

Careers education and career readiness

Higher quality careers provision leads
to stronger student career readiness

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Summary

This report presents the findings of our latest research on the relationship between students' career readiness and the quality of careers provision provided by their institution (as measured by the Gatsby Benchmarks), replicating analysis from last academic year on a larger sample.¹

The [Future Skills Questionnaire \(FSQ\)](#) was launched by [The Careers & Enterprise Company](#) as a feature of the [Compass+](#) career management tool in September 2021, available to state-funded secondary schools, special schools and alternative provisions in England. The FSQ is a student self-completion questionnaire that measures students' career readiness and essential skills at key transition points across secondary education. The data, aggregated across schools, provides national insight into student perceptions and how they compare according to stage of learning, student background and school characteristics. During the 2022/23 academic year, over 100,000 students from 574 institutions completed the Future Skills Questionnaire (FSQ), making it the most extensive survey of its kind in the country.

The analysis on Key Stage 4 students supports previous findings of the positive impact of careers provision on students' reporting of their career readiness, suggesting that a student in a school achieving all eight Gatsby Benchmarks would typically have a career readiness score of 3.5%pts higher than a student in a school achieving one Gatsby Benchmark.² While this is a small increase, it is worth noting that such provision would be able to more than compensate for the average disadvantage associated with being in receipt of Free School Meals (FSM) (students in receipt of FSM typically score 1.5%pts lower than students not in receipt of FSM).

This positive relationship supports our [impact model](#) in which good career guidance improves students' career readiness, including their labour market awareness, understanding of post-16 options and transition skills. Viewed through such a theory of change and in line with significant qualitative evidence, this observational finding is likely to reflect an underpinning causal relationship. The analysis also contributes to the literature linking achievement of Gatsby Benchmarks to improved post-16 and post-18 transitions, hypothesising that increased career readiness could be one of the mechanisms through which improved EET outcomes are achieved (students being in Education, Employment, or Training destinations post-transition).

Introduction

This report considers the relationship between a student's career readiness (as measured through the FSQ) and the quality of careers education provided in a student's institution. The analysis supports previous findings of the positive impact of careers provision on students' career readiness.

The aims of this research were:

- To substantiate the role of careers education provision in developing the career readiness of young people, particularly in overcoming the starting gap faced by young people in circumstances of financial disadvantage.
- To propose future investigations into the relationship between careers provision and student career readiness.

Key findings

1. Students in institutions with the strongest careers provision have, on average, higher career readiness than students in institutions with lower provision. The analysis suggests that student in a school achieving all eight Gatsby Benchmarks would typically have a career readiness score of 3.5%pts higher than a student in a school achieving one Gatsby Benchmark.
2. This positive benefit would be able to more than compensate for the average disadvantage associated with being in receipt of free school meals (students in receipt of FSM typically score 1.5%pts lower than students not in receipt of FSM).

Analysis

The results show that careers provision, alongside many other factors, can influence students' career readiness. Career readiness, in this context, is an overall score reflecting self-reported confidence on such topics as labour market awareness, career planning, seeking guidance and transition skills. Other influential factors identified in this analysis include a student's age, being in receipt of FSM, gender and the geographical location of their school. For example, younger students, students in receipt of FSM, and female students typically reported lower career readiness.

The sample was limited to Key Stage 4 (KS4) students reflecting both that the majority of career activity takes place in KS4 and that they would have typically had the most exposure to their schools' careers programme. Careers provision at a school level had a small but statistically significant correlation with students' average career readiness. There was a positive relationship between higher reported Gatsby Benchmark results in 2022/23 and Year 10 and Year 11 students' career readiness score.

Holding all other available factors constant, the analysis showed that a student in a school achieving all eight benchmarks would typically score 3.5%pts (score on a 0-100% scale) than a student in a school achieving only one benchmark (see Appendix 1 for detailed model results), noting that there were no schools in the sample with zero benchmarks. While this is a small increase, it is worth noting that such provision would be able to more than compensate for the average disadvantage associated with being in receipt of free school meals (students in receipt of FSM typically score 1.5%pts lower than students not in receipt of FSM).

The results suggest a positive association between careers provision, as reported in Gatsby Benchmarks, and KS4 students' career readiness. The average benefit associated with the best careers provision is much higher than the average FSM disadvantage. This positive association lends credibility to our impact model in which good career guidance improves students' career readiness, including their labour market awareness, understanding of post-16 options and transition skills. This analysis contributes to the literature linking achievement of Gatsby Benchmarks to improved education, employment and training (EET) outcomes, hypothesising that increased career readiness could be one of the mechanisms through which improved EET outcomes are achieved, as well as other labour market benefits identified for career guidance.

As the number of students completing the FSQ continues to grow, we will continue to explore the link between students' career readiness and the quality of careers provision provided in their school. This year, for the first time, we explored the relationship between career readiness and careers provision on a small sub-sample of students who completed the FSQ in both the 2021/22 and 2022/23 academic year. Results from this longitudinal analysis were directionally positive but not statistically significant, reflecting the small sample in terms of schools (81 institutions) and its low level of variation in terms of careers provision (only 3 schools had fewer than 4 Gatsby Benchmarks and 54% had 7 or 8 Gatsby Benchmarks). As the number and diversity of schools completing the FSQ in multiple years grows, we will look to replicate this analysis, exploring the progression of individual students through their time in secondary school. Future analysis using activities data, rather than Gatsby Benchmark achievement, would make

this analysis more specific to individual students. There is also scope for exploration of the link in other Key Stages and the link between career readiness (as measured through the FSQ) and student destinations in the future.

Methodology

This analysis uses responses from 29,029 Year 10 and Year 11 students who completed the GCSE Years version of the FSQ in the 2022/23 academic year.³ Control variables were sourced from Compass+ (accessed from the school's MIS system) and government data sources (the School Info website). All models required full control variable availability, resulting in a maximum sample size of 27,437 students across 349 schools. All data were taken as of the 2022/23 academic year.

The analysis modelled the outcome variable of student's career readiness (defined in Appendix 2), with the independent variable of interest being the number of Gatsby Benchmarks achieved by their school.⁴ We modelled both the direct relationship (e.g. no control variables) and with a set of controls (see below). Our headline results are based on the final model as a multivariable regression using all control variables (Level 4 model in Appendix 1). All models use standard errors clustered at the school level, since the variable of interest is measured at the school level. Outliers were excluded using the Cook's Distance 4/N heuristic, removing 1,279 students and increasing R2 from 7.4% to 10.0%. The headline results are supported by a range of robustness tests, reported in Appendix 1.

There are many factors that may influence a school's careers provision and student's career readiness. As such the analysis sought to control for potentially confounding factors in the relationship between school careers provision and career readiness in order to better understand the relationship between these variables. Control variables were added iteratively in four blocks:

- Level 0 – no control variables.
- Level 1 – student characteristics to account for individual variation.
- Level 2 – addition of school characteristics which may influence the common and expected pathways for students.
- Level 3 – school geography to account for geographic variation.
- Level 4 – factors for school management quality and area-level focus on careers.

The regression model results by control model build up are provided in Appendix 1, with a full list of control variables in Appendix 3. Sample descriptives are provided in Appendix 4.

There are three key limitations to flag up, beyond standard limitations that apply to all observational data of this type. First, the FSQ was launched in September 2021, and it is likely those early users are more highly engaged with careers than those who did not use the tool, reflected in the Gatsby Benchmark achievement in our analytical sample of 348 schools. While there was a range in achievement from 1 to 8 benchmarks fully achieved, 65% were achieving 6 or more benchmarks. Second, while guidance on the CEC website encourages Careers Leaders to use the FSQ with entire cohorts of students e.g. all students in a year group, analysis of responses suggests this is not always the case and we are unsure how students are selected to complete the FSQ. For instance, Careers Leaders may be targeting the questionnaire at students they are most concerned about or those thought to respond more positively; either possibility limits the generalisability of the results. Finally, by using a school-level measure of careers provision, we obscure potential variation in experiences across individual students. Future analysis using activities data would make this analysis more specific to individual students.

This report has presented exploratory analysis of the second year of FSQ data. We invite comments and suggestions for how to improve these analyses and which additional questions might be a priority to explore with this dataset.

Appendix 1: Regression model results

Model	R2	Coefficient [Robust p-value]		Modelled career readiness for 1-8 benchmarks [delta]
		Number of benchmarks	FSM status	
Level 0	0.8%	0.8 [0.00]	n/a	49.8% – 55.6% [+5.8%pts]
Level 1	8.3%	0.6 [0.00]	-2.1%pts [0.00]	51.0% – 55.1% [+4.1%pts]
Level 2	9.1%	0.5 [0.00]	-1.4%pts [0.00]	51.2% – 55.0% [+3.8%pts]
Level 3	9.9%	0.5 [0.00]	-1.5%pts [0.00]	51.5% – 54.9% [+3.5%pts]
Level 4	10.0%	0.5 [0.00]	-1.5%pts [0.00]	51.4% – 54.9% [+3.5%pts]

* Sample size for all models: 26,158 students across 348 school clusters.

The headline results from the Level 4 model were tested for robustness against the following models:

- Using average Gatsby Benchmark score in the region with data coverage (effectively 70%+ scores)
- Controlling additionally for student ethnicity (which otherwise has 24% missingness so not included by default; no ethnicity factors were statistically significant)
- Isolating schools with 3+ benchmarks (as the region with stronger data support)
- Retaining outliers via the 4/N Cook’s Distance heuristic

Results remained significant at the 5% level in all robustness checks and effect sizes remained materially similar, with a lowest career readiness delta of 2.1%pts across the benchmark range.

We also tested the inclusion of an interaction term between a student’s FSM status and a school’s benchmark achievement (not significant at the 10% level) and confirmed that the positive relationship between a school’s benchmark achievement and student career readiness was the same magnitude and remained statistically significant at the 1% level or better for both the FSM and the non-FSM subsamples of students, i.e. the average benefit associated with the best careers provision specifically for FSM students would still be much higher than the average FSM disadvantage.

Appendix 2: Career readiness score

A full list of KS4 FSQ questions can be found [here](#).

Each question in the career knowledge and skills section of the questionnaire was scored from 0-3.

- o No, not yet = 0
- o Possibly, I'm not sure = 1
- o Yes, to some extent = 2
- o Yes, to a great extent = 3

A student's total score is then converted into a percentage relative to their maximum possible score.

Appendix 3: Control variables

The control variables were added iteratively in four blocks, requiring full control variable coverage from later blocks in earlier models:

Level 0: No control variables

Level 1: Student-level control variables

- Year Group dummy variables
- Whether student is reported as female
- Whether student is reported as in receipt of FSM (Free School Meals)
- Whether student is reported as having SEN (Special Educational Needs)
- Whether student is reported as having EAL (English as Additional Language)

Level 2: School-level control variables

- Whether an institution is reported as having a sixth form
- Number of pupils (as a squared term)
- FSM % (also as a squared term)
- CEC school type dummy variables

Level 3: Regional control variables

- Region of England dummy variables
- Level of rurality dummy variables

Level 4: Factors directly correlated with likely support for careers / management quality

- Whether in an Education Investment Area
- Ofsted score dummy variables, allowing "missing" to be an explicit category with a dummy variable

Appendix 4: Sample descriptives

The following tables provide descriptive statistics for the full eligible sample.

Variable	Full eligible sample		
	N	Mean	Std. Dev.
Career readiness score	29029	54.2	17.3
Number of benchmarks achieved	29029	6.0	1.7
Average benchmark score	29029	93.8	7.4
Number of pupils in students' institution	28331	1108.7	382.8
Percentage of students in receipt of Free Schools Meals (FSM)	28331	21.6	12.3

Variable name followed by its values	Full eligible sample	
	N	%
Pupil year group		
Year 10	17791	61.3
Year 11	11238	38.7
Gender		
Male	13667	47.1
Female	15362	52.9
Student in receipt of FSM		
No	22831	78.6
Yes	5248	18.1
Missing	950	3.3
Student registered as having Special Educational Needs (SEN)		
No	24852	85.6
Yes	3258	11.2
Missing	919	3.2

Student registered as having English as an Additional Language (EAL)		
No	22256	76.7
Yes	5854	20.2
Missing	919	3.2
Institution has Sixth Form		
Does not have a sixth form	11765	40.5
Has a sixth form	17264	59.5
Institution in Education Investment Area		
No	18900	65.1
Yes	10129	34.9
Institution type		
AP	137	0.5
Mainstream	28787	99.2
SEND	105	0.4
Institution Ofsted rating		
Good	19181	66.1
Outstanding	3533	12.2
Requires improvement	3039	10.5
Serious Weaknesses	287	1
Special Measures	219	0.8
Missing	2770	9.5

Government Office Region of institution		
East Midlands	2783	9.6
East of England	2121	7.3
London	2113	7.3
North East	2023	7
North West	5166	17.8
South East	5267	18.1
South West	3488	12
West Midlands	4101	14.1
Yorkshire and the Humber	1967	6.8
Rurality of institution		
Rural hamlet and isolated dwellings	785	2.7
Rural hamlet and isolated dwellings in a sparse setting	120	0.4
Rural town and fringe	3611	12.4
Rural town and fringe in a sparse setting	129	0.4
Rural village	1097	3.8
Rural village in a sparse setting	62	0.2
Urban city and town	15611	53.8
Urban major conurbation	7050	24.3
Urban minor conurbation	564	1.9

Endnotes

- 1 The Careers & Enterprise Company (2023). [Ready for the Future: A review of Careers Education in England 2021/22](#). The Careers & Enterprise Company (London).
- 2 There were no schools in the sample achieving zero benchmarks.
- 3 The sample was cleaned, removing duplicate responses (36) and students who completed the wrong version of the questionnaire for their year group (125).
- 4 On this sample of careers-focused schools, there is greater data range and variation in the stricter measure of careers achievement via number of benchmarks fully achieved than via the average Gatsby Benchmark score, so reported results use the former. A squared term on number of benchmarks was not significant at the 10% level, so the analysis proceeds by modelling a linear relationship.

