is the very high relative performance of individuals with low KS3 attainment from BME communities in ‘wide usage’ schools who undertook CoPE. This group has a pass rate of 48.6%, compared to 18.9% among their peers in ‘wide usage’ schools not undertaking CoPE and 18.6% in ‘no CoPE’ schools. This is quite a remarkable finding, suggesting that CoPE has a particularly strong effect for this group.

In contrast, among average KS3 attainers, there is some evidence that undertaking CoPE has slightly more positive impact for White individuals. For example, the gap in outcomes by ethnicity is 4.3% among those undertaking CoPE in ‘wide usage’ schools, compared to 9.4% for their peers in ‘wide usage’ schools and 6.3% in ‘no CoPE’ schools.

It is also possible to see the relatively poorer performance of young people from BME communities in undertaking CoPE in ‘thin usage’ schools, where there is little gap in outcome between the two subgroups relative to that in ‘no CoPE’ schools. For example, the difference is 1.6% for the average KS3 attainers, compared to 6.3% in ‘no CoPE’ schools and, indeed, 4.3% among those undertaking CoPE in ‘wide usage’ schools. This finding is consistent with the regression model, but it defies ready explanation.

Figure 11: Pass rate for five GCSEs at A* to C including English and Maths, by KS3 attainment, ethnicity, school type and CoPE

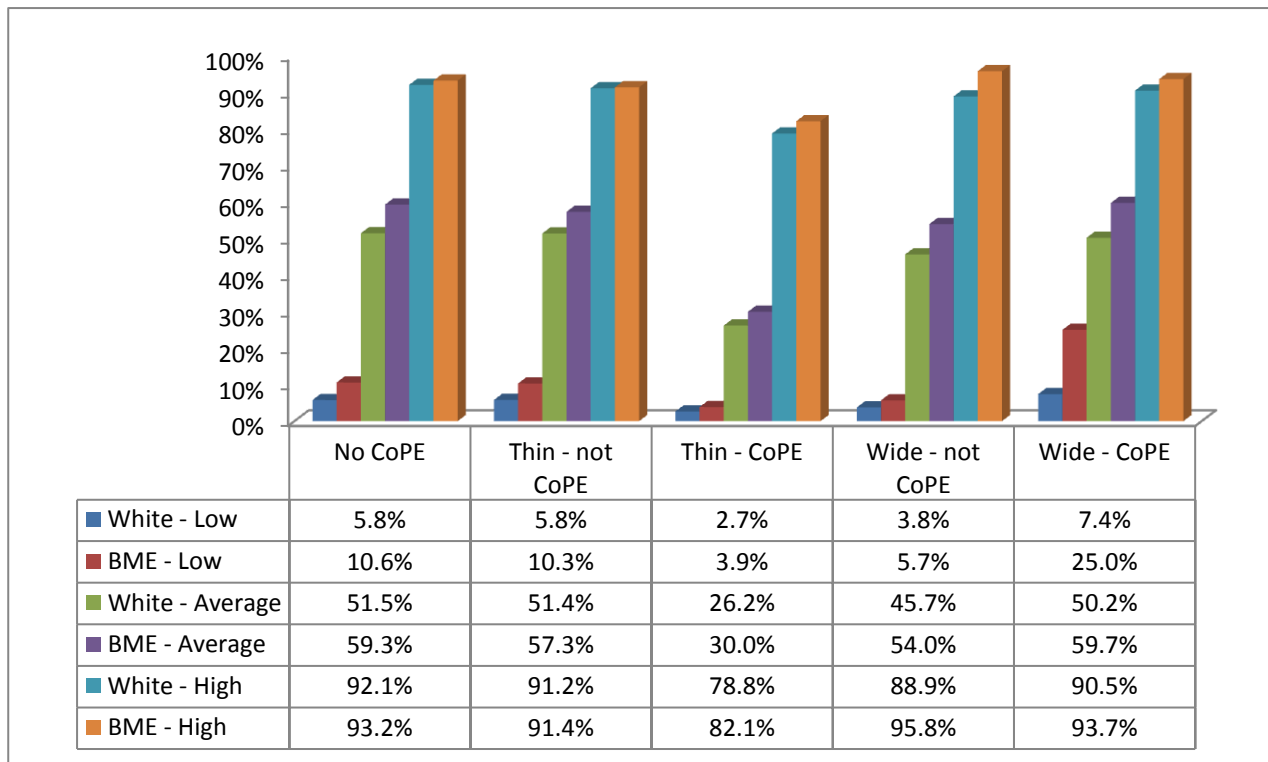


Figure 11 shows a similar pattern by ethnicity to that revealed in Figure 9 above, with low KS3 attainers from BME communities having a disproportionately high likelihood of passing five GCSEs at A* to C including English and Maths if they are undertaking CoPE in a ‘wide usage’ school. 25.0% of this group achieved this threshold, compared to 5.7% of their peers in ‘wide usage’ schools and 10.6% in ‘no CoPE’ schools. This therefore reinforces the finding that CoPE is associated with a greater impact among low KS3 attainers from BME communities when it is delivered in ‘wide usage’ schools.

Additional analysis suggests that these findings about ethnicity are closely tied to English as a second language, such that this might be a useful reference point for understanding the role of CoPE for individuals from BME communities. It may be, for example, that CoPE provides a particularly efficacious vehicle for the rapid development of English language skills between KS3 and KS4 for this group.

D6viii. Summary (2)

From these analyses, we can draw the following conclusions:

1. CoPE is associated with a much stronger relative impact among low KS3 attainers than among average or high attainers, largely because of the low average pass rate. Among this

subgroup, it is associated with nearly double the likelihood of passing GCSE English at A* to C and getting five GCSE passes at A* to C including English and Maths.

2. Nevertheless, CoPE is still associated with significantly better outcomes for GCSE English passes at A* to C for the average and high KS3 attainment subgroups, although not for five GCSE passes at A* to C including English and Maths.
3. There is some evidence that CoPE's impact interacts with gender, but the pattern is unclear.
4. CoPE appears to have a disproportionately positive impact for individuals with special educational needs, but only on their likelihood of attaining a GCSE English pass at A* to C and not for five GCSE passes at A* to C including English and Maths.
5. CoPE appears to have disproportionately positive impact for individuals receiving free school meals across all KS3 attainment groups and school contexts.
6. There is a very marked pattern that individuals from BME communities with low KS3 attainment undertaking CoPE in the context of a 'wide usage' school have very much stronger outcomes than those in other school contexts.

E. Quantitative analysis – paired sample

E1. Rationale and approach

While the analysis of the full dataset provides the most robust findings, it is appreciated that the procedure of binary logistic regression is not readily understood by non-specialists. In particular, it is not easily translated into a like-for-like comparison between those individuals undertaking and not undertaking CoPE because of the differences between school contexts and other variables. In order to address this concern, this section reports the findings of a parallel analysis using a small randomised sample of 400 individuals from the main dataset.

The sample comprises 200 sets of paired individuals, with each pair consisting of one individual from a ‘wide usage’ school undertaking CoPE and one individual from a ‘no CoPE’ school. In the first stage, 200 individuals were randomly selected from the 3,738 undertaking CoPE in a ‘wide usage’ school (i.e. a 5.4% sample). Then groups of individuals were identified from among the 334,368 in the ‘no CoPE’ schools who matched the 200 across eight variables:

- KS3 attainment in English
- Gender
- Ethnicity
- Eligibility for free school meals
- Special educational needs
- English as a second language
- Persistent absentee in KS3
- Living in a deprived neighbourhood

Thus, for each individual undertaking CoPE in a ‘wide usage’ school, a paired individual was randomly selected from individuals with an ostensibly identical profile; checks were undertaken to ensure that the same individuals weren’t paired twice. Clearly there are many factors which cannot be controlled for through this approach, including behaviour, motivation and school ethos. Nevertheless, it provided a reasonable sample of individuals who had identical backgrounds across a range of the most important variables for predicting educational outcomes, especially at KS4.

Individuals undertaking CoPE in ‘thin usage’ schools were not included as they are felt to comprise a highly rarefied group, as discussed previously. In particular, they are felt to be distinct from other individuals on variables which are not captured within the National Pupil Database.

It is important to remember that this is not necessarily a fully representative sample of those undertaking CoPE within ‘wide usage’ schools. Not all combinations of the eight variables were included in the sample in the same proportions as in the population as a whole as this would have

required a level of complexity that is beyond the scope of this report, as well as a much larger sample. However, the randomisation process did generate a reasonably representative sample at the single variable level – e.g. there were roughly the ‘right’ proportion of females or individuals with special educational needs. This point is important in that it is not meaningful to try to analyse subgroups within the sample as it is not possible to control adequately for the other variables – the sample is too small for meaningful regression analysis. However, conclusions can be drawn about the relative impact of CoPE as this is the only variable allowed to vary within the pairings.

In effect, this approach retrospectively creates a quasi-experimental study, albeit that the experimental (CoPE in a ‘wide usage’ school) and control (not CoPE) groups have been reconstructed retrospectively. It can most readily be conceptualised as creating two ‘virtual’ schools with identical pupil bodies, where the only difference is that one school offers CoPE to all its pupils while the other offers it to none. These two ‘schools’ are not necessarily representative of other schools or the nationwide pupil cohort, but they are a reasonable microcosm for a diverse student body of the type that might undertake CoPE in real life.

In order to assess the impact of CoPE, the pairs are compared across a similar set of measures as used in the regression analyses above. However, no analysis is presented of GCSE English pass rates at A* to G as too few individuals within the sample failed to achieve this. Conversely, analysis is presented of the contrast in GCSE English performance between the two members of the pair, expressed in the number of grades of difference – e.g. if one individual achieved a C grade and the other an E grade, this would be two grades of difference.

E2. Findings

Within the paired sample, the likelihood of an individual achieving a GCSE English at A* to C was higher among those who had undertaken CoPE (75.0%) than among those that had not (66.0%). This difference was statistically significant at the 5% level, using a X^2 test (3.895, 1 df, $p = 0.048$).

Table 10: Attainment of GCSE English at A to C, by CoPE*

	No	Yes	ALL
Not undertaking CoPE	68 (34.0%)	132 (66.0%)	200
Undertaking CoPE	50 (25.0%)	150 (75.0%)	200
ALL	118 (29.5%)	282 (70.5%)	400

A similar pattern is seen for GCSE English passes at A* or A, with those individuals undertaking CoPE (22.0%) tending to outperform those not taking CoPE (18.5%). However, in this instance, this difference was not statistically significant ($X^2 = 0.759$, 1df, $p = 0.384$). In other words, this

difference in profile could occur due to chance alone, although it does suggest a possible small positive impact from CoPE.

Table 11: Attainment of GCSE English at A or A, by CoPE*

	No	Yes	ALL
Not undertaking CoPE	163 (81.5%)	37 (18.5%)	200
Undertaking CoPE	156 (78.0%)	44 (22.0%)	200
ALL	319 (79.8%)	81 (20.3%)	400

The same also holds true for the achievement of five GCSEs A* to C including English and Maths (excluding equivalents), with there being a slightly higher pass rate among those undertaking CoPE (61.0% compared to 55.5%), although this did not achieve statistical significance ($\chi^2 = 1.244$, 1 df, $p = 0.265$).

Table 12: Attainment of five GCSEs A to C including English and Maths, by CoPE*

	No	Yes	ALL
Not undertaking CoPE	89 (44.5%)	111 (55.5%)	200
Undertaking CoPE	78 (39.0%)	122 (61.0%)	200
ALL	167 (41.8%)	233 (58.3%)	400

Returning to GCSE English only, there is a difference in the profile of the two groups in terms of the grades achieved; note that some grades are missing in the original dataset, leading to slightly less than 400 individuals being represented and some small discrepancies with the tables above. There are more passes in each grade between A* and C among individuals undertaking CoPE and fewer in D, E and G. This is consistent with the findings above, although the trend does not achieve statistical significance using the Mann-Whitney test ($U = 17452.5$, $Z = -1.517$, $p = 0.129$).

Table 13: Attainment in GCSE English, by CoPE

	A*	A	B	C	D	E	F	G	U	ALL
Not undertaking CoPE	12	25	37	56	37	19	6	4	1	197
Undertaking CoPE	13	31	39	64	24	15	7	2	1	196
ALL	25	56	76	120	61	34	13	6	2	393

In order to test this finding in a slightly different way, the difference in grades between the two members of each pairing was calculated: seven pairings were missing data on the grade, leaving 193 for which a grade difference could be calculated.

Table 14: Grades of difference in attainment in GCSE English between pair members undertaking and not undertaking CoPE

Grades of difference between CoPE and not CoPE individuals	Number	%
-3 (individual undertaking CoPE poorer)	2	1.0%
-2	18	9.3%
-1	26	13.5%
0	64	33.2%
+1	61	31.6%
+2	21	10.9%
+3	0	-
+4 (individual undertaking CoPE better)	1	0.5%
ALL	193	100%

From Table 14, it can be seen that 76.2% of the individuals undertaking CoPE did at least as well as their paired individual not undertaking CoPE, with 43.0% attaining at least one grade higher. These differences were subjected to a t-test against the alternative that there was no difference in grades between the two groups. When presented in this way, the difference was found to be statistically significant at the 5% level ($t = -2.371$, 192 df, $p = 0.019$), with a mean difference of 0.2 grades. In other words, those individuals undertaking CoPE attained an average of one-fifth of a grade higher in GCSE English than otherwise identical individuals (with the caveats covered above) not undertaking CoPE.

E3. Summary

From these analyses, we can draw the following conclusions:

1. There is evidence from this quasi-experimental study that undertaking CoPE is associated with improved outcomes at GCSE. While positive differences were found across all four measures investigated, they were only statistically significant in two instances.
2. Firstly, there was a higher likelihood of individuals undertaking CoPE achieving GCSE English at A* to C than those not undertaking CoPE. Within this particular sample, the difference amounted to 9 percentage points.

3. Secondly, that individuals undertaking CoPE attained, on average, one-fifth of a grade higher in GCSE English than those individuals not undertaking CoPE.
4. It was not possible within this sample to investigate differences in outcome by subgroups (e.g. gender) which is not itself necessarily representative of the wider national pupil cohort.

F. Analysis of indicative case studies

The research study included visits to four schools in which there was substantial use of CoPE, and within each there were interviews with staff and young people: we interviewed the member of staff with main responsibility for CoPE, the senior manager with overall curriculum responsibility, and two small groups of pupils (drawn respectively from those following CoPE and those not following CoPE as part of their KS4 programme); the interview schedule can be found at Appendix V. The four schools do not represent a sampling strategy in any conventional or rounded sense, and their involvement in the research was brokered primarily by ASDAN. It is also important to note that the pupils interviewed were selected by school staff.

These cases do not provide the basis for any generalisation. They do however provide important insights because they illustrate some of the ways in which CoPE provision is actually conceived, arranged, managed and experienced by staff and young people ‘on the ground’. The main impressions are summarised below under a series of headings that signal main themes.

F1. CoPE’s position and delivery within KS4

The schools in the study had been providing ASDAN courses as part of the school offer for a number of years; the average being six, but ranging from five to eight years. The schools were all running other ASDAN courses as well as CoPE and had been running ASDAN courses before CoPE came online. The main reason that schools had expanded their offer to include CoPE was because it provided an accredited alternative to traditional GCSEs, allowing an increase in ‘headline’ attainment levels at Key Stage 4. However, in addition to this ‘extrinsic’ motivation there was a great deal of what can be termed intrinsic valuing, whereby CoPE is seen to represent a distinctive curricular and pedagogic entity, valued for how it provides a particular method and approach, and for its capacity to give some pupils a route to recognised qualifications they would otherwise not achieve:

“When we started with CoPE we were just looking to increase our five A to C, but now we are at 92% five A* to C we do it because it is a good course.”*

There was evidence that CoPE had been chosen because schools had positive experiences of running ASDAN courses and felt that the pupils responded well to the methods of study used in ASDAN courses, such as the ‘Plan-Do-Review’ sequence and the use of group work. School staff interviewed were in agreement that the modular format with certificates for completion offered a structure that was itself motivating.

In three of the four case study schools, 20% or less of the Year 11 pupils undertook CoPE, in the fourth around 40% of the year group studied CoPE. In none of the schools were the pupils themselves making active choices to do CoPE as part of their KS4 portfolio: the staff determined which pupils would study CoPE, though there were rare cases of young people opting in of their own volition. The reasons why pupils were selected for CoPE varied from school to school and from pupil to pupil, but included:

- Where particular young people had low levels of attendance (e.g. due to prior illness or family issues), but were likely to achieve five A* to C grades at GCSE, it was felt that CoPE was likely to re-engage them with education;
- Where young people had 'self-excluded' from other lessons they had been directed to undertake CoPE on the grounds that it would be likely to re-engage them with education;
- Where young people had behavioural issues that made them disruptive in other lessons and where the personal attention of the CoPE curriculum was felt to be beneficial.
- Where young people were likely to get English and Maths GCSE at A* to C, but were borderline in obtaining three others to get five altogether, they were selected for CoPE because it would help to increase their achievement (one senior manager described this as avoiding a "dangerous" situation);
- Pupils with special education needs were felt to benefit from CoPE. In two of the schools, staff experience demonstrated a close affinity between the processes of CoPE and the learning preferences of young people with autism.
- Where pupils had already obtained a qualification in Year 10 (such as a NVQ Level 1 in a foreign language), they undertook CoPE in Year 11 as a productive use of a 'gap' on their timetable;

All the schools were clear that an advantage of CoPE was that it enabled students that were unlikely to obtain GCSE passes at A* to C the opportunity to attain at that level, which in turn helped to raise the attainment level of the schools in the league tables. Two of the four schools stated this was a reason for running the ASDAN course and indicated that if the course did not maintain its role in headline measures, they would be looking for a course that could replace it:

"The points gain is very important to the school and if we could find a course that is similar but has points attached we would use that."

These two schools also had a high number of students undertaking BTEC courses and were concerned that their attainment levels would drop dramatically if CoPE and/or the BTECs they taught did not retain a recognised equivalence with GCSE in headline measures. Despite these concerns the staff interviewed at these two schools were strongly of the view that CoPE should retain its place on the curriculum because it engaged pupils in learning where they may otherwise disengage in Years 10 and 11, due to the demands of the academic curriculum.

The course was taught by a mixture of qualified teachers and learning support mentors, and the input from each varied from school to school. In two schools there were qualified teachers managing the programme, but the majority of teaching was carried out by learning mentors. In the third the whole programme was managed and taught by learning mentors and in the fourth – the school where 40% of the year group studied CoPE – it was taught by qualified teachers but the portfolios were moderated by learning mentors that had completed the relevant ASDAN training.

The amount (and positioning) of time on the timetable allocated to CoPE varied greatly from school to school. One school ran it as a whole day per week plus other sessions, totalling some 12 hours a week for each student, all in small groups. Another ran it over two terms in year 11, in a time-slot of 5 hours a week, again in small groups. In another, CoPE took place in a one-hour per week slot on Friday afternoons over a school year, in normal sized classes. In this latter case the teaching was done differently to the other schools and the pupils took work they were doing in other subject areas and expanded on it to create a CoPE portfolio, rather than studying topics specifically for CoPE. As a teacher here described it:

“So we basically say ‘what other subjects are you doing’ and they say ‘we are doing all this’, and we say ‘you can do this challenge from there, and this [other] challenge from there...’ and we show them how it can be built up. And then of course they can give me other suggestions of where they might want to get the challenges covered. And a big thing is to say ‘and, it’s equivalent to a GCSE at a grade x, depending on which level they are working on.’”

This was the school where the course was managed and taught through qualified teaching staff.

Two aspects are worthy of note here. Firstly, the research team was struck by the great variety of arrangements in the provision of CoPE, even across these four indicative case studies. This is especially visible in how it is timetabled and in its relationship to other parts of the KS4 curriculum. Secondly, there was considerable variety in how much CoPE appeared to draw upon the ‘outside interests’ of pupils and on the generation of events that would provide pupils with opportunities to devise and meet challenges. In one school there appeared to be almost no effort to draw on such outside interests or generate such opportunities; yet in another school this was a clear and celebrated part of both the everyday practice and indeed the rationale of CoPE.

F2. Perceptions of CoPE - school staff

School staff interviewed described the CoPE course programme as flexible, relevant and interesting for the pupils (and used many other similar terms). It was felt that the structure of the course provides an ideal framework for skills and curriculum knowledge and in all of the case study schools staff could provide examples of where CoPE was successfully used in conjunction with other subjects, such as BTEC Business and Design & Technology.

The head of curriculum at one case study school summed up CoPE as:

“A varied qualification that provides students with the tools they need to get on with education that they wouldn’t necessarily get in their [mainstream] curriculum classes.”

This perception was also held by the other case study school staff and often by pupils as well. It was a widely held view that the pupils studying for CoPE acquired study skills in areas such as research, reflection and presentation, and that they did so to an extent that was beyond the skills acquired by those not studying CoPE. The acquisition of these skills was seen as vital for progression and then successful study at Level 3:

“We find that those that are doing CoPE when they get into the sixth form are much better at researching and project work or even just better at formatting and laying out a page and making it look presentable.”

The study included an attempt to gauge how CoPE was seen by staff and pupils who were not currently involved with it in any direct sense. There was a consensus from both staff and pupils interviewed that these other staff knew very little about CoPE and what it entailed, even where CoPE was followed by a high proportion of school pupils in total. It was also felt that whilst some of these colleagues would see CoPE as an easy route to a GCSE pass equivalent, there was nevertheless a general and positive acceptance that CoPE had a place in the curriculum and was an appropriate course for those that were studying it.

In three of the four schools the staff most closely associated with CoPE talked about the explicit links they had made with teachers of other subject areas such as PE and Design and Technology. Where these links had been made the staff interviewed said that the subject teachers had indicated they thought that CoPE had benefited the pupils studying it in their subject area.

F3. Perceptions of CoPE – young people

Every student interviewed that was studying towards CoPE was positive about the course. They felt that the work they did towards CoPE was interesting and relevant not only to their education but also their life beyond the school gates:

“CoPE is more like for lifestyle where GCSEs are doing subjects.”

With those that would be regarded as the higher achieving students recognising:

“It gives us skills for the rest of our GCSEs.”

Many felt that the lack of assessment by examination made it 'easier' to gain a GCSE equivalent than in the traditional GCSE subjects and likened it to studying for a BTEC:

"It's just coursework, they [school staff] send off to the examiner and they check through it."

However, this point about the mode of assessment did not mean that such pupils thought CoPE to be an 'easy option', and they noted that CoPE represented a lot of work, especially in terms of the amount to writing to fill the Plan-Do-Review forms (PDRs).

It was important to the students to get the CoPE award because it counted 'as an extra GCSE'. It is firmly part of their perceptions that maths, English and science need to be focused on to be able to get a good job, but they appreciate that CoPE at Level 2 currently has equivalence to a GCSE at grade B, and that when employers look at it they will know they have a breadth of skills and knowledge which might help with gaining employment.

The pupils interviewed that were not studying CoPE had very little knowledge of the course. Those that were aware of it thought that it sounded like it was interesting because they felt it allowed the study of different topics and that it was easier than traditional GCSEs because there was no exam:

"Isn't ASDAN what people do if they are struggling to get the five A to Cs, to help them get it up? Usually in our school it is the lower sets that do ASDAN I think."

"I know kids from other schools doing ASDAN, and its more small groups of kids and then they take them out of school and do different activities and stuff like that... I think it's like going camping and that sort of thing."

In two of the schools there were comments from pupils not doing CoPE that even though they didn't really know much about it they thought that those studying towards CoPE appeared to enjoy the classes and thought that it was a subject that they looked forward to doing:

"Most people have got a lesson that they look forward to... I look at PE as the lesson I look forward to, and I don't really mind doing anything else because I know I've got PE coming. I think they look at it as that as well. As well as doing stuff that helps them, they had fun doing it. It's a bit more of a break sort of thing, and they are a bit more lenient 'cause you can talk and you can have a bit of fun and stuff, so when you come back to the lesson you think 'right, now I'll get some work done' sort of thing."

There is an interesting congruence between this positive assessment of the experience of CoPE and the earlier point about staff perceptions of the positive effects of CoPE.

F4. Perceptions of CoPE – parents/guardians

We did not interview parents or guardians for this study, but explored the perceptions of their awareness and views with staff and pupils.

CoPE is not a very publicly-visible part of the curriculum offer in the case study schools. It is likely that only some of the parents of the pupils studying CoPE have some knowledge of the course. As noted earlier, the young people are selected or steered to do the course, and at this point a letter is sent home to the parents. Whilst parents do have the opportunity to ask questions about the course and to question any such allocation, there appeared to be no examples of this having occurred in relation to CoPE.

The majority of pupils themselves said they didn't talk to their parents about their work with CoPE and they also thought that their parents/guardians would not really understand them even if they tried to explain because it is different to their other courses"

"Because it is so different to anything else they don't understand it. It is social; history; sport; it covers everything... they don't get that."

"My mum doesn't understand what a BTEC is – there is no way she'd understand CoPE."

"My parents are happy, as long as I stay in school they don't care what I do."

In one school – the only one of the four schools where the pupils not doing CoPE had some knowledge about the course – there were strongly expressed views that parents are all aware of what CoPE is and according to the students they think it is a good idea. They say their parents agree with them that it is equipping them with skills for life when they leave school.

In one school the teacher responsible for CoPE described how a parent who had been highly sceptical had made a point of thanking him for CoPE:

"We had a Year 11 parents evening quite recently, and a young man was sitting in there with his father. His father said 'When this [CoPE] started in Year 9, I thought this is going to be a waste of time, just keeping him busy', but he came along and said 'I have to apologise to you because I think this course has done a huge amount for my son in terms of confidence and the way he is progressing with other subjects in school.'"

F5. Overall strengths and weaknesses of CoPE

Staff and students interviewed readily identified several strengths. In one of the case study schools, where CoPE formed a significant part of the week for a small proportion of students, the coordinating member of staff cited example after example of how individual students had made great gains that were attributable to CoPE and its approach. He also spoke in more general terms about the relationship between attendance and confidence:

“Some of these kids I have all day on a Tuesday, and they always come... Many of them have [previously] lost a lot of confidence. So the first six months is persuading them that they can actually do stuff. The atmosphere in the class is much different to what they have elsewhere in the school, and it’s smaller groups. They come on those days, they don’t argue about doing the work. We have long rest periods, we watch a film every now and again, as a reward, but there is never any issue about getting the work done. I have never known one to truant.”

A further key strength identified by both staff and students was how CoPE offered ‘flexibility within a tight structure’, or ‘a mixture of freedom and constraint’. Staff liked the fact that the course could be taught as discrete modules that followed a format of required tasks which itself became familiar to students. As noted, in some schools they also placed a high value on the capacity to follow the interests of students, and where they did this was in turn valued by the students themselves:

“...because you can pick what you want to do. I like the days I do CoPE. I enjoy coming to school on those days.”

In two of the case study schools staff felt that an additional strength of the course was the opportunity for students to gain further qualifications such as a certificate in first aid. Indeed, the pupils themselves mentioned that they had gained a first aid qualification and how they felt it would be useful in their ‘life outside of school’. We were given examples by a number of students of how they had already put into practice some of the skills they had learnt within CoPE, and several used terms such as ‘it’s about preparing for life’ when describing the course.

The students also perceived that a main strength of CoPE was that it did not include an examination, and in they acknowledged that this provided them with a more accessible (though as mentioned earlier, not necessarily ‘easier’) Level 2 pass than was the case in other areas of the curriculum. They valued the way in which the build-up of portfolio assessment allowed ‘second chances’, improvement over time and the opportunity to work together in groups.

In one school staff said that the absence of an examination meant the pupils obtained a level 2 qualification that they felt some young people would not have been able to obtain if they were

required to do an exam. Staff in another indicated for some of their pupils the CoPE qualification was the only Level 2 qualification they were likely to achieve, which gave it immense importance.

Amongst the staff, the group work element and the opportunity to attain certificates throughout the course was felt to be both motivational and confidence-building for the pupils. It was agreed that the pupils had a sense of achievement:

“I think the extra confidence comes from the fact they are doing it for themselves. Unlike in a GCSE where you are teacher taught.”

This was mirrored amongst the pupils:

“I need a lot of motivation to do things and so sometimes it’s better if I’ve got someone to work with me rather than working on my own so the group work is better for me.”

It is however important to reiterate that even if this or similar data were drawn from a representative sample of schools and students pursuing CoPE, they would not provide compelling evidence that CoPE (or any other curriculum entity) ‘causes’ an increase in motivation of this kind. One staff member interviewed made this point well in saying that young people mature in so many ways between Year 9 and the end of Year 11 that it was impossible to tell whether the increased motivation was due to engagement fostered by CoPE, or alternatively students realising that education was an important part of their life and/or realising that the achievement of credentials would make a difference to their employment prospects.

A further widely-perceived strength of CoPE, particularly clear in two of the case study schools, was its provision of life skills that students would not be able to develop elsewhere in the curriculum. Examples provided were around how to open bank accounts and the writing of CVs.

Staff and students interviewed did not readily identify any substantial weaknesses of CoPE *per se*. When pressed, one suggested that some public impressions of CoPE were problematic:

“There is a weakness in other people’s knowledge of it. And that includes the teaching staff as well as the wider public. I think they tend to lump all ASDAN courses together. They never talk about doing CoPE or wider key skills, or any of the other courses on offer. They talk about ‘ASDAN’ and that kind of almost labels it as being something that only low ability students do. But when you show them the work of those who are slightly more able... the quality of the work is astonishing.”

Again, and only when pressed, another cited the amount of work involved:

“It is such a lot of work, and I know that’s a negative, I’m sorry... it’s mainly paperwork, the monitoring, the checking of what they have done and what they haven’t.”

This staff member added immediately that it had not taken long to accept that all the work was necessary, and PDR forms became easier with time as staff and students began to understand what was required to complete them appropriately.

Issues to do with moderation were raised in two of the schools. They included a general point about the volume of paperwork, and a suggestion that there could be inconsistencies from school to school in the quality of portfolios deemed to be of a ‘pass’ standard. A further minor concern expressed by one co-ordinator about moderation processes was unfounded and demonstrated that there was some misunderstanding among staff delivering CoPE about how the sampling process works.

G. Discussion and conclusions

In order to frame the discussion of findings, we return to the original research questions, answering each in turn, drawing from the quantitative and qualitative evidence presented above.

1. Do young people who undertake CoPE achieve a higher grade at GCSE English than comparable young people who do not?

The answer to this question is heavily context-specific. Treating the cohort of young people undertaking CoPE as a single group, there is no evidence for a positive effect from CoPE from the quantitative data. However, subsequent detailed analysis revealed that there were strong differences in the impact between different types of school, as determined by the proportion of the cohort undertaking CoPE.

This distinction is vital to understanding the impact of CoPE. The key factor is the method by which schools select which young people will undertake CoPE. Data from the school visits suggests that schools, in general, take a very directive approach to selection, effectively dictating which young people should be admitted to the CoPE cohort. In some instances, this was undertaken in an instrumental and mechanised way, based on internal statistical markers like the Fischer Family Trust predictions. In others, the approach was more child-centred and based around which individuals were felt likely to benefit from CoPE's pedagogic approach and values. Nevertheless, it appears usual for the CoPE cohort to be defined by the school with little active choice from the young person or their parents. There were some instances of young people opting in or out of CoPE of their own volition, but these were rare.

In those schools with relatively small CoPE cohort, the young people selected tended to have serious challenges to their educational experience. Examples provided by schools during the research visits included those with behavioural problems, those who were 'school refusers', those with severe special educational needs, those who had missed significant amounts of schooling through illness or family issues, those with low confidence or self-esteem and those struggling with written English. Even taking into account their attainment at KS3, these are individuals who are likely to struggle to achieve their potential at KS4. This was therefore a highly rarefied group of young people, selected specifically due to their educational challenges.

In contrast, some schools have a relatively large CoPE cohort, drawing from a much wider range of young people. These tended to include the same types of challenged individual as described above, but also those young people with more mainstream educational experiences and behaviours. For example, in one school visited, it was those individuals without an aptitude or

interest in foreign languages (the school's specialism) that were primarily selected for CoPE. In these schools, the CoPE cohort more closely mirrored the school profile as a whole.

Through exploratory analysis of the NPD data, it was possible to identify a threshold where young people undertaking CoPE comprised around 25% of the total cohort. This was not a 'hard and fast' rule and there was, in reality, a continuum from very small CoPE cohorts through to schools where all or nearly all of the young people undertook CoPE. Nevertheless, the 25% threshold allowed for a simple bifurcation into 'thin usage' (less than 25%) and 'wide usage' (25% or more) schools. There were 1,040 of the former and 54 of the latter, though the latter accounted for 39% of young people undertaking CoPE at Level 2.

Looking at the profile of these schools, both had more educational challenges than those not offering CoPE at all – e.g. more young people with special educational needs or eligible for free school meals. The 'wide usage' schools were slightly more challenged by their pupil profile than the 'thin usage' ones, but not sufficiently so to account for the differing sizes of the CoPE cohorts; the selection approach remained the main determinant.

It is this division between 'thin usage' and 'wide usage' schools that illuminates the impact of CoPE. In short, those young people undertaking CoPE in 'thin usage' schools do significantly worse in GCSE English than similar individuals in 'no CoPE' schools across two of the three measures used, whereas those in 'wide usage' schools do significantly better across two of the three.

Before we move on to the detail, it is important to note here that the methods employed in this study cannot distinguish between an effect derived from CoPE itself and one which is related to a further unknown confounding factor. The most likely such factor would be the ethos of the school itself. For example, it could be that schools which get very strong outcomes for their young people (in terms of value-added between KS3 and KS4) are also more likely to offer CoPE. In this instance, it would be impossible to determine whether it was the school effect or the CoPE effect that was causal to the improved GCSE English results. This should be borne in mind in the interpretation of the results in this report.

Young people undertaking CoPE in 'thin usage' schools are significantly more likely to achieve a pass in GCSE English at grades A* to G than those in 'no CoPE' schools, all else being equal. This is largely driven by an increased propensity of young people with very low attainment in English at KS3 (including those with special educational needs) to attempt the GCSE two years later. However, their propensity to achieve a pass at A* to C or a top pass (A* or A) was significantly lower than for similar individuals in 'no CoPE' schools, across all ability ranges.

Given the composition of the 'thin usage' school CoPE cohort, this finding is perhaps not surprising. The defining features of the cohort are not generally ones that are captured by the NPD dataset. For example, poor behaviour in school or background family issues are not variables

that can be included and controlled for within the regression analysis. It is therefore hypothesised that these individuals were very likely to underperform relative to their KS3 attainment and that they formed part of the CoPE cohort precisely because of this likelihood. It is not possible to determine whether or not undertaking CoPE might have had some role in mitigating the scale of their relative underperformance; this is explored in more depth in the answers to the fourth and fifth research questions.

The contrast with the 'wide usage' schools could scarcely be more stark. Young people undertaking CoPE in 'wide usage' schools were nearly five times less likely than those in 'no CoPE' schools to not obtain a pass in GCSE English at grades A* to G. However, they were also significantly more likely to achieve a pass at A* to C – the increased likelihood is estimated at around 10%, as an average across the ability range. This cohort was slightly less likely to receive an A* or A grade, but the difference was not statistically significant.

Drawing on the paired sample analysis, we can extend the conclusions a little further and infer that young people undertaking CoPE in a 'wide usage' school attain, on average, around one-fifth of a grade higher in GCSE English than otherwise identical young people in 'no CoPE' schools. Averages like this can be difficult to conceptualise, but one approach would be to consider a fairly typical school where 20% of the young people ordinarily attain a grade D. In this instance, the use of CoPE across the whole cohort might be expected to raise the overall pass rate at A* to C by around 4%. Clearly different schools will have different attainment profiles and so CoPE will impact differently.

In summary, then, the answer to this research question is that when other background factors are taken into account, CoPE is indeed associated with a positive impact on GCSE English outcomes when delivered across a relatively broad section of the pupil cohort. Where CoPE is used with a highly challenged cohort, there is a positive impact on achieving any pass, but other outcomes are lower than those predicted by KS3 attainment. However, there may still be a 'hidden' positive impact by mitigating what might have otherwise have been even lower underperformance, and our case study data lends support to this idea.

2. Are young people who undertake CoPE more likely to achieve five GCSE passes than comparable young people who do not?

The contextual points made the answer to the previous question also hold here, so are not repeated. The precise measure used in assessing this question was the young person's achievement of five or more GCSEs at grades A* to C including English and Maths, but excluding any 'equivalent qualifications' – such as CoPE itself. It therefore measures only full GCSE passes and gives an indication of the impact of CoPE on traditional KS4 qualifications.

The distinction in this definition is important. Some young people in schools with a heavy focus on vocational qualifications may not even be entered for five traditional subject-based GCSEs, having their curriculum made up primarily of BTEC and similar qualifications. The impact of CoPE in this instance would be invisible as it would be impossible for the young person to achieve five GCSEs, regardless of CoPE's efficacy. The analysis of this measure is therefore necessarily an underestimate of the possible impact of CoPE. In essence, it measures only the impact in those schools with a broadly traditional curriculum offer.

Once again, there is a stark difference between the results in the 'thin usage' and 'wide usage' schools. In the 'thin usage' schools, CoPE is associated with a significantly lower likelihood of achieving the five GCSE threshold. The hypothesis about the nature of the CoPE cohort in this context outlined above holds here too. In the 'wide usage' schools, undertaking CoPE is associated with a significantly higher likelihood of reaching the threshold compared to similar young people in 'no CoPE' schools. This effect is estimated to be around a 5% increased likelihood of attaining five GCSEs at A* to C including English and Maths.

In summary, the impact of CoPE is again dependent on the context in which it is delivered. Young people undertaking CoPE in 'thin usage' schools are less likely to achieve five good GCSEs including English and Maths, whereas those in 'wide usage' schools are significantly more likely to do so. The suggested explanation developed above for the underperformance of the CoPE cohort in 'thin usage' schools holds here too.

3. Are there any identifiable subgroups of pupils (e.g. in terms of social deprivation or gender) for whom the impacts above are particularly marked or absent?

Quantitative analysis does indeed reveal a number of patterns within the data that provide a steer as to with which groups CoPE might most be effective. This is supported to some extent by qualitative evidence from the school visits.

Perhaps the most obvious difference is in regard to attainment in English at KS3. CoPE appears to have the strongest impact with those having the lowest attainment, as evidenced by the relative likelihood of this group meeting the various thresholds between 'wide usage' schools and 'no CoPE' schools. The proportion of this subgroup achieving, for example, a GCSE English pass at A* to C remains low overall, but it is around twice as high among those undertaking CoPE; a similar effect occurs with the five GCSE passes threshold. However, young people achieving higher outcomes at KS3 do also show significant impact from undertaking CoPE, such that their overall result profile is little different from the 'no CoPE' schools, despite the higher levels of educational challenge in schools offering CoPE.

As might be anticipated, the low KS3 attainment subgroup is closely correlated with the subgroup of young people with special educational needs. There is evidence that CoPE is particularly effective with this group in terms of the likelihood of a young person attaining a pass in GCSE English at A* to C, even once KS3 attainment is controlled for. However, there is no obvious effect in terms of the five GCSE pass threshold. This finding is triangulated by evidence from interviews with teaching staff during the school visits, where they found that CoPE was particularly suited to young people with special educational needs, due to the portfolio-based approach and high levels of personal attention that could be offered. In particular, one school drew strong attention for the usefulness of the CoPE approach for young people with autism and related conditions.

In general, young people from BME communities tend to outperform those from White communities at KS4; perhaps counterintuitively, having English as a second language is also a positive predictor for GCSE outcomes relative to KS3 attainment. Detailed analysis suggested that CoPE was particularly effective for young people from BME communities who had low KS3 attainment in English, perhaps suggesting that their language skills were particularly weak. For example, members of this subgroup undertaking CoPE in 'wide usage' schools had a pass rate for GCSE English at A* to C of 48.6%, compared to just 18.6% in 'no CoPE' schools; the comparable figures for the five GCSE pass threshold were 25.0% and 10.6% respectively. The effect was muted among those with higher KS3 attainment, but there was still an identifiable additional impact associated with undertaking CoPE.

The other subgroup for which CoPE appeared to have a particularly strong impact was that composed of young people who were eligible for free school meals – i.e. those living in low income households. This additional impact of undertaking CoPE was most strongly evident among those with low KS3 attainment, but it existed across the whole ability range. This was found for both the GCSE English pass rate and the five GCSE pass threshold, with the performance of young people eligible for free school meals undertaking CoPE in 'wide usage' schools being higher than their peers in 'no CoPE' schools across all KS3 attainment groups and both KS4 outcome measures.

The phenomenon of CoPE appearing to have a stronger effect among young people receiving free school meals and those from BME communities would bear additional research to better understand the mechanisms by which this might operate. In reality, there is a heavy overlap between the two groups as young people from BME communities are over-represented within the group receiving free school meals.

Teaching staff at two of the schools visited asserted that the CoPE pedagogic approach and assessment regime were more suited to females than males. There was, however, little support for this position from the quantitative data.

In summary, CoPE's positive effect on outcomes appears to be particularly strong for (a) those with low attainment in English as KS3 and specifically those with special educational needs

and/or from BME communities, and (b) those eligible for free school meals across the full KS3 attainment range. There was little evidence for a particular gender effect, despite the expectations of teaching staff involved in delivering CoPE.

4. Do pupils and staff identify relationships between CoPE and other KS4 study with respect to pupil engagement, attendance and motivation?

and

5. If so, what is the nature of experiences, perceptions, impressions and claims about such relationships?

As outlined in the report, the case study schools operated with highly managed selection processes drawing on a number of rationales, which ranged from using CoPE to make a '5 A*-C' GCSE outcome more likely for the student (and the school), to providing particular students with a programme that was likely to capitalise on their interests of learning preferences where mainstream courses were unlikely to find a positive or engaged response. This range of purposes is an important reminder that CoPE cannot be conceived as 'one thing'.

Most staff and students interviewed who were closely involved with CoPE thought that there was a directional and beneficial link between the pursuit of CoPE and pupil engagement, attendance, motivation and confidence. However, the teachers interviewed that had key responsibility for CoPE varied in how certain they were on this point, and roughly speaking may be placed on a continuum: at one end was a teacher who said it was *likely* that doing CoPE had a positive impact on engagement, attendance, motivation and confidence; whilst at the other was a teacher who was *certain* on this point and gave example after example of individual young people where various benefits of CoPE were, in his view, clearly evidenced.

Importantly, many of the accounts from staff and students highlighted that particular features, namely the systematic use of Plan-Do-Review and collaborative group work provided a mode of working that young people could (and did) transfer to other subjects and other contexts. Close behind these features was another, in that CoPE (and other ASDAN qualifications) had given many students their first taste of success and recognised achievement, and this had changed their more general orientation to study, including raised motivation and confidence.

In summary, the indicative case studies show that despite a relatively low public profile, CoPE is an important part of what the schools offer at KS4. It provides a range of supportive structures and practices for learners, and adds to the security of student engagement and the relative certainty of actual profiles of achievement. CoPE was also viewed as being very effective in

providing supportive structures for some students with learning difficulties. However, even between the case study schools, there was considerable variety in: the arrangements surrounding the provision of CoPE; its relationship to the rest of the KS4 curriculum; the extent to which it sparked creativity in the curriculum (for example via the setting up of events or opportunities that create new challenges for learners); and the extent to which it engaged in a meaningful sense with learners' 'outside interests'. At its best, CoPE appears to be a powerful vehicle for harnessing learner interest and professional commitment. Putting this together with the earlier discussion (see Section C), it is regrettable if CoPE has lost a recognised equivalence at GCSE through the category error of being considered 'vocational' in the terms of the Wolf Review (Wolf, 2011).

H. References

- Ball, S. (2008) *The Education Debate: Policy and Politics in the Twenty-First Century*. Bristol: Policy Press.
- Brown, P., Lauder, H. and Ashton D. (2011) *The global auction*. Oxford: Oxford University Press.
- Coffield, F. and Williamson, B. (2012) *From exam factories to communities of discovery: the democratic route*. London: Institute of Education, University of London.
- James, D. and Simmons, J. (2007) Alternative assessment for engagement in a climate of performativity: lessons from an English case study. *Assessment in Education: Principles, Policy and Practice* 14: 353-371.
- Fielding, M. and Moss, P. (2011) *Radical Education and the Common School: A democratic alternative*. Abingdon: Routledge.
- Institute of Education (2010) *Focus on results can make children do worse, study finds*. Available online at www.ioe.ac.uk/newsEvents/43212.html.
- Leitch, S. (2006) *Prosperity for all in the global economy: world class skills*. Final report. London: HM Treasury.
- Pring, R., Hayward, G., Hodgson, A., Johnson, J., Keep, E., Oancea, A., Rees, G., Spours, K. and Wilde, S. (2009) *Education for all: the future of education and training for 14-19 year olds*. Abingdon: Routledge.
- Raphael Reed, L., Croudace, C., Harrison, N., Baxter, A. & Last, K. (2007) *A sociocultural study of educational engagement in Bristol South parliamentary constituency*. Bristol: UWE/HEFCE.
- Reay, D., Crozier, G. and James, D. (2011) *White middle class identities and urban schooling*. Basingstoke/New York: Palgrave Macmillan.
- Tomlinson, M. (2004) *14-19 curriculum and qualifications reform – final report of the working group on 14-19 reform*. Annesley: DfES Publications.
- Torrance, H. (2009) Using assessment in education reform – policy, practice and future possibilities, in H. Daniels, H. Lauder and J. Porter (eds.) *Knowledge, values and educational policy – a critical perspective*. London/New York: Routledge.
- Watkins, C. (2010) Learning, performance and improvement (*INSI Research Matters* No. 34). London Centre for Leadership in Learning, Institute of Education, University of London.
- Wolf, A. (2011) *Review of vocational education* (known as the Wolf Report). Available online at www.education.gov.uk/publications/eOrderingDownload/The%20Wolf%20Report.pdf.
- Zhang, J. and Yu, K. (1998) What's the relative risk? A method of correcting the odds ratio in cohort studies of common outcomes. *Journal of the American Medical Association* 280: 1690-1.

Appendix I – approved project plan

Full title: The Impact of the pursuit of the Award Scheme Development and Accreditation Network's *Certificate of Personal Effectiveness* on GCSE attainment

Start date: 1st Sept 2011

End date: 31st March 2012

Research questions

The main purpose of the study is to assess whether the pursuit of the Certificate of Personal Effectiveness (CoPE) has a statistically-identifiable impact on other measures of success at Key Stage 4. Specifically, the core questions being addressed are:

- Do pupils who undertake CoPE achieve a higher grade at GCSE English Language than comparable pupils who do not?
- Are pupils who undertake CoPE more likely to achieve five GCSE passes than comparable pupils who do not?
- Are there any identifiable subgroups of pupils (e.g. in terms of social deprivation or gender) for whom the impacts above are particularly marked or absent?

In addition the research will address broader research questions, namely:

- Do pupils and staff identify relationships between CoPE and other KS4 study with respect to pupil engagement, attendance and motivation?
- If so, what is the nature of experiences, perceptions, impressions and claims about such relationships?

These broader questions will be addressed through the collection and analysis of qualitative data. The project analysis and reporting will integrate treatment of the core and broader research questions.

Sampling frame

The quantitative data will be drawn from the National Pupil Database (NPD) administered by the Department for Education. Specifically, linked data will be acquired for performance at Key Stages 2 to 4, as well as for pupil attendance during Key Stage 3. This will cover young people who

completed Key Stage 4 in the 2008/09, 2009/10 and 2010/11 academic years, comprising around 500,000 individuals in each year. Those attending independent schools and specialist facilities in the state sector will be removed, providing a dataset of young people attending mainstream education across a variety of maintained and other (e.g. academy) school types.

Qualitative data will be sought from six schools who are currently offering CoPE to their pupils. These are based on those identified by ASDAN and which have shown a willingness to participate in the study¹. These schools are drawn from five different locations and comprise a range of different organisational identities.

Timescale

- Initial data on KS2 and KS4 attainment was acquired from the NPD in December 2011, with additional data (on KS3 attainment and attendance) being acquired in January 2012.
- Researcher visits to the participating schools will be made in January and February 2012. The purpose of these visits will be to collect qualitative data, mainly in the form of interviews with key staff and groups of students.
- Quantitative analysis will be undertaken from December 2011 through to March 2012, with a short interim report being provided at the end of January 2012.
- A full report, including the qualitative analysis and further quantitative analysis, will be provided at the end of March 2012.

Quantitative data collection

The following data will be derived from the NPD for each pupil:

- An indicator of whether or not they pursued CoPE.
- Their result in GCSE English Language.
- The total number of GCSEs obtained at (1) A* to C, and (2) A* to G.
- English assessment at Key Stage 2 and Key Stage 3.
- Unauthorised absence record during Key Stage 3.
- Gender, ethnicity and disability.
- Eligibility for free school meals.
- Assessments of Special Educational Needs.
- Area measures of deprivation (e.g. IDACI).

¹ It had originally been hoped to include more schools within the study and to structure these around different locations and school types. It has not been possible to do this due to reluctance on the part of schools, so a convenience sample approach is now being used.

Research strands

Strand 1: whole sample

The key analysis will be to determine whether there are statistically significant differences between the GCSE attainment of students who have and have not pursued CoPE, given their prior performance (at KS2 and KS3) and attendance record (at KS3). A number of techniques will be used to assess this for each of the academic years in the sample, including chi-squared and ANOVA. Attempts will be made within the analyses to control for external factors such as the relative deprivation of the young person's home neighbourhood, using linear regression techniques. Furthermore, analysis will also be undertaken into the possible impact of demographic factors such as gender or ethnicity, to see whether CoPE has a particularly strong or weak effect for different groups.

Strand 2: paired sample

In order to further probe the possible impact of undertaking CoPE on GCSE outcomes, 200 pairs of young people with identical demographic and external factors and identical attainment at KS3 will be randomly isolated from the main dataset, where one has pursued CoPE and one has not. This will provide a complementary form of analysis to that outlined above, examining whether ostensibly similar individuals performed different at GCSE, based on whether or not they pursued CoPE. This is likely to provide a more 'human' form of analysis within the final report.

Strand 3: qualitative data

As part of the research team's visits to the sample schools, semi-structured interviews will be undertaken, ideally with (a) the Deputy Head with curriculum responsibility, (b) the teacher with lead responsibility for CoPE, and (c) two groups of up to five Year 11 pupils. The first will be pupils undertaking CoPE and the second will be pupils not doing so. This will provide evidence of perceptions of CoPE and shared beliefs or claims about its relationship to other study at KS4 on the part of both pupils and staff. It will also provide background information about the implementation of CoPE within the school, the experience of the learners and possible wider impacts (e.g. on engagement, motivation and attendance).

Management and costing

The project requires skilled and experienced researchers who can encompass both quantitative and qualitative analysis. The project will be managed by Neil Harrison (Senior Research Fellow,

Department of Education, UWE). His total time on the project will be 30 days, divided between fieldwork (15 days) and analysis/report preparation (15 days). A sub-contract will be prepared with Cardiff University to enable David James (Professor, SOCSI) to contribute 6 days to the project, divided between fieldwork (4 days) and analysis/report preparation (2 days). Kathryn Last (Research Fellow, Department of Education, UWE) will assist with fieldwork for five days and analysis for one day. Each of the 6 schools will receive a one-day visit from one researcher as a minimum. It is envisaged that half the schools will be at a distance that will necessitate overnight accommodation.

Appendix II – main dataset profile

Table 15: composition of main dataset by background variables

Variable	Group	Numbers	% of non-missing
Gender	Female	254,041	49.5%
	Male	259,573	50.5%
	Missing	19,311	-
SEN	Yes	119,403	23.2%
	No	394,211	76.8%
	Missing	19,311	-
FSM	Yes	68,193	12.8%
	No	464,732	77.2%
IDACI bottom 20%	Yes	116,574	22.0%
	No	413,348	78.0%
	Missing	3,003	-
KS3 Absentee	Yes	18,695	3.5%
	No	511,761	96.5%
	Missing	2,469	-
Ethnicity	White	441,636	82.9%
	BME	84,424	15.8%
	Unknown	6,865	1.3%
ESL	Yes	45,277	8.8%
	No	468,337	91.2%
	Missing	19,311	-

There were a number of noteworthy patterns within the variables outlined above:

- Males (27.7%) were more likely to have special educational needs than females (18.7%).
- Young people from the BME communities were more likely than White young people to be in receipt of free school meals (25.5% compared to 10.4%), live in a deprived neighbourhood (49.5% compared to 16.8%) and speak English as a second language (52.0% compared to 1.2%). They were also marginally more likely to have special educational needs (26.2% compared to 22.7%), but less likely to have been a persistent absentee (2.5% compared to 3.7%).
- Unsurprisingly, young people living in deprived neighbourhoods were more likely to receive free school meals (31.4%) than those in less deprived ones (7.6%). They were also more likely to have special educational needs (34.0% compared to 20.3%), to have been persistent absentees (6.0% compared to 2.8%) and to speak English as a second language (22.5% compared to 5.0%).

- Similarly, young people receiving free school meals were more likely than those from more affluent families to have special educational needs (40.3% compared to 20.8%), be persistent absentees (8.9% compared to 2.7%) and to speak English as a second language (21.2% compared to 7.0%).
- Young people speaking English as a second language were more likely to have special educational needs (26.7% compared to 22.9%), but less likely to have been persistent absentees (2.1% compared to 3.6%).
- Finally, young people with special educational needs were more likely to have been persistent absentees (8.0% compared to 2.1%).

These relationships speak for a complex set of interactions between ethnicity (and language), measures of family and neighbourhood deprivation and special educational needs. Gender was a relatively minor component, impacting only on the propensity to have special educational needs.

Key Stage 3 attainment

Table 16: Composition of main database, by KS3 attainment and background variables

KS3 English attainment	ALL	Gender		SEN		FSM		IDACI 20%	
		Female	Male	Yes	No	Yes	No	Yes	No
Below testable level	5.5	2.9	7.0	17.9	1.0	13.1	4.4	10.3	4.2
Level 3	3.3	2.1	4.2	9.1	1.4	6.6	2.8	5.5	2.6
Level 4	12.9	9.6	15.8	25.9	8.8	21.2	11.7	18.7	11.2
Level 5	41.4	40.5	43.1	36.2	43.5	41.9	41.4	43.3	40.9
Level 6	27.0	32.2	22.8	9.1	33.0	14.3	28.9	17.9	29.6
Level 7	9.8	12.8	7.1	1.8	12.4	2.8	10.8	4.3	11.4

KS3 English attainment	KS3 absentee		Ethnicity			ESL	
	Yes	No	White	BME	U/K	Yes	No
Below testable level	19.4	5.0	5.3	7.0	7.2	5.8	4.8
Level 3	8.5	3.1	3.2	3.6	3.7	3.8	3.1
Level 4	23.6	12.5	12.6	14.4	13.4	14.9	12.5
Level 5	37.0	41.6	41.2	42.7	40.2	44.4	41.6
Level 6	9.6	27.7	27.6	24.0	26.1	23.5	27.8
Level 7	1.9	10.1	10.1	8.3	9.4	7.6	10.1

78.2% of the individuals in the dataset achieved Level 5 or better at Key Stage 3, with the largest single group being those specifically achieving Level 5 (41.4%). Those achieving Level 5 or better were more likely to be female (85.5% compared to 73.0%), but less likely to be those with special educational needs (47.1% compared to 88.9%), those receiving free school meals (59.0% compared to 81.1%), those living in deprived neighbourhoods (65.5% compared to 81.9%), those who were persistent absentees (48.5% compared to 79.4%), those from BME communities (75.0% compared to 78.9%) and those speaking English as a second language (75.5% compared to 79.5%).

Key Stage 4 attainment

This report uses several measures of attainment at Key Stage 4, built around performance in GCSE English. Three are examined in detail below.

Table 17: KS4 outcomes, by background variables

KS4 attainment		ALL	Gender		SEN		FSM		IDACI 20%	
			Female	Male	Yes	No	Yes	No	Yes	No
GCSE English A* to G	Yes	97.7	98.5	97.4	93.3	99.4	94.9	98.1	96.0	98.4
	No	2.3	1.5	2.6	6.7	0.6	5.1	1.9	4.0	1.6
GCSE English A* to C	Yes	68.3	75.9	62.0	34.1	79.4	46.4	71.5	54.7	72.4
	No	31.7	24.1	38.0	65.9	20.6	53.6	28.5	45.3	27.6
5 GCSEs (A* to C) inc E+M	Yes	56.9	60.7	54.1	22.9	67.8	33.8	60.3	42.1	61.3
	No	43.1	39.3	45.9	77.1	32.2	66.2	39.7	57.9	38.7

KS4 attainment		KS3 absentee		Ethnicity			ESL	
		Yes	No	White	BME	U/K	Yes	No
GCSE English A* to G	Yes	83.0	98.3	97.7	98.2	93.4	98.7	97.9
	No	17.0	1.7	2.3	1.8	6.6	1.3	2.1
GCSE English A* to C	Yes	29.5	69.7	68.3	68.8	63.4	69.8	68.8
	No	70.5	30.3	31.7	31.2	36.6	30.2	31.2
5 GCSEs (A* to C) inc E+M	Yes	17.1	58.3	56.9	57.5	51.6	59.6	57.2
	No	82.9	41.7	43.1	42.5	48.4	40.4	42.8

Overall, attainment at KS4 shows a very similar set of relationships with the demographic variables as that at KS3. Females outperform males, while special educational needs, free school meals, living in a deprived neighbourhood and a persistent absenteeism were all markers for markedly lower outcomes across the measures used in this analysis.

The major change between KS3 and KS4 is that ethnicity and language background have switched their impact, with individuals from BME communities and those speaking English as a second language actually doing better (albeit narrowly) than White individuals and those speaking English as their first language across all three measures. At KS3, these were negatively associated with attainment.

The other analysis which is instructive at this stage is to compare attainment at KS3 with that at KS4 and this is presented below:

Table 18: KS4 outcomes, by KS3 attainment in English

KS3 attainment	GCSE English A* to G		GCSE English A* to C		5 GCSEs (A* to C) inc E+M	
	Yes	No	Yes	No	Yes	No
< Level 3	80.1	19.9	2.2	97.8	1.3	98.7
Level 3	92.8	7.2	4.5	95.5	2.0	98.0
Level 4	96.6	3.4	19.2	80.8	9.9	90.1
Level 5	99.0	1.0	70.9	29.1	52.3	47.7
Level 6	99.8	0.2	97.6	2.4	89.6	10.4
Level 7	99.9	0.1	99.7	0.3	98.0	2.0

Unsurprisingly, there is a strong association between attainment at KS3 and that at KS4, with the latter being a strong predictor for the former. For example, 99.7% of those achieving Level 7 in English at Key Stage 3 achieved GCSE English at A* to C, compared to just 4.5% of those achieving Level 3. In particular, there is a significant leap in outcomes between those achieving Level 4 at KS3 and those achieving Level 5.

Table 19: GCSE English grade, by KS3 attainment in English

KS3 attainment	GCSE English Grade									
	A*	A	B	C	D	E	F	G	U	n/a
< Level 3	0.0	0.0	0.2	1.9	10.3	27.4	28.0	12.7	5.5	13.9
Level 3	0.0	0.0	0.1	4.3	23.9	39.8	19.8	5.2	2.5	4.4
Level 4	0.0	0.0	0.8	18.2	42.1	26.6	7.1	1.9	1.2	2.0
Level 5	0.1	2.1	17.2	51.5	23.1	4.1	0.7	0.3	0.4	0.5
Level 6	3.6	23.8	46.2	24.0	1.9	0.2	0.0	0.0	0.1	0.1
Level 7	29.5	46.9	20.9	2.4	0.1	0.0	0.0	0.0	0.0	0.1

This pattern is carried through into individual grades for GCSE English – please note that there are some minor discrepancies between this data and that presented above for the A* to C and A* to G groups which are due to rounding errors and that ‘n/a’ represents those individuals who did not attempt GCSE English.

Who takes CoPE?

As described above, a total of 14,690 individuals within the dataset undertook CoPE, with 5,213 completing the Level 1 variant and 9,477 completing the Level 2 variant.

Table 20: CoPE cohort by background variables

Variable	Group	CoPE Level 1	% within cohort	CoPE Level 2	% within cohort
ALL		5,213	1.0%	9,477	1.8%
Gender	Female	1,852	0.7%	4,761	1.9%
	Male	3,133	1.2%	4,290	1.7%
SEN	Yes	3,802	3.2%	4,022	3.4%
	No	1,183	0.7%	5,029	1.9%
FSM	Yes	1,345	2.0%	1,792	2.6%
	No	3,868	0.8%	7,685	1.7%
IDACI 20%	Yes	1,668	1.4%	2,794	2.4%
	No	3,513	0.8%	6,657	1.6%
KS3 Absentee	Yes	371	2.0%	409	2.2%
	No	4,831	0.9%	9,040	1.8%
Ethnicity	White	4,508	1.0%	7,938	1.8%
	BME	649	0.8%	1,420	1.7%
	Unknown	56	0.8%	119	1.7%
ESL	Yes	4,647	1.0%	8,233	1.8%
	No	338	0.7%	818	1.8%
KS3 attainment	< Level 3	2,145	7.3%	1,246	4.2%
	Level 3	691	4.0%	685	3.9%
	Level 4	1,394	2.0%	2,085	3.0%
	Level 5	903	0.4%	3,727	1.7%
	Level 6	76	0.1%	1,310	0.9%
	Level 7	4	0.0%	424	0.8%

[Note : individual numbers may not sum to the total numbers given in the first row of the table due to missing data. This also impacts in a minor way on the percentages given.]

There were some clear patterns in the types of individuals who completed CoPE, although these were not as pronounced as might, perhaps, be anticipated. Relative to the cohort as a whole, individuals with special education needs, those receiving free school meals, those living in areas of deprivation and those who had been persistent absentees were more likely to have completed CoPE at both Levels. Ethnicity and first language were not associated with completing CoPE and there was a mixed pattern by gender, with males being over-represented among those completing CoPE at Level 1 and under-represented at Level 2.

There is also a strong association between attainment at KS3 and CoPE, with those with lower attainment being more likely to complete CoPE at either Level. Specifically, Level 1 was more likely to be completed by individuals with lower attainment at KS3 than Level 2. Even within this broad context, it is noteworthy that 1,814 individuals with above average attainment at KS3 (i.e. Levels 6 and 7) completed one form of CoPE, joined by 4,630 individuals with average attainment (i.e. Level 5). Therefore, although CoPE was disproportionately common among individuals with lower attainment, it was nevertheless well represented at the higher end of the attainment scale.

Appendix III : methodological note on ‘odds ratio’

The main measure of impact (technically ‘effect size’) used in this report is the ‘odds ratio’. This is commonly used in the field of applied statistics and especially in conjunction with logistic regression analysis. For example, it is often used within medical research to quantify the effects of a particular treatment on patients when there are many different potential factors that may partly determine their odds of recovery.

However, the odds ratio is not necessarily a measure that is intuitive to a general readership and there are dangers of misinterpretation. In particular, while it is linked to concepts such as probability and likelihood, it is not synonymous with them. The purpose of this note is to provide some clarity about the measure and the interpretation of the results reported in this study.

The ‘odds’ of something occurring is derived from the probability of it occurring divided by the probability of it not occurring. For example, the **probability** of pulling a red ball from a bag containing balls of the seven colours of the rainbow would be one-in-seven or **0.143**. However, the **odds** would be voiced (e.g. in gambling parlance) as “six-to-one”. This can be mathematically calculated as $0.143 / (1 - 0.143) = 0.143 / 0.857 = \mathbf{0.167}$.

An odds ratio is a representation of the relative difference in odds between two groups. For example, assume that individuals eligible for free school meals have odds of 0.35 of attaining a particular qualification, compared to those are not eligible, who have odds of 0.2. The **odds ratio** in this example would be $0.35 / 0.2 = \mathbf{1.75}$.

At the simplest level, odds ratios can be interpreted in respect of whether they are greater or less than 1. An odds ratio of one means that the odds are identical for the two groups, so there is no effect from being a member of one rather than another. An odds ratio of over one can be interpreted as meaning that being a member of the group has a positive impact, while an odds ratio of less than one represents a negative impact. So, in the example given in the paragraph above, the odds ratio of 1.75 signifies that eligibility for free school meals has a positive impact on attainment. It is also valid to compare two odds ratios within the same analysis, describing one has having a greater or less impact than another (e.g. 1.86 would specify a greater positive effect than 1.75).

However, it is not accurate to use odds ratios to make statements about how much more likely or probable an outcome is. Continuing with the example, an odds ratio of 1.75 does not mean that the outcome is 75% more likely for young people eligible for free school meals or any similar construction. This type of measure is correctly referred to as the ‘relative risk’ and it is not (generally) the same as the odds ratio. Unfortunately, the logistic regression procedure produces

results that are expressed in the latter and not the former, which is more easily interpreted in common speech.

Where the outcome is rare (a threshold of a probability of 10% is often used), then the odds ratio is a good estimate for the relative risk. However, as the probability rises, the odds ratio begins to overestimate the relative risk, potentially to a very high degree. In other words, for relatively common outcomes (like examination passes), the odds ratios produced by the logistic regression analyses in this report are considerably higher than the everyday meaning of “more likely”. This is an extremely common error in the presentation of statistics, especially in journalistic contexts.

There is no generally accepted means of converting an odds ratio from a logistic regression analysis into a relative risk. This report has used Zhang and Yu’s (1998) estimation to provide a more readily-interpreted figure for how much more likely outcomes are for those individuals undertaking CoPE – i.e. the relative risk. It is important to bear in mind that this is just an estimate and that Zhang and Yu’s work has come under criticism. However, it is a better figure for general public understanding than the raw odds ratio.

For example, the **odds ratio** of **1.42** noted for individuals undertaking CoPE in wide schools in relation to passing GCSE English at grades A* to C translates to an estimated **relative risk** of **1.10**. This can accurately be communicated as this group being “an estimated 10% more likely” to achieve the particular outcome compared to those not undertaking CoPE.

Appendix IV : Subgroup regression analyses

Low KS3 attainment

Table 21: Logistic regression model for GCSE English A* to C, for low KS3 attainment subgroup

Variable	Group	B	SE	OR	p
KS3 English test score (continuous)		1.912	.032	6.767	.000
Gender (ref = Male)	Female	.092	.021	1.096	.000
SEN (ref = No)	Yes	-.495	.021	.610	.000
FSM (ref = No)	Yes	-.211	.027	.810	.000
IDACI score (continuous)		-.261	.060	.771	.000
KS3 absentee (ref = No)	Yes	-.666	.053	.514	.000
Ethnicity (ref = White)	BME	.396	.035	1.486	.000
	Unknown	.051	.093	1.052	.587
ESL (ref = No)	Yes	.413	.041	1.512	.000
School/CoPE type (ref = No CoPE)	Thin – Not CoPE	-.060	.021	.942	.005
	Thin – CoPE	-.282	.075	.754	.000
	Wide – Not CoPE	.159	.112	1.172	.157
	Wide – CoPE	.763	.098	2.145	.000
Constant		-9.972	.147	.000	.000

$R^2 = 0.140$

Table 22: Logistic regression model for 5 GCSE passes at A* to C inc. E&M, for low KS3 subgroup

Variable	Group	B	SE	OR	p
KS3 English test score (continuous)		2.035	.045	7.652	.000
Gender (ref = Male)	Female	-.521	.030	.594	.000
SEN (ref = No)	Yes	-.594	.029	.552	.000
FSM (ref = No)	Yes	-.198	.038	.820	.000
IDACI score (continuous)		-.246	.081	.782	.002
KS3 absentee (ref = No)	Yes	-.985	.090	.373	.000
Ethnicity (ref = White)	BME	.331	.047	1.392	.000
	Unknown	-.130	.135	.878	.336
ESL (ref = No)	Yes	.596	.053	1.815	.000
School/CoPE type (ref = No CoPE)	Thin – Not CoPE	.002	.028	1.002	.943
	Thin – CoPE	-.541	.121	.582	.000
	Wide – Not CoPE	-.271	.177	.762	.126
	Wide – CoPE	.585	.132	1.794	.000
Constant		-11.167	.209	.000	.000

$R^2 = 0.131$

Average KS3 attainment

Table 23: Logistic regression model for GCSE English A* to C, for average KS3 attainment subgroup

Variable	Group	B	SE	OR	p
KS3 English test score (continuous)		3.076	.020	21.671	.000
Gender (ref = Male)	Female	.134	.011	1.143	.000
SEN (ref = No)	Yes	-.605	.012	.546	.000
FSM (ref = No)	Yes	-.302	.016	.739	.000
IDACI score (continuous)		-.587	.032	.556	.000
Ethnicity (ref = White)	BME	.322	.020	1.380	.000
	Unknown	-.020	.047	.980	.669
KS3 absentee (ref = No)	Yes	-.847	.028	.429	.000
ESL (ref = No)	Yes	.436	.025	1.546	.000
School/CoPE type (ref = No CoPE)	Thin – Not CoPE	-.001	.011	.999	.908
	Thin – CoPE	-.477	.049	.620	.000
	Wide – Not CoPE	-.090	.059	.914	.127
	Wide – CoPE	.189	.063	1.209	.003
Constant		-15.663	.111	.000	.000

$R^2 = 0.230$

Table 24: Logistic regression model for 5 GCSE passes at A* to C inc. E&M, for average KS3 subgroup

Variable	Group	B	SE	OR	p
KS3 English test score (continuous)		2.716	.018	15.122	.000
Gender (ref = Male)	Female	-.512	.010	.599	.000
SEN (ref = No)	Yes	-.684	.012	.504	.000
FSM (ref = No)	Yes	-.293	.015	.746	.000
IDACI score (continuous)		-.640	.030	.527	.000
KS3 absentee (ref = No)	Yes	-1.027	.032	.358	.000
Ethnicity (ref = White)	BME	.212	.018	1.236	.000
	Unknown	-.055	.044	.946	.208
ESL (ref = No)	Yes	.614	.022	1.849	.000
School/CoPE type (ref = No CoPE)	Thin – Not CoPE	.012	.010	1.012	.237
	Thin – CoPE	-.761	.054	.467	.000
	Wide – Not CoPE	-.106	.056	.900	.058
	Wide – CoPE	.060	.056	1.062	.281
Constant		-14.334	.100	.000	.000

$R^2 = 0.223$

High KS3 attainment

Table 25: Logistic regression model for GCSE English A* to C, for high KS3 attainment subgroup

Variable	Group	B	SE	OR	p
KS3 English test score (continuous)		2.524	.064	12.474	.000
Gender (ref = Male)	Female	.258	.036	1.295	.000
SEN (ref = No)	Yes	-1.170	.043	.310	.000
FSM (ref = No)	Yes	-.449	.058	.638	.000
IDACI score (continuous)		-1.353	.109	.259	.000
KS3 absentee (ref = No)	Yes	-1.426	.078	.240	.000
Ethnicity (ref = White)	BME	.324	.068	1.382	.000
	Unknown	-.044	.154	.957	.776
ESL (ref = No)	Yes	.742	.099	2.100	.000
School/CoPE type (ref = No CoPE)	Thin – Not CoPE	.009	.038	1.009	.817
	Thin – CoPE	-.853	.206	.426	.000
	Wide – Not CoPE	-.016	.213	.984	.941
	Wide – CoPE	.638	.273	1.893	.019
Constant		-11.895	.404	.000	.000

$R^2 = 0.135$

Table 26: Logistic regression model for 5 GCSE passes at A* to C inc. E&M, for high KS3 subgroup

Variable	Group	B	SE	OR	p
KS3 English test score (continuous)		1.957	.026	7.079	.000
Gender (ref = Male)	Female	-.617	.019	.539	.000
SEN (ref = No)	Yes	-.953	.025	.386	.000
FSM (ref = No)	Yes	-.446	.031	.640	.000
IDACI score (continuous)		-1.216	.056	.296	.000
KS3 absentee (ref = No)	Yes	-1.197	.053	.302	.000
Ethnicity (ref = White)	BME	.206	.033	1.228	.000
	Unknown	-.026	.079	.975	.746
ESL (ref = No)	Yes	.690	.046	1.993	.000
School/CoPE type (ref = No CoPE)	Thin – Not CoPE	-.041	.018	.960	.027
	Thin – CoPE	-.713	.125	.490	.000
	Wide – Not CoPE	-.183	.103	.833	.076
	Wide – CoPE	.085	.107	1.089	.423
Constant		-9.519	.168	.000	.000

$R^2 = 0.145$

Female

Table 27: Logistic regression model for GCSE English A* to C, for female subgroup

Variable	Group	B	SE	OR	p
KS3 English attainment (ref = Level 5)	<Level 3	-4.551	.097	.011	.000
	Level 3	-3.746	.070	.024	.000
	Level 4	-2.225	.018	.108	.000
	Level 6	2.704	.026	14.945	.000
	Level 7	4.808	.117	122.428	.000
SEN (ref = No)	Yes	-.860	.015	.423	.000
FSM (ref = No)	Yes	-.364	.018	.695	.000
IDACI score (continuous)		-.942	.038	.390	.000
KS3 absentee (ref = No)	Yes	-.935	.030	.393	.000
Ethnicity (ref = White)	BME	.477	.024	1.611	.000
	Unknown	-.014	.058	.986	.807
ESL (ref = No)	Yes	.389	.030	1.476	.000
School/CoPE type (ref = No CoPE)	Thin – Not CoPE	-.031	.013	.969	.019
	Thin – CoPE	-.574	.053	.563	.000
	Wide – Not CoPE	-.139	.075	.871	.066
	Wide – CoPE	.364	.073	1.439	.000
Constant		1.441	.013	4.223	.000

$R^2 = 0.578$

Table 28: Logistic regression model for 5 GCSE passes at A* to C inc. E&M, for female subgroup

Variable	Group	B	SE	OR	p
KS3 English attainment (ref = Level 5)	<Level 3	-4.193	.145	.015	.000
	Level 3	-4.071	.143	.017	.000
	Level 4	-2.281	.027	.102	.000
	Level 6	1.914	.013	6.782	.000
	Level 7	3.610	.038	36.962	.000
SEN (ref = No)	Yes	-.937	.015	.392	.000
FSM (ref = No)	Yes	-.378	.017	.685	.000
IDACI score (continuous)		-1.019	.033	.361	.000
KS3 absentee (ref = No)	Yes	-1.162	.034	.313	.000
Ethnicity (ref = White)	BME	.309	.020	1.361	.000
	Unknown	-.067	.049	.935	.168
ESL (ref = No)	Yes	.614	.025	1.847	.000
School/CoPE type (ref = No CoPE)	Thin – Not CoPE	-.004	.011	.996	.720
	Thin – CoPE	-.848	.059	.428	.000
	Wide – Not CoPE	-.140	.066	.869	.034
	Wide – CoPE	.158	.061	1.171	.009
Constant		.317	.011	1.373	.000

$R^2 = 0.529$

Male

Table 29: Logistic regression model for GCSE English A* to C, for female subgroup

Variable	Group	B	SE	OR	p
KS3 English attainment (ref = Level 5)	<Level 3	-4.421	.062	.012	.000
	Level 3	-3.693	.051	.025	.000
	Level 4	-2.128	.015	.119	.000
	Level 6	2.671	.026	14.455	.000
	Level 7	5.111	.157	165.825	.000
SEN (ref = No)	Yes	-.757	.013	.469	.000
FSM (ref = No)	Yes	-.316	.018	.729	.000
IDACI score (continuous)		-.780	.035	.459	.000
KS3 absentee (ref = No)	Yes	-.853	.036	.426	.000
Ethnicity (ref = White)	BME	.281	.021	1.324	.000
	Unknown	-.024	.052	.976	.642
ESL (ref = No)	Yes	.411	.026	1.508	.000
School/CoPE type (ref = No CoPE)	Thin – Not CoPE	-.023	.012	.977	.050
	Thin – CoPE	-.600	.059	.549	.000
	Wide – Not CoPE	.028	.064	1.029	.660
	Wide – CoPE	.336	.073	1.400	.000
Constant		1.131	.011	3.100	.000

$R^2 = 0.602$

Table 30: Logistic regression model for 5 GCSE passes at A* to C inc. E&M, for male subgroup

Variable	Group	B	SE	OR	p
KS3 English attainment (ref = Level 5)	<Level 3	-4.432	.084	.012	.000
	Level 3	-3.892	.074	.020	.000
	Level 4	-2.170	.017	.114	.000
	Level 6	2.141	.017	8.506	.000
	Level 7	3.966	.068	52.755	.000
SEN (ref = No)	Yes	-.841	.013	.431	.000
FSM (ref = No)	Yes	-.334	.018	.716	.000
IDACI score (continuous)		-.928	.034	.395	.000
KS3 absentee (ref = No)	Yes	-1.023	.040	.360	.000
Ethnicity (ref = White)	BME	.191	.020	1.211	.000
	Unknown	-.072	.050	.931	.150
ESL (ref = No)	Yes	.541	.025	1.717	.000
School/CoPE type (ref = No CoPE)	Thin – Not CoPE	-.027	.011	.974	.019
	Thin – CoPE	-.887	.067	.412	.000
	Wide – Not CoPE	-.130	.062	.879	.036
	Wide – CoPE	.083	.068	1.087	.221
Constant		.628	.010	1.874	.000

$R^2 = 0.578$

Special educational needs

Table 31: Logistic regression model for GCSE English A* to C, for SEN subgroup

Variable	Group	B	SE	OR	p
KS3 English attainment (ref = Level 5)	<Level 3	-4.552	.065	.011	.000
	Level 3	-3.543	.055	.029	.000
	Level 4	-2.019	.019	.133	.000
	Level 6	2.323	.039	10.209	.000
	Level 7	3.755	.166	42.728	.000
Gender (ref = Male)	Female	.155	.017	1.167	.000
FSM (ref = No)	Yes	-.261	.022	.770	.000
IDACI score (continuous)		-.734	.048	.480	.000
KS3 absentee (ref = No)	Yes	-.715	.036	.489	.000
Ethnicity (ref = White)	BME	.358	.028	1.430	.000
	Unknown	.002	.075	1.002	.974
ESL (ref = No)	Yes	.461	.034	1.586	.000
School/CoPE type (ref = No CoPE)	Thin – Not CoPE	-.036	.017	.964	.034
	Thin – CoPE	-.419	.059	.658	.000
	Wide – Not CoPE	-.136	.084	.873	.106
	Wide – CoPE	.563	.087	1.756	.000
Constant		.317	.017	1.372	.000

$R^2 = 0.539$

Table 32: Logistic regression model for 5 GCSE passes at A* to C inc. E&M, for SEN subgroup

Variable	Group	B	SE	OR	p
KS3 English attainment (ref = Level 5)	<Level 3	-4.661	.099	.009	.000
	Level 3	-3.803	.090	.022	.000
	Level 4	-2.100	.026	.122	.000
	Level 6	1.914	.026	6.782	.000
	Level 7	3.280	.086	26.585	.000
Gender (ref = Male)	Female	-.434	.018	.648	.000
FSM (ref = No)	Yes	-.315	.025	.730	.000
IDACI score (continuous)		-.714	.053	.490	.000
KS3 absentee (ref = No)	Yes	-.916	.044	.400	.000
Ethnicity (ref = White)	BME	.155	.029	1.168	.000
	Unknown	-.093	.082	.911	.257
ESL (ref = No)	Yes	.696	.035	2.006	.000
School/CoPE type (ref = No CoPE)	Thin – Not CoPE	-.024	.018	.976	.186
	Thin – CoPE	-.784	.078	.456	.000
	Wide – Not CoPE	-.298	.095	.742	.002
	Wide – CoPE	.177	.090	1.193	.049
Constant		-.267	.018	.765	.000

$R^2 = 0.480$

No special educational needs

Table 33: Logistic regression model for GCSE English A* to C, for no SEN subgroup

Variable	Group	B	SE	OR	p
KS3 English attainment (ref = Level 5)	<Level 3	-4.248	.088	.014	.000
	Level 3	-3.890	.063	.020	.000
	Level 4	-2.243	.014	.106	.000
	Level 6	2.772	.021	15.996	.000
	Level 7	5.201	.113	181.511	.000
Gender (ref = Male)	Female	.270	.010	1.310	.000
FSM (ref = No)	Yes	-.378	.016	.686	.000
IDACI score (continuous)		-.891	.031	.410	.000
KS3 absentee (ref = No)	Yes	-1.014	.029	.363	.000
Ethnicity (ref = White)	BME	.372	.020	1.450	.000
	Unknown	-.023	.045	.978	.615
ESL (ref = No)	Yes	.368	.024	1.445	.000
School/CoPE type (ref = No CoPE)	Thin – Not CoPE	-.023	.010	.977	.028
	Thin – CoPE	-.714	.052	.490	.000
	Wide – Not CoPE	.008	.061	1.008	.895
	Wide – CoPE	.237	.063	1.268	.000
Constant		1.173	.010	3.231	.000

$R^2 = 0.485$

Table 34: Logistic regression model for 5 GCSE passes at A* to C inc. E&M, for no SEN subgroup

Variable	Group	B	SE	OR	p
KS3 English attainment (ref = Level 5)	<Level 3	-3.968	.108	.019	.000
	Level 3	-4.091	.096	.017	.000
	Level 4	-2.264	.018	.104	.000
	Level 6	2.011	.011	7.468	.000
	Level 7	3.769	.036	43.320	.000
Gender (ref = Male)	Female	-.362	.009	.697	.000
FSM (ref = No)	Yes	-.372	.014	.689	.000
IDACI score (continuous)		-1.035	.027	.355	.000
KS3 absentee (ref = No)	Yes	-1.187	.031	.305	.000
Ethnicity (ref = White)	BME	.278	.016	1.321	.000
	Unknown	-.061	.039	.941	.113
ESL (ref = No)	Yes	.534	.021	1.706	.000
School/CoPE type (ref = No CoPE)	Thin – Not CoPE	-.014	.009	.987	.127
	Thin – CoPE	-.903	.053	.405	.000
	Wide – Not CoPE	-.086	.052	.918	.099
	Wide – CoPE	.109	.052	1.115	.036
Constant		.668	.009	1.950	.000

$R^2 = 0.449$

Eligible for free school meals

Table 35: Logistic regression model for GCSE English A* to C, for FSM subgroup

Variable	Group	B	SE	OR	p
KS3 English attainment (ref = Level 5)	<Level 3	-4.496	.108	.011	.000
	Level 3	-3.565	.086	.028	.000
	Level 4	-2.016	.027	.133	.000
	Level 6	2.447	.051	11.551	.000
	Level 7	4.176	.260	65.110	.000
Gender (ref = Male)	Female	.203	.022	1.225	.000
SEN (ref = No)	Yes	-.704	.023	.494	.000
IDACI score (continuous)		-.079	.058	.924	.173
KS3 absentee (ref = No)	Yes	-.737	.043	.478	.000
Ethnicity (ref = White)	BME	.443	.032	1.557	.000
	Unknown	.125	.094	1.133	.185
ESL (ref = No)	Yes	.488	.036	1.629	.000
School/CoPE type (ref = No CoPE)	Thin – Not CoPE	-.048	.023	.953	.035
	Thin – CoPE	-.316	.093	.729	.001
	Wide – Not CoPE	-.015	.116	.985	.894
	Wide – CoPE	.623	.113	1.864	.000
Constant		.440	.029	1.553	.000

$R^2 = 0.585$

Table 36: Logistic regression model for 5 GCSE passes at A* to C inc. E&M, for FSM subgroup

Variable	Group	B	SE	OR	p
KS3 English attainment (ref = Level 5)	<Level 3	-4.738	.178	.009	.000
	Level 3	-3.653	.130	.026	.000
	Level 4	-2.058	.035	.128	.000
	Level 6	1.846	.031	6.335	.000
	Level 7	3.171	.104	23.843	.000
Gender (ref = Male)	Female	-.363	.022	.696	.000
SEN (ref = No)	Yes	-.827	.025	.437	.000
IDACI score (continuous)		.121	.058	1.129	.036
KS3 absentee (ref = No)	Yes	-.879	.050	.415	.000
Ethnicity (ref = White)	BME	.336	.031	1.400	.000
	Unknown	.122	.093	1.130	.186
ESL (ref = No)	Yes	.638	.034	1.893	.000
School/CoPE type (ref = No CoPE)	Thin – Not CoPE	-.014	.023	.986	.536
	Thin – CoPE	-.615	.114	.541	.000
	Wide – Not CoPE	-.124	.120	.883	.302
	Wide – CoPE	.467	.109	1.596	.000
Constant		-.181	.029	.835	.000

$R^2 = 0.524$

Not eligible for free school meals

Table 37: Logistic regression model for GCSE English A* to C, for no FSM subgroup

Variable	Group	B	SE	OR	p
KS3 English attainment (ref = Level 5)	<Level 3	-4.436	.060	.012	.000
	Level 3	-3.742	.047	.024	.000
	Level 4	-2.195	.013	.111	.000
	Level 6	2.715	.020	15.108	.000
	Level 7	4.993	.100	147.379	.000
Gender (ref = Male)	Female	.251	.009	1.286	.000
SEN (ref = No)	Yes	-.818	.011	.441	.000
IDACI score (continuous)		-1.025	.029	.359	.000
KS3 absentee (ref = No)	Yes	-.949	.027	.387	.000
Ethnicity (ref = White)	BME	.351	.018	1.421	.000
	Unknown	-.038	.042	.963	.375
ESL (ref = No)	Yes	.318	.024	1.375	.000
School/CoPE type (ref = No CoPE)	Thin – Not CoPE	-.022	.010	.978	.021
	Thin – CoPE	-.642	.044	.526	.000
	Wide – Not CoPE	-.044	.054	.957	.412
	Wide – CoPE	.277	.058	1.319	.000
Constant		1.209	.010	3.351	.000

$R^2 = 0.587$

Table 38: Logistic regression model for 5 GCSE passes at A* to C inc. E&M, for no FSM subgroup

Variable	Group	B	SE	OR	p
KS3 English attainment (ref = Level 5)	<Level 3	-4.287	.080	.014	.000
	Level 3	-4.018	.076	.018	.000
	Level 4	-2.240	.016	.106	.000
	Level 6	2.012	.011	7.477	.000
	Level 7	3.753	.035	42.637	.000
Gender (ref = Male)	Female	-.373	.008	.688	.000
SEN (ref = No)	Yes	-.892	.011	.410	.000
IDACI score (continuous)		-1.182	.026	.307	.000
KS3 absentee (ref = No)	Yes	-1.158	.030	.314	.000
Ethnicity (ref = White)	BME	.238	.016	1.269	.000
	Unknown	-.089	.038	.915	.018
ESL (ref = No)	Yes	.504	.021	1.655	.000
School/CoPE type (ref = No CoPE)	Thin – Not CoPE	-.015	.009	.985	.071
	Thin – CoPE	-.905	.048	.405	.000
	Wide – Not CoPE	-.135	.049	.874	.006
	Wide – CoPE	.056	.049	1.058	.256
Constant		.709	.009	2.032	.000

$R^2 = 0.541$

From a White community

Table 39: Logistic regression model for GCSE English A* to C, for White subgroup

Variable	Group	B	SE	OR	p
KS3 English attainment (ref = Level 5)	<Level 3	-4.443	.060	.012	.000
	Level 3	-3.743	.048	.024	.000
	Level 4	-2.197	.013	.111	.000
	Level 6	2.688	.020	14.708	.000
	Level 7	4.964	.101	143.202	.000
Gender (ref = Male)	Female	.226	.009	1.253	.000
SEN (ref = No)	Yes	-.812	.011	.444	.000
FSM (ref = No)	Yes	-.408	.015	.665	.000
IDACI score (continuous)		-1.004	.029	.366	.000
KS3 absentee (ref = No)	Yes	-.890	.025	.411	.000
ESL (ref = No)	Yes	.600	.044	1.822	.000
School/CoPE type (ref = No CoPE)	Thin – Not CoPE	-.007	.010	.993	.484
	Thin – CoPE	-.543	.043	.581	.000
	Wide – Not CoPE	-.060	.052	.942	.251
	Wide – CoPE	.288	.055	1.334	.000
Constant		1.206	.010	3.339	.000

$R^2 = 0.609$

Table 40: Logistic regression model for 5 GCSE passes at A* to C inc. E&M, for White subgroup

Variable	Group	B	SE	OR	p
KS3 English attainment (ref = Level 5)	<Level 3	-4.311	.081	.013	.000
	Level 3	-3.950	.075	.019	.000
	Level 4	-2.260	.017	.104	.000
	Level 6	2.006	.011	7.432	.000
	Level 7	3.723	.035	41.403	.000
Gender (ref = Male)	Female	-.394	.009	.674	.000
SEN (ref = No)	Yes	-.885	.011	.413	.000
FSM (ref = No)	Yes	-.439	.015	.645	.000
IDACI score (continuous)		-1.159	.027	.314	.000
KS3 absentee (ref = No)	Yes	-1.080	.028	.340	.000
ESL (ref = No)	Yes	.659	.040	1.934	.000
School/CoPE type (ref = No CoPE)	Thin – Not CoPE	.004	.009	1.004	.678
	Thin – CoPE	-.841	.048	.431	.000
	Wide – Not CoPE	-.111	.048	.895	.022
	Wide – CoPE	.108	.049	1.114	.028
Constant		.706	.009	2.026	.000

$R^2 = 0.562$

From a BME community

Table 41: Logistic regression model for GCSE English A* to C, for BME subgroup

Variable	Group	B	SE	OR	p
KS3 English attainment (ref = Level 5)	<Level 3	-4.520	.115	.011	.000
	Level 3	-3.556	.085	.029	.000
	Level 4	-2.022	.027	.132	.000
	Level 6	2.670	.055	14.435	.000
	Level 7	4.748	.268	115.365	.000
Gender (ref = Male)	Female	.340	.022	1.405	.000
SEN (ref = No)	Yes	-.759	.024	.468	.000
FSM (ref = No)	Yes	-.170	.025	.843	.000
IDACI score (continuous)		-.269	.058	.764	.000
KS3 absentee (ref = No)	Yes	-.931	.066	.394	.000
ESL (ref = No)	Yes	.288	.023	1.334	.000
School/CoPE type (ref = No CoPE)	Thin – Not CoPE	-.127	.023	.881	.000
	Thin – CoPE	-.822	.109	.440	.000
	Wide – Not CoPE	.133	.154	1.143	.387
	Wide – CoPE	.774	.150	2.169	.000
Constant		1.254	.029	3.503	.000

$R^2 = 0.574$

Table 42: Logistic regression model for 5 GCSE passes at A* to C inc. E&M, for BME subgroup

Variable	Group	B	SE	OR	p
KS3 English attainment (ref = Level 5)	<Level 3	-4.580	.173	.010	.000
	Level 3	-3.854	.138	.021	.000
	Level 4	-2.002	.031	.135	.000
	Level 6	1.917	.028	6.799	.000
	Level 7	3.669	.099	39.219	.000
Gender (ref = Male)	Female	-.250	.020	.778	.000
SEN (ref = No)	Yes	-.891	.023	.410	.000
FSM (ref = No)	Yes	-.186	.023	.830	.000
IDACI score (continuous)		-.309	.051	.734	.000
KS3 absentee (ref = No)	Yes	-1.194	.072	.303	.000
ESL (ref = No)	Yes	.480	.020	1.617	.000
School/CoPE type (ref = No CoPE)	Thin – Not CoPE	-.117	.021	.890	.000
	Thin – CoPE	-1.017	.123	.362	.000
	Wide – Not CoPE	-.226	.141	.798	.108
	Wide – CoPE	.275	.123	1.316	.026
Constant		.631	.026	1.880	.000

$R^2 = 0.531$

Appendix V : interview schedules

For all interviews, start with a quick summary of the purpose of the study. Mention ethical approval by UWE and reassure about total anonymity in any resulting report. Check OK to record and reassure that device can be switched off at any time if requested.

A. Interview with Curriculum Deputy or equivalent, and with teacher who has lead responsibility for CoPE

- a. How long has the school been doing CoPE?
- b. How would you describe CoPE?
- c. Does it have particular strengths and/or weaknesses?
- d. Which young people do CoPE?
- e. What is the process by which young people come to do CoPE?
- f. Are there particular young people you know or have heard about for whom the pursuit of CoPE seemed especially *productive*?
- g. Are there particular young people you know or have heard about for whom the pursuit of CoPE seemed especially *unproductive*?
- h. How does CoPE fit with the rest of the curriculum offered by the school at KS4?
- i. Would you say that doing CoPE has any particular effects on the rest of a young person's programme or achievements? If so, of what kind(s)? (*further prompts to explore any dimensions offered here. Ensure covers (i) engagement, (ii) attendance, (iii) motivation and (iv) confidence/self-esteem*)
- j. Generally speaking, how is CoPE regarded by parents and by staff?
- k. How would you describe parental perceptions or understandings of CoPE?
- l. How would you describe school staff perceptions or understandings of CoPE?
- m. Is there an intention to continue using CoPE in the school in future?

B. Extra questions for interview with teacher who has lead responsibility for CoPE

All the above questions, plus the following inserted between 'e' and 'f' in that list:

- As well as having responsibility for it, do you work directly with young people on CoPE? If yes, please describe what that entails.
- Are other staff involved? If so, what do they do?
- How would you describe your contacts and connections with ASDAN?
- Are there any particular strengths or weaknesses in those contacts and connections?

C. Interview with group of students undertaking CoPE

Start with introductions and note what each student is doing within KS4

- a. What sorts of things do you do as part of doing CoPE?
- b. What are the main differences and similarities between CoPE and what you do for GCSE subjects?
- c. Are there any particular strong or weak points about CoPE?

- d. Do you think that doing CoPE has any effect on the rest of your studies? If so, in what way? *(Further prompts to explore any dimensions offered here. Ensure covers (i) engagement, (ii) attendance, (iii) motivation and (iv) confidence/self-esteem)*
- e. Do other young people who are not doing CoPE ever say anything about it? Do you think they have any general impressions?
- f. Do your parents or carers understand what CoPE is?
- g. Do you think CoPE might be important in your collection of qualifications?

D. Interview with group of students NOT undertaking CoPE

Start with introductions and note what each student is doing within KS4

- a. Have you heard of CoPE or ASDAN? If so, what do you think it is?
- b. What is CoPE for and who does it?
- c. Do you study for any programmes or qualifications that are not standard GCSE subjects?
- d. Do you think that for those people that do it, doing CoPE might have any effect on the rest of their studies? If so, in what way? *(Further prompts to explore any dimensions offered here. Ensure covers (i) engagement, (ii) attendance, (iii) motivation and (iv) confidence/self-esteem)*