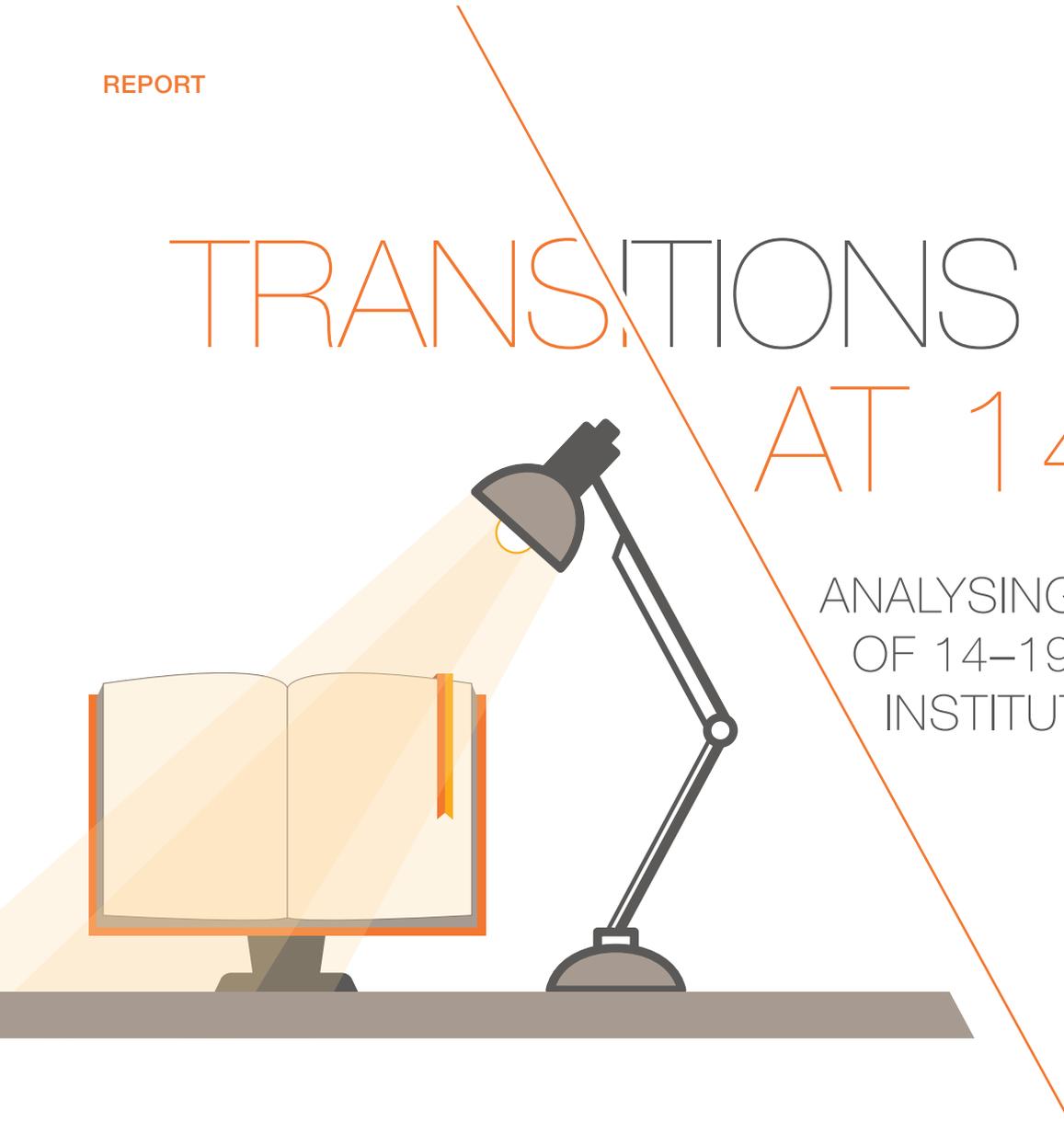


REPORT

TRANSITIONS AT 14

ANALYSING THE INTAKE
OF 14–19 EDUCATION
INSTITUTIONS



Will Cook,
Craig Thorley
and Jonathan Clifton

September 2016
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IPPR
4th Floor
14 Buckingham Street
London WC2N 6DF
T: +44 (0)20 7470 6100
E: info@ippr.org
www.ippr.org
Registered charity no. 800065

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ABOUT THE AUTHORS

Will Cook is a senior lecturer at Manchester Metropolitan University and an Associate Fellow at IPPR

Craig Thorley is a Research Fellow at IPPR

Jonathan Clifton is Associate Director for Public Services at IPPR

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SUMMARY

In England, more young people are now able to change education institution at age 14. This follows a growth in recent years in the number of institutions that cater for 14–19-year-olds, such as university technical colleges (UTCs), studio schools and 14–19 free schools. These institutions typically have a focus on vocational or technical education, but promise to deliver a broad education to a wide mixture of pupils.

UTCs, studio schools and 14–19 free schools were all introduced following the passing of the Academies Act 2010. Each of them implement different models of the provision of 14–19 education, and of the extent to which vocational and technical education is blended with a mainstream academic curriculum. All, however, are designed to build relationships with a range of business partners.

Despite this growth in their number, relatively little is known about how 14–19 institutions impact upon their local education markets. This has led to many claims and counter-claims being made about UTCs and studio schools, ranging from arguments that they provide high-quality technical routes for young people, through to fears that they will ‘track’ low-attaining pupils and impede their chances of success.

IPPR’s ‘Transitions at age 14’ study seeks to understand these claims in more detail. It will examine how 14–19 education institutions are becoming a more significant part of local schools provision, and what this means for both nearby mainstream secondary schools and the wider education system.

This briefing is the first, interim publication of our ‘Transitions at 14’ study, and presents new findings, based on analysis of the Department for Education’s National Pupil Database, to help inform the debate.

KEY FINDINGS

What are the characteristics of pupils enrolling in 14–19 institutions¹ at age 14?

- They are disproportionately male (68 per cent).
- They are more likely to have lower attainment at key stage 2 (KS2), and to have ‘underprogressed’ between the ages of 7 and 11.
- Based on their attainment at KS2, they are predicted to achieve GCSE grades below the national average. This is particularly true of pupils in studio schools, compared to those in UTCs (who are more likely to recruit ‘middle attainers’).
- They are likely to travel around three times further to get to school than the national average.

¹ We analysed data for UTCs, studio schools and 14–19 free schools which opened in 2013 or 2014. While some further education colleges are also able to recruit pupils at age 14, data for these institutions is not included in the National Pupil Database so they were not included in this analysis.

- While the average proportion of pupils who are eligible for free school meals is 15 per cent among all school types, within UTCs it is slightly below average (13 per cent), and among studio schools it is above average (20 per cent).
- UTCs recruit equally from the most and least deprived neighbourhoods, while studio schools recruit disproportionately from the most deprived neighbourhoods.

What are the characteristics of the schools from which 14–19 institutions recruit pupils at age 14?

- They are more likely to be schools rated as ‘inadequate’ or ‘requires improvement’ by Ofsted as opposed to those rated as ‘good’ or ‘outstanding’.
- Pupils that join a 14–19 institution from schools within the same multi-academy trust (MAT) are more likely to have lower prior attainment when compared to those that join from schools which are not within the same MAT.²

At age 13, what factors predict whether a pupil will enrol in a 14–19 institution?

- They are disproportionately likely to have already moved from one primary school to another.
- Those recruited from ‘good’ and ‘outstanding’ schools are more likely to be lower-attaining and more disadvantaged than their peers within the same school.
- Coming from a more deprived household was found to increase the likelihood that a pupil will enrol in a 14–19 institution.
- Pupils that come from schools with lower GCSE pass rates are more likely to travel further to attend a 14–19 institution.
- Pupils most likely to attend UTCs are boys with high attainment in maths and low attainment in English, who come from more affluent neighbourhoods and who join from a school with an adverse Ofsted rating (‘requires improvement’ or ‘inadequate’).

Where are 14–19 institutions being set up?

- There is no discernible pattern determining their geographical spread: their location is not based on the quality of local schools, or local labour market or demographic factors.
- Many of these institutions are failing to recruit sufficient numbers of pupils, and are operating significantly under capacity.

It is important to remember that these are average statistics and mask considerable variation between different 14–19 institutions. It is also important to remember that 14–19 institutions are a recent phenomenon, and the characteristics of pupils attending them might change as the programme ‘beds down’ over time. For example, they may attract a more diverse intake once parents are familiar with them and they become an established part of the education market.

² A multi-academy trust is an organisation established as a legal entity to govern a group of schools, through a single set of members and directors.

1. INTRODUCTION

1.1 WHAT ARE 14–19 EDUCATION INSTITUTIONS?

In England, more young people are now able to change education institution at age 14. This follows a growth in recent years in the number of institutions that cater for 14–19-year-olds, such as university technical colleges (UTCs), studio schools and 14–19 free schools and career colleges. Also, since 2013, some further education (FE) colleges have been able to recruit students at age 14. This change to the landscape of English secondary education provision has **challenged the traditional assumption that young people will make a transition only at ages 11 and 16.**

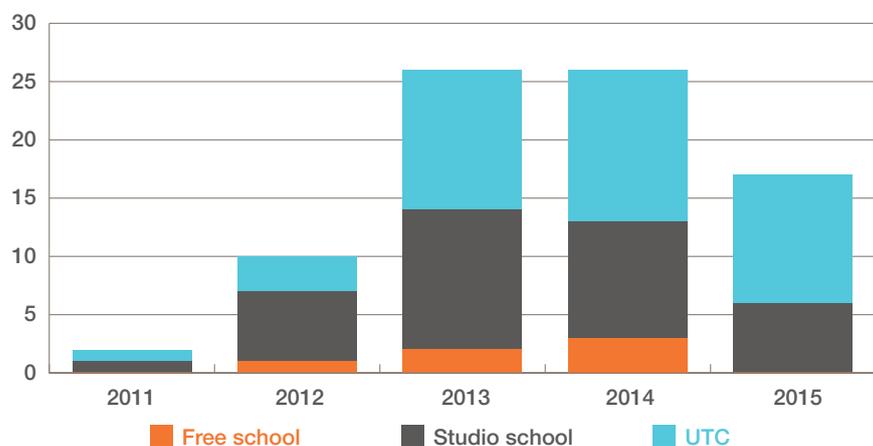
While vocational and technical education has a long history in the English system, institutions such as **UTCs and studio schools provide a new context in which qualifications are delivered.** Since 2010, the number of 14–19 education institutions in England has grown considerably. The government has also set out an ambition to expand the number of UTCs over the course of the current parliament, with a view to there being at least one ‘in reach’ of every English city by 2020.

Despite this growth in the number of providers, **relatively little is known about how existing 14–19 institutions impact upon their local education markets.** IPPR’s *Transitions at age 14* study seeks to understand the changes taking place in the landscape of 14–19 education institutions, the consequences of this trend for the wider education system, and the challenges and opportunities that 14–19 institutions pose to local schools provision.

FIGURE 1.1

Since 2010, a growing number of 14–19 institutions have opened in England

Timeline of 14–19 institution openings, 2011–2015



Source: IPPR analysis of data from an extract of the Department for Education’s EduBase dataset (DfE 2015a) <http://www.education.gov.uk/edubase/home.xhtml>

14–19 education institutions

Studio schools

As of January 2016, there were 40 studio schools open across England, and a further three were opened in September 2016.

Studio schools are ‘innovative’ schools for 14–19-year-olds, and work with local employers with a view to delivering both academic and vocational education to children of all abilities. As academies, they do not fall under the control of local authorities. They are funded by central government and sponsored by a local and existing college or school. They aim to equip young people with the knowledge, skills and experiences they need to succeed in life and work, by delivering teaching through enterprise projects and work-based learning, including by incorporating paid work experience into the curriculum.

First conceived prior to 2010, their growth has accelerated following the Academies Act 2010. Their development is overseen by the Studio Schools Trust.

‘Studio schools benefit both business and young people – they are a brilliant way for employers to become involved in helping give young people what they need to get ‘good’ jobs. They are aimed at children who learn in more practical ways and offer ‘good’ qualifications alongside the kind of skills employers want.’

Michael Gove (former secretary of state for education), July 2012

For more details about the studio school model see <https://studioschoolstrust.org/>

University technical colleges

As of January 2016, there were 39 UTCs open across England. The government has pledged to expand the number of UTCs, and a further 11 were opened in September 2016.

UTCs are government-funded schools for 14–19-year-olds, and design their curricula in conjunction with local academic institutions and business partners. As academies they do not fall under the control of local authorities. They aim to deliver an integrated technical, practical and academic approach to learning, with a view to addressing skills gaps in key technical occupations such as engineering and computer science. They emphasise that their pupils can take GCSEs and A levels and move onto university – as well as offering more vocational provision.

UTCs emerged in England following the Academies Act 2010, and are overseen by the Baker-Dearing Educational Trust.

‘We are committed to ensuring there is a UTC within reach of every city so that increasing numbers of young people can benefit from this type of technical education.’

Department for Education, *Educational Excellence Everywhere*, March 2016

For more details about the UTC model see <http://www.utcolleges.org/>

14–19 free schools

Free schools were introduced following the Academies Act 2010, with the first 24 opening in 2011; in summer 2016, there were 304 free schools open in England. Free schools can be established by, for example, groups of parents, charities, businesses and faith groups.

They do not fall under the control of local authorities, and are not required to follow the national curriculum. They also have additional powers such as the ability to change the length of the school day, and to set pay and conditions for staff.

The majority of free schools follow the traditional transition age in secondary education (age 11), although there are a very small number that follow a 14–19 model. Unlike studio schools and UTCs, these do not necessarily follow an explicit model of blending vocational and technical education with a traditional academic curriculum, although in practice some do aim to specialise in subjects such as science and technology.

1.2 ABOUT OUR ANALYSIS

There have been lots of claims and counterclaims about UTCs and studio schools: ranging from arguments that they provide high-quality technical routes for young people, through to fears that they will ‘track’ low-attaining pupils and impede their chances of success.

In order to begin to understand these claims in more detail, as well as to get a clearer picture of the challenges and opportunities posed by UTCs and studio schools, this briefing presents new data which we hope will help to inform the debate.

This briefing – the first interim report of the *Transitions at age 14* study – presents new quantitative analysis of data from the National Pupil Database (NPD) (DfE 2015b), taken from 64 14–19 institutions (29 studio schools, 29 UTCs, and 6 free schools that recruit pupils at age 14).³

We looked at the data for pupils recruited at age 14 into these 64 institutions in September 2013 (wave 1) and September 2014 (wave 2). Our analysis of pupil intake over the two waves meant that 3,206 pupils were eligible to be included in the research (1,019 in studio schools, 1,994 in UTCs, and 193 in free schools that recruit at age 14).⁴ Pupils studying at FE colleges that recruit at age 14 were not included, as data on these pupils is not recorded in the NPD.

3 Unless otherwise specified, all data presented in this report is taken from the NPD (DfE 2015b).

4 Unless otherwise stated, the modelling results and the reported differences between 14–19 institutions and all other schools are statistically significant at the 95 per cent confidence level and, where appropriate, standard errors were clustered at the school level.

TABLE 1.1

Number of pupils included in our analysis, wave 1 (September 2013) and wave 2 (September 2014)

Base	Number
14–19 institutions	3,206
<i>of which:</i>	
Free schools	193
Studio schools	1,019
UTCs	1,994
All other schools	532,902
Total: all pupils	536,108

Source: DfE 2015b

Note: The base sizes for all charts and tables in this briefing should be identified by referring to this table.

This briefing therefore aims to create a profile of 14–19 institutions – in terms of their location, their intake, and their impact on local education markets – by answering four key questions:

1. What are the characteristics of pupils who join 14–19 institutions?
2. What are the characteristics of the schools that 14–19 institutions recruit pupils from?
3. What factors predict whether a 13-year-old pupil will opt to join a 14–19 institution?'
4. Where have 14–19 institutions been set up?

It should be noted that there are some limitations to the extent to which this data should be used to draw far-reaching conclusions about the success or otherwise of 14–19 institutions and their ongoing viability within the English schools system. Both the UTC and studio school programmes only began to expand on a significant scale in 2013, and as such should still be considered to be 'bedding down' and adjusting to life within local education markets. There is also relatively little data available with which the analysis contained in this briefing can be compared and contrasted. This briefing should therefore be considered as a first glimpse at the profile of 14–19 institutions, with more analysis to follow in further publications from IPPR's *Transitions at age 14* study.

2. WHAT ARE THE CHARACTERISTICS OF PUPILS WITHIN 14–19 INSTITUTIONS?

UTCs and studio schools are intended to have a broadly comprehensive intake. This means that they should be attracting boys and girls with a broad mix of prior attainment levels, and provide opportunities for a wide range of 14-year-olds who it is felt would benefit from studying in a new learning environment, with a specialist technical or vocational focus.

That's the theory – but in practice, what are the characteristics of pupils who are opting to join these institutions at age 14, and how do they differ from the average across all other schools? Are UTCs and studio schools achieving their aim of attracting a broadly comprehensive intake?

In this chapter, our analysis gives an indication as to the gender, prior attainment and ethnicity of pupils in 14–19 institutions compared to all other schools, as well as the likelihood that pupils have special educational needs. We also look at the distance that pupils travel to 14–19 institutions.

Summary

Our analysis of the characteristics of pupils joining 14–19 institutions in September 2013 and 2014 show variations from the national average in a number of ways:

- they are significantly more likely to be male (68 per cent, compared to 51 per cent)
- they are more likely to have lower prior attainment at key stage 2 (KS2), and to have made significantly less progress between the ages of 7–11
- they are predicted to achieve lower GCSE results based on their attainment at KS2
- they travel around three times further to get to school
- they are slightly more likely to have special educational needs (SEN) (21 per cent compared to 15 per cent).

A number of differences between the characteristics of pupils in UTCs and studio schools also become clear:

- UTCs have a more uneven gender balance than studio schools
- UTCs' intake is generally drawn from less deprived households, while that of studio schools is drawn from more deprived households

- UTCs draw pupils equally from both affluent and deprived neighbourhoods, while studio schools draw disproportionately from more deprived neighbourhoods
- pupils in studio schools are predicted to achieve lower grades at GCSE than those in UTCs, based on their attainment at KS2
- UTCs' intake has prior attainment at age 7 that is identical to the national average, and so considerably above that within studio schools' intake.

These findings suggests that UTCs are performing better than studio schools in their aim to recruit a mixed-ability intake, but are performing worse in their attempts to achieve a gender balance.

14–19 institutions have a disproportionately male intake.

There is a perception that 14–19 institutions with a focus on technical subjects, such as maths, science and engineering, are more likely to attract boys than girls. Our analysis suggests that this perception is largely accurate, and that the proportion of male pupils is far higher in these institutions than the average across other schools.

Across all English secondary schools, 51 per cent of pupils are male. However, this jumps to over two thirds of pupils (68 per cent) when looking at 14–19 institutions in isolation.

The ratio of male to female pupils is most disproportionately weighted in UTCs, where there are 3.4 males for every female. This effect is less prominent in studio schools (1.5:1) and free schools which recruit at age 14 (1.7:1), although the intake in both remains disproportionately skewed towards male pupils.

14–19 institutions that specialise in engineering have the highest proportion of pupils who are male. Conversely, the creative and performing arts tend to be those with the highest proportion of female pupils.

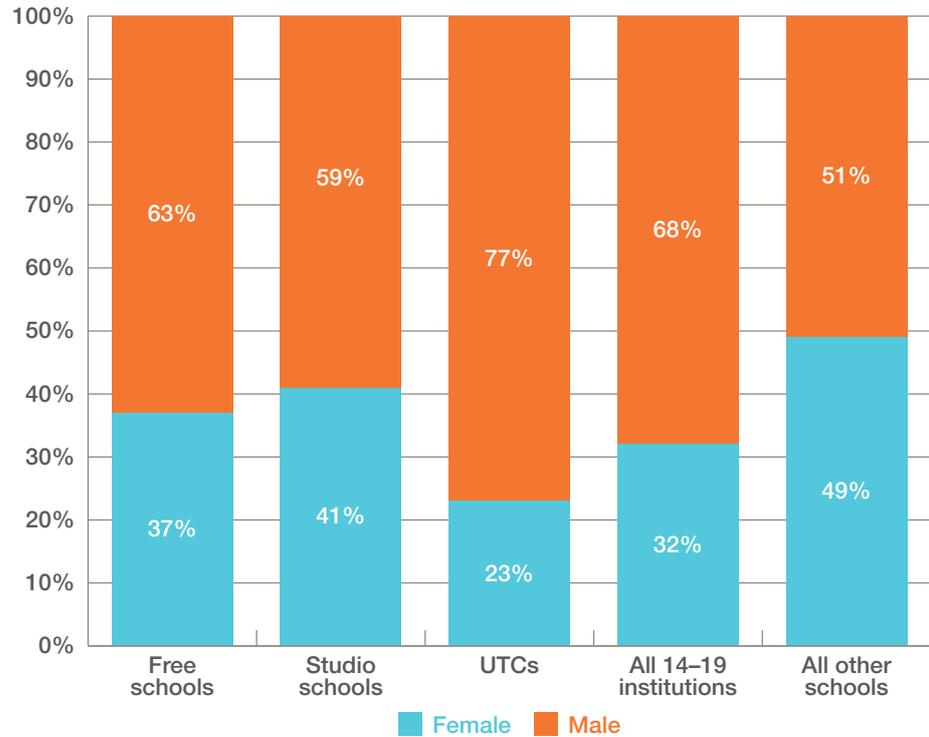
Comparing the 2013 intake to that of 2014, we found the latter to be marginally more likely to be male (67 per cent to 68 per cent), less likely to be entitled to free school meals (17 per cent to 15 per cent) and to be predicted a slightly higher GCSE points score (365 to 373).⁵ This change was wholly accounted for by new 14–19 institutions that opened in 2014, rather than a changing intake among existing ones, and so suggests that newer institutions are attracting slightly higher-attaining pupils from less deprived households.

⁵ This is approximately equivalent to going from eight C-grades and one B-grade at GCSE, to seven C-grades and two B-grades, (that is, an increase by a grade level in one GCSE subject).

FIGURE 2.1

14–19 institutions have a disproportionately male intake compared to all other schools

Percentage of male and female pupils (all other schools; 14–19 institutions).

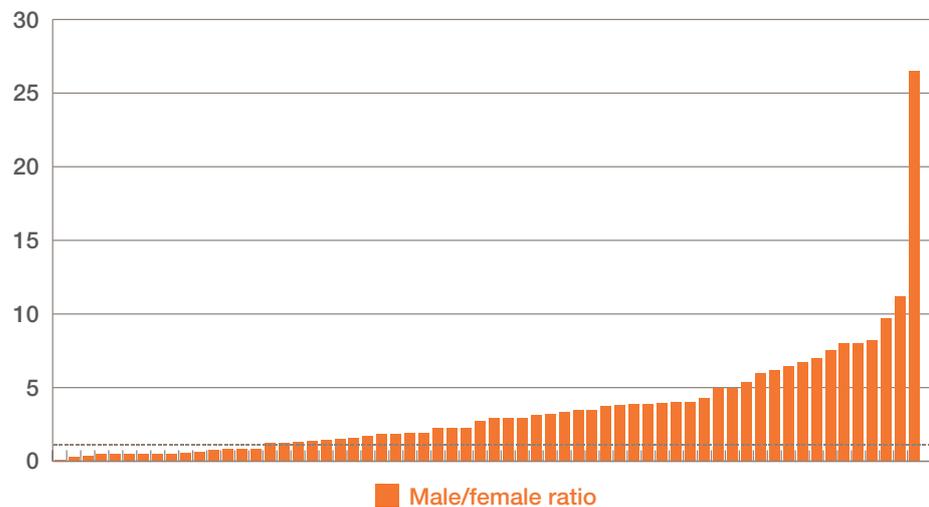


Source: IPPR analysis of data from the Department for Education's National Pupil Database (DfE 2015b)

FIGURE 2.2

There is significant variation in the ratio of male to female pupils across 14–19 institutions

Male/female ratio, distribution among 14–19 institutions (dotted line marks where the ratio is 1)



Source: IPPR analysis of data from the Department for Education's National Pupil Database (DfE 2015b)

The proportion of pupils at UTCs who are eligible for free school meals is slightly lower than the national average, while that of studio schools is higher.

Our analysis looked at the proportion of pupils who are entitled to free school meals (FSM) as well as the Income Deprivation Affecting Children Index (IDACI), which measures the proportion of children aged under 16 that live in low-income households within a local area.

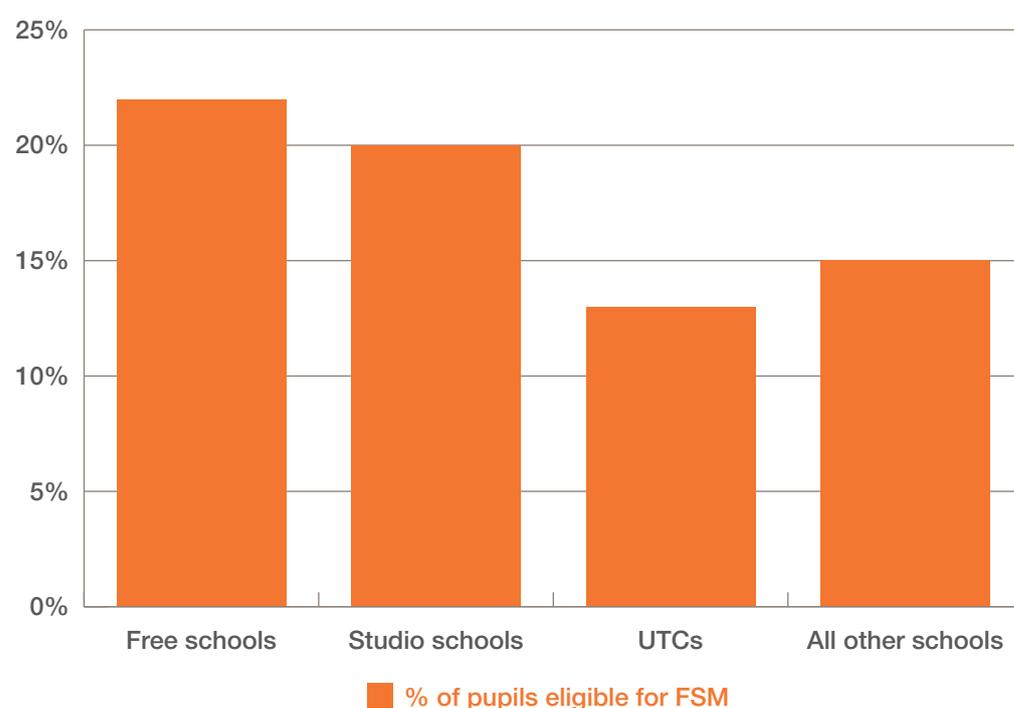
Our analysis showed that, on average, the number of children from deprived or low-income households studying at 14–19 institutions is similar to the national average (at around 15 per cent of all pupils). This suggests that fears 14–19 institutions would become a way to separate, or track, poorer pupils have been overplayed.

However, once the data is analysed according to specific institution types, there is more variation. For example, studio schools and free schools that recruit at age 14 have a proportion of their intake on FSM that is closer to 20 per cent. UTCs, meanwhile, have a proportion of pupils on FSM that is just below the national average, at around 13 per cent. In both cases, the proportion of pupils entitled to FSM was lower among the 2014 intake compared to the 2013 intake.

FIGURE 2.3

The proportion of pupils at UTCs who are eligible for free school meals is slightly lower than the national average, while that of studio schools is higher

Percentage of 14–19 institution intake entitled to FSM, split by institution type



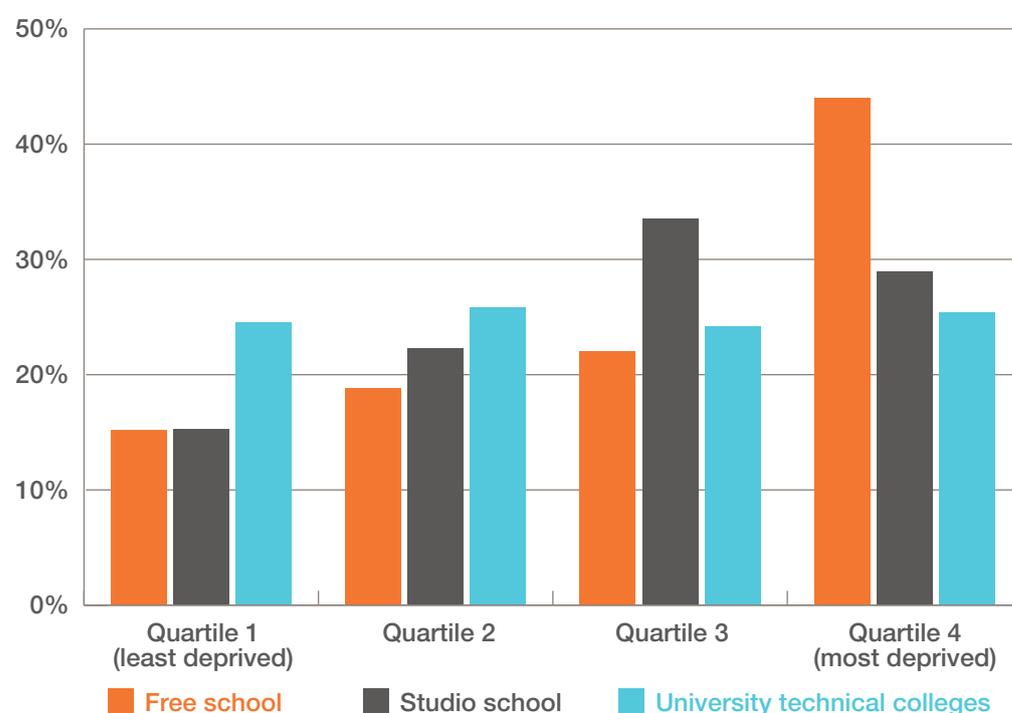
Source: IPPR analysis of data from the Department for Education's National Pupil Database (DfE 2015b)

UTCs' intake is drawn equally from both affluent and deprived neighbourhoods, while that of studio schools is drawn disproportionately from the most deprived neighbourhoods.

Figure 2.3 used FSM as a measure of pupil disadvantage. However, this is a crude binary measure and it can miss some households who could be described as 'working poor'. It is therefore also important to look at the neighbourhoods from which pupils are drawn. Breaking down the intake of different 14–19 institution types according to the neighbourhoods from which pupils are drawn shows real differences between UTCs, studio schools and free schools that recruit at age 14. While UTCs' intake is drawn equally from both affluent and deprived neighbourhoods, studio schools draw pupils disproportionately from the most deprived neighbourhoods. This is even more evident among free schools that recruit at age 14, where on average almost 45 per cent of pupils are from the most deprived quarter of neighbourhoods. This trend was found to have increased in 2014 compared to 2013.⁶

FIGURE 2.4

Figure 2.4: UTCs' intake is drawn equally from both affluent and deprived neighbourhoods, while that of studio schools is drawn disproportionately from the most deprived neighbourhoods.
Percentage of 14–19 institution intake, according to IDACI quartile, by institution type



Source: IPPR analysis of data from the Department for Education's National Pupil Database (DfE 2015b)

⁶ We use the IDACI measure to define whether pupils are drawn from affluent or disadvantaged neighbourhoods. IDACI is an index of deprivation based on pupil postcodes.

Pupils in 14–19 institutions have, on average, lower prior attainment at key stage 2 (ages 7 to 11).

Pupils attending 14–19 institutions are 30 per cent more likely to have made significantly less progress between the ages of 7 and 11 than those who attend mainstream secondary schools.

14–19 institutions are intended to have a largely comprehensive intake, recruiting pupils with diverse levels of prior educational attainment. Our analysis therefore examined the prior attainment of 14-year-olds joining 14–19 institutions by looking at their results at KS2 (ages 7–11).

We found that the intake within 14–19 institutions have, on average, lower prior attainment at both age 7 and age 11, particularly for reading and writing. The exception was among UTCs, whose intake was found to have levels of prior attainment in maths at ages 7 and 11 that are identical to the national average. We found that 24 per cent of pupils in studio schools performed significantly below expectations at KS2 (based on their attainment at KS1), compared to 14 per cent in all other schools.

We also looked at the progress that pupils made between ages 7 and 11, and found this to be lower among those who go on to attend 14–19 institutions when compared to the national average. Those attending 14–19 institutions are 30 per cent more likely to have made significantly less progress than the rest of their cohort. This is especially pronounced for those attending free schools which recruit at age 14, who are twice as likely to underprogress when compared to the rest of their cohort.

Based on their attainment at key stage 2, pupils attending 14–19 institutions have predicted GCSE results that are below the national average.

Based on their attainment at key stage 2, pupils at studio schools are predicted to achieve lower grades at GCSE than those at UTCs.

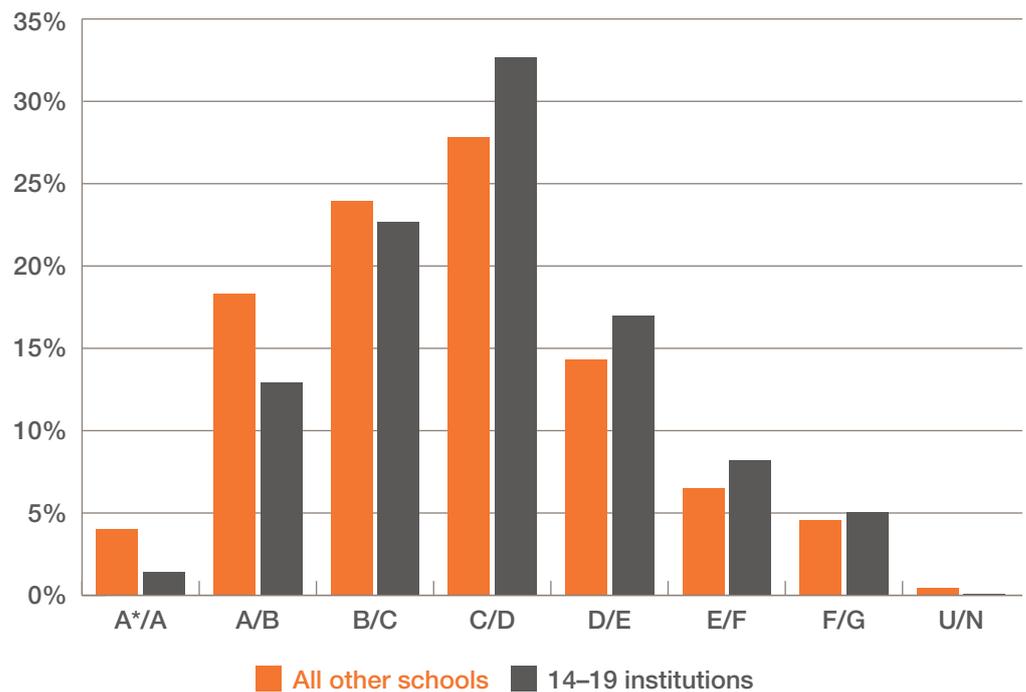
Using Department for Education conversion tables, our analysis converted pupils' key stage 2 attainment levels into a predicted GCSE pass rate (for the achievement of five A*–C grades). The results of our analysis are as follows:

- 44.5 per cent of the intake of 14–19 institutions are predicted to achieve five A*–C grades, compared to 52.6 per cent among all other schools. The predicted GCSE grades of pupils in 14–19 institutions is therefore below the national average.
- Across all 14–19 institutions, pupils are most likely to be predicted to achieve C/D grades (as they are across all other schools). However, pupils in 14–19 institutions are more likely to be predicted to achieve lower grades (C/D and below) than those in all other schools, and less likely to achieve higher grades (B/C and above).
- When looking at specific institution types, we found that pupils at studio schools are more likely than those at UTCs to be predicted to achieve lower GCSE grades. Pupils at UTCs are most likely to be predicted to achieve the middle grades (B–D). Free schools which recruit at age 14 have seemingly larger proportions of pupils at the top and bottom end of the distribution compared

to UTCs, with fewer in the middle. However, as only a small number of students attend such schools it is difficult to draw firm conclusions on any general pattern.

FIGURE 2.5

Based on their attainment at KS2, pupils attending 14–19 institutions have predicted GCSE results that are below the national average
Distribution of pupils by predicted average GCSE grade, split by institution type



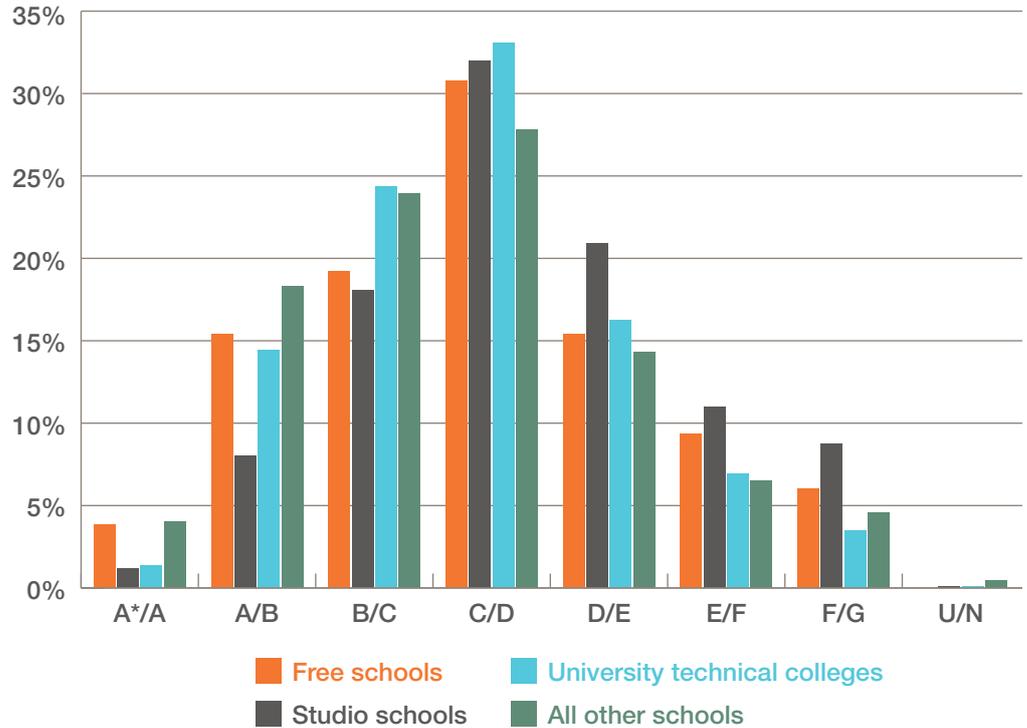
Source: IPPR analysis of data from the Department for Education’s National Pupil Database (DfE 2015b)

This analysis shows that studio schools disproportionately cater for low-achieving pupils, while UTCs tend to attract middle attainers. It is important to note that our analysis only focuses on the *prior* attainment of pupils who attend these institutions – we have not examined how pupils actually perform in their GCSEs or the progress they make once they have enrolled.

FIGURE 2.6

Based on their attainment at key stage 2, pupils at studio schools are predicted to achieve lower grades at GCSE than those at UTCs, and those in all other schools

Distribution of pupils by predicted average GCSE grade, split by 14–19 institution type



Source: IPPR analysis of data from the Department for Education's National Pupil Database (DfE 2015b)

The average distance travelled by pupils at 14–19 institutions is around three times further than the national average.

Pupils in 14–19 institutions generally match the ethnic profile of the wider cohort.

Pupils in 14–19 institutions are slightly more likely to have special educational needs (SEN), although this difference is not large.

The average distance which, nationally, secondary school pupils travel to get to school is 2km. This is considerably higher among those attending 14–19 institutions, who travel 5.5km on average. This effect is particularly evident among those who attend UTCs, who travel 6.2km on average. What's more, our analysis showed that pupils who both attend UTCs and scored in the top 25 per cent nationally in maths at age 11 are likely to travel further still to get to school. Pupils joining 14–19 institutions in September 2014 are likely to travel, on average, 1km further to get to school than those who joined at age 14 in September 2013.

In general, the intake of pupils at 14–19 institutions match the ethnic profile of the wider cohort, though they are slightly less likely to be of Bangladeshi (0.4 per cent in 14–19 institutions compared to 1.5 per cent among all other schools) or Indian (1.2 per cent compared to 2.6 per cent) ethnicity.

In general, the intake of pupils attending 14–19 institutions is slightly more likely to have special educational needs (SEN), although the difference here is not large (21 per cent of pupils in 14–19 institutions compared to 15 per cent in all other schools). There is no difference in the percentage of pupils with education, health and care plans, which is 2 per cent among both 14–19 institutions and all other schools.

3.

WHAT ARE THE CHARACTERISTICS OF THE SCHOOLS FROM WHICH 14–19 INSTITUTIONS RECRUIT PUPILS?

UTCs and studio schools are not islands. They exist within local education markets comprised of many other secondary schools. These schools might react in very different ways to the creation of a 14–19 institution. Some local schools might see them as a competitive threat trying to ‘poach’ their pupils; others might see them as offering a new pathway for pupils who would benefit from a more technical or vocational education; while others still, more negatively, might view them as a means to ‘manage out’ pupils who are proving difficult to teach.

Are schools with any particular characteristics more or less likely to be those from which 14–19 institutions recruit pupils? Across the 14–19 institutions we looked at during this study (65 in total), the pupils that were recruited in September 2014 (wave 2) came from 937 different mainstream secondary schools. In this chapter, our analysis gives an indication as to which school-level characteristics are most likely to see secondary schools lose pupils to 14–19 institutions, and looks at whether 14–19 institutions and mainstream secondary schools being joined together in multi-academy trusts (MATs) has an impact on recruiting pupils with different characteristics.

Summary

- Our analysis shows that 14–19 institutions draw disproportionately from schools with adverse ratings (39 per cent of the year 10 intake in 14–19 institutions came from schools rated as ‘inadequate’ or ‘requires improvement’, compared to 26 per cent of all pupils in the same cohort). This suggests that there are significant ‘push factors’ behind the decision to move at age 14.
 - For those 14–19 institutions operated by MATs which also include other local secondary schools, they are more likely to recruit lower-attaining pupils from the other schools within the MAT, compared to pupils recruited from schools outside of the MAT.
 - Those 14–19 institutions operated by MATs are also likely to be reliant on a single school within the same MAT for recruitment.
-

Pupils opting to join 14–19 institutions are much less likely to be drawn from schools with a ‘good’ or ‘outstanding’ Ofsted rating, and are more likely to be drawn from those that are ‘inadequate’ or ‘require improvement’.

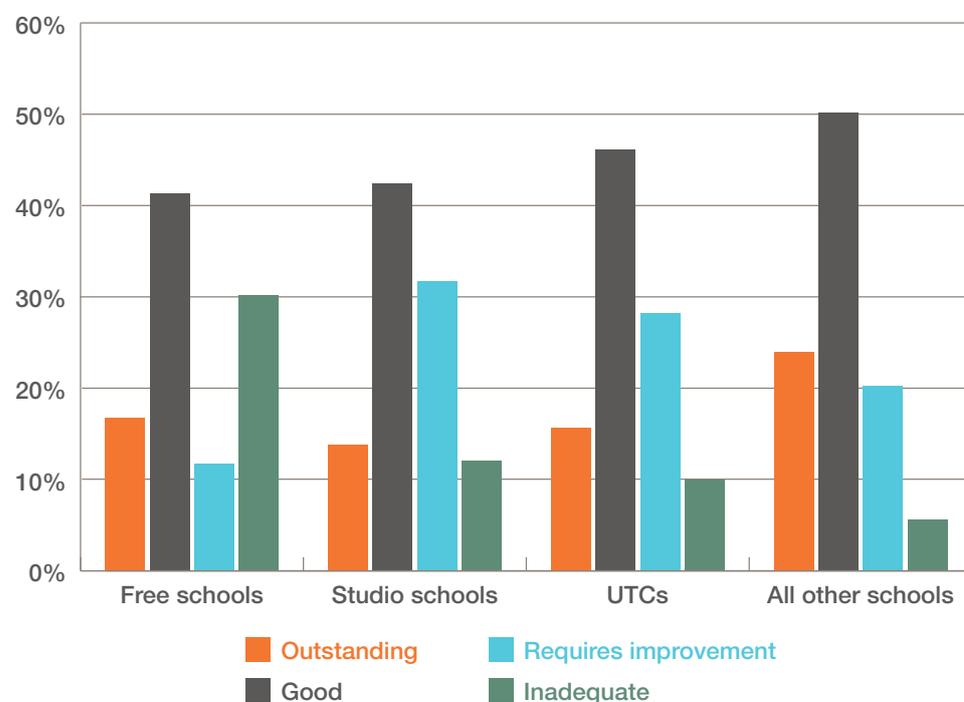
Our analysis examined possible explanatory factors with regards to the likelihood that a pupil will enrol in a 14–19 institution at age 14, and found several associated with the characteristics of the school that the pupil attends at age 13.

Nationally, pupils opting to join 14–19 institutions are disproportionately likely to have attended schools rated as ‘inadequate’ or ‘requires improvement’, and are less likely to have attended those rated ‘good’ or ‘outstanding’. This would appear to be a significant ‘push’ factor affecting the decision as to whether to transition at age 14. We found this trend to be almost identical for pupils enrolling in September 2013 and September 2014.

Our analysis showed this trend to be particularly evident among pupils joining free schools that recruit at age 14, of whom 30 per cent joined from schools rated as ‘inadequate’ by Ofsted (compared to 5 per cent nationally).

FIGURE 3.1

Pupils opting to join 14–19 institutions are more likely to be drawn from schools with adverse Ofsted ratings
Percentage of pupils recruited from mainstream secondary schools with different Ofsted ratings, by institution type⁷



Source: IPPR analysis of data based on a combination of the Department for Education’s National Pupil Database (DfE 2015b) and EduBase (DfE 2015a) datasets

7 Where ‘all other’ relates to all other pupils in the same cohort (that is, pupils aged 14 as of 1 September 2014).

Pupils that join a 14–19 institution from schools within the same MAT are more likely to be the lower-performing pupils in their year group compared to those that join from schools which are not within the same MAT.

A number of 14–19 institutions are members of multi-academy trusts which also encompass mainstream secondary schools from which the 14–19 institution could possibly recruit pupils. The government has actively promoted this model, arguing that a MAT can give much needed support to a 14–19 institution (Burke et al 2016). Critics, on the other hand, have raised concerns that this could provide a means for pupils to covertly ‘stream’ pupils into different institutions (Whittaker 2016).

We therefore looked at whether there were any significant differences between pupils who opted to enrol in 14–19 institutions and who had joined from a school within the same MAT, and those who joined from schools that are not within the same MAT. (Our sample was restricted to those secondary schools where at least one pupil moved to a 14–19 institution at age 14).

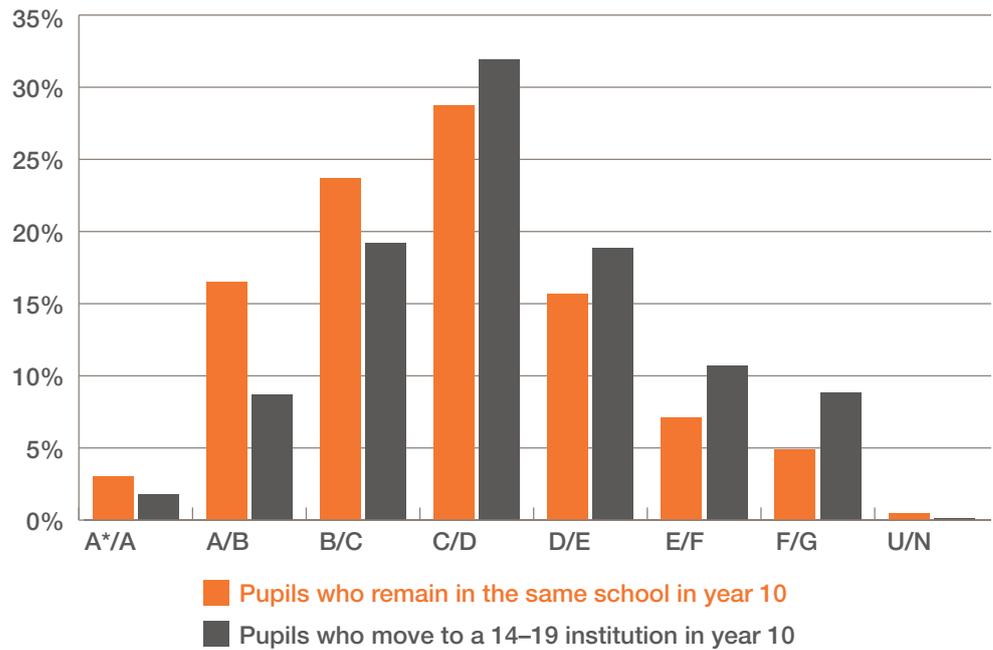
Our analysis showed that those pupils joining a 14–19 institution from schools within the same MAT are more likely to be the lower-performing pupils in their year group, compared to those who joined from schools which are not within the same MAT (see figure 3.2 below).

We also found that 14–19 institutions linked to MATs are more likely to have an intake taken predominantly from a single mainstream secondary school. This suggests that they are far more reliant on a mainstream school within the MAT to be their feeder school.

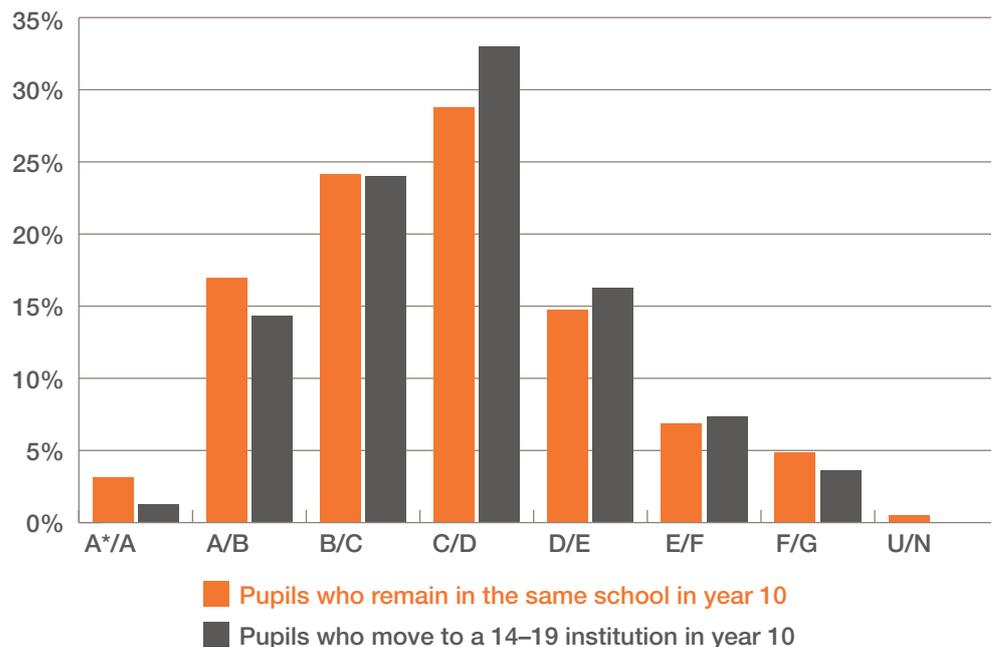
FIGURE 3.2

Pupils that join a 14–19 institution from schools within the same MAT are more likely to be the lower-performing pupils in their year group compared to those that join from schools which are not within the same MAT
Distribution of pupils by predicted average GCSE grade among feeder schools for 14–19 institutions, split by whether pupils remain in that school or leave at age 14

Feeder schools that are in a MAT that contains a 14–19 institution



Feeder schools that are not within a MAT that contains a 14–19 institution



Source: National Pupil Database (DfE 2015b) and EduBase (DfE 2015a) datasets
 Base: n(feeder schools in MAT) = 37,941; n(feeder schools not in MAT) = 120,483

4.

WHAT FACTORS PREDICT WHETHER A 13-YEAR-OLD WILL ENROL IN A 14–19 INSTITUTION?

The previous chapters presented descriptive statistics about the intake of 14–19 institutions. This provided a useful overview of their key characteristics – for example, the fact that they tend to recruit more male pupils and more pupils who are eligible for FSM.

However, the preceding analysis does not tell us about the explanatory variables that determine the composition of 14–19 institutions. The characteristics of pupils described in the preceding sections may simply be a result of the areas that 14–19 institutions set up in. For instance, the fact that 14–19 institutions recruit large numbers of FSM pupils might simply reflect the fact that UTCs and studio schools are more likely to be located in deprived neighbourhoods than other schools. Similarly, the fact that they recruit lots of pupils from schools with adverse Ofsted ratings might reflect their having been set up in areas where there are lots of these schools.

We therefore created a predictive model which enabled us to isolate the impact of particular factors that might affect recruitment to 14–19 institutions. We tested for a range of possible explanatory factors that could predict whether a pupil will opt to enrol in a 14–19 institution at age 14. We looked at differences between pupils within a local area, as well as differences between pupils within individual schools. This allows us to answer the question: All things being equal, what kinds of pupils choose to enrol in 14–19 institutions, and how do they differ from those who do not choose to do so at age 13?

Summary

- Pupils who opt to enrol in a 14–19 institution at age 14 are disproportionately likely (18 per cent more likely) to have moved from one primary school to another.
 - When comparing pupils within the same local area, the likelihood of attending a 14–19 institution is related to the characteristics of the school the pupil attends at age 13. In general, the better performing the school, the less likely a pupil is to opt to move to a 14–19 institution.
 - Deprivation, disadvantage and ethnicity are pupil/family characteristics that are significant factors in determining the likelihood that pupils within an individual school at age 13 will go on to enrol in a 14–19 institution.
-

Pupils who opt to enrol in a 14–19 institution at age 14 are disproportionately likely to have moved from one primary school to another.

We found that pupils who opt to enrol in a 14–19 institution are disproportionately likely to have also moved from one school to another between the ages 7 to 11. This suggests that an important factor affecting the likelihood of transitioning at age 14 is the extent to which the concept of voluntarily moving schools (outside of the usual transition points) is normalised for individual families.

When comparing pupils within the same local area, the likelihood of attending a 14–19 institution is related to the characteristics of the school the pupil attends at age 13. In general, the better performing the school, the less likely a pupil is to opt to move to a 14–19 institution.

We examined the school-level factors that might predict whether pupils within the same local area would go on to enrol in a 14–19 institution (we defined a ‘local area’ as a parliamentary constituency, although the results hold true for local authority districts also).

Our analysis showed that if a pupil attends a school that is rated as either ‘inadequate’ or ‘requires improvement’, the likelihood that they will transition at age 14 is significantly enhanced.

Our analysis also showed there to be no relationship between the likelihood of a pupil enrolling in a 14–19 institution and the percentage of pupils in the school they attend at age 13 who are eligible for free school meals or who have special educational needs.

However, there was found to be a relationship between the likelihood of a pupil enrolling in a 14–19 institution and the academic performance of pupils at the school they attend at age 13. For each additional 10 per cent of the pupil population who achieve five A*–C grades at GCSE, the likelihood of a pupil from that school joining a 14–19 institution declines by 6 per cent.

Pupils recruited into 14–19 institutions from schools with a positive Ofsted rating are disproportionately from more deprived neighbourhoods, and are more likely to be low-attaining.

We also compared pupils who opted to join 14–19 institutions from schools rated as ‘good’ or ‘outstanding’ by Ofsted to those who joined from schools rated as ‘inadequate’ or ‘requires improvement’.

When compared to other pupils from the same school at age 13, we found that those joining from schools with a positive Ofsted rating generally have lower attainment and come from more deprived neighbourhoods. Within these schools, pupils who live in the most deprived 25 per cent of postcodes are 34 per cent more likely to enrol in a 14–19 institution than those in the most affluent 25 per cent. However, those pupils joining from schools with an adverse Ofsted

rating are more likely to be high-attaining than other pupils within the same school, and to come from less deprived neighbourhoods.

This suggests that 14–19 institutions are, in general, attracting the lower-attaining and more disadvantaged pupils from ‘good’ and ‘outstanding’ schools, and the higher-attaining and less disadvantaged pupils from schools rated as ‘inadequate’ or ‘requires improvement’. We found this to be true of schools that are both joined with the 14–19 institution as part of a MAT and those that are not.

Of the pupils recruited into 14–19 institutions from schools with a positive Ofsted rating, they are disproportionately from more deprived neighbourhoods, and are more likely to be low-attaining

Deprivation, disadvantage and ethnicity are significant factors in determining the likelihood that pupils within an individual school at age 13 will go on to enrol in a 14–19 institution.

Our analysis looked at the ways in which pupils who attend 14–19 institutions differ from other pupils within the same school at age 13.

It showed that deprivation and disadvantage (as demonstrated by IDACI) are a significant factor that differentiates between the likelihood that different pupils within an individual school will opt to enrol in a 14–19 institution. Controlling for pupil characteristics such as gender, ethnicity, EAL and SEN status, as well as KS2 attainments, pupils from the top 25 per cent most deprived postcodes were 16 per cent more likely to enrol in a 14–19 institution compared to those from the top 25 per cent most affluent postcodes.⁸

Ethnicity also becomes a significant predictive factor. In comparison to White British pupils, Black Caribbean and Mixed Black (African, Caribbean and Other) and White pupils are more likely to enrol in a 14–19 institution, whereas all other major ethnicity groups are less likely to.

Pupils with higher attainment in maths, and those that come from schools with lower GCSE pass rates, are more likely to travel further to attend a 14–19 institution.

We also looked at whether there were any factors that predicted how far a pupil would travel to attend a 14–19 institution. Most factors were found to be insignificant, although pupils with higher maths attainment were found to generally travel further, as were those to have come from schools with lower GCSE pass rates. This suggests that there are both ‘push’ (a desire to leave a school where pupils’ chances might be reduced at GCSE) and ‘pull’ (a desire to attend a school which is perceived to be well suited to high-attainers in maths) factors at play in determining how far a pupil will travel to enrol in a 14–19 institution.

⁸ EAL, or learners of English as an additional language, are pupils also referred to as bilingual learners. SEN refers to pupils with special educational needs.

Pupils most likely to attend UTCs are boys with high attainment in maths and low attainment in English, who come from more affluent neighbourhoods and who join from a school with an adverse Ofsted rating.

Finally, we looked at the factors predicting whether a 14-year-old will go on to enrol in a UTC in particular, and found the patterns described elsewhere in this section to generally hold true. However, it was also found that pupils who attend UTCs are more likely to be those that have higher attainment in maths and lower attainment in English than the average.

The evidence suggests, therefore, that entry to UTCs is most likely among pupils who are male, have high attainment in maths and low attainment in English, come from more affluent neighbourhoods and who join from a mainstream secondary school with lower GCSE pass rates and/or an Ofsted rating of 'inadequate' or 'requires improvement'.

5. WHERE HAVE 14–19 EDUCATION INSTITUTIONS SET UP?

The government has committed to ensuring that there is a UTC within reach of every city as part of its pledge to build 500 new free schools and UTCs by 2020 (DoE 2016). Advocates of 14–19 institutions argue that they can help fill key gaps in the local jobs market, particularly areas that need more mid-level technical and vocational careers. But has the establishment of 14–19 institutions been based on any particular understanding of local need or characteristics? This final chapter examines whether there are factors that determine where they have been established, and whether there are any patterns to be identified.

Summary

Our analysis of where 14–19 institutions have been set up has found no significant patterns to be present. Their establishment is not related to the quality of local schools, or local labour market or demographic factors, such as skills shortages in key technical occupations. The evidence does suggest, though, that the rate of admissions in 14–19 institutions is significantly below capacity, and that recruitment at age 14 remains a real problem.

There is no discernible pattern determining the geographical spread of 14–19 institutions.

Our analysis shows how 14–19 institutions have been spread relatively evenly across England, and there are few places where a significant number of 14–19 institutions are concentrated.

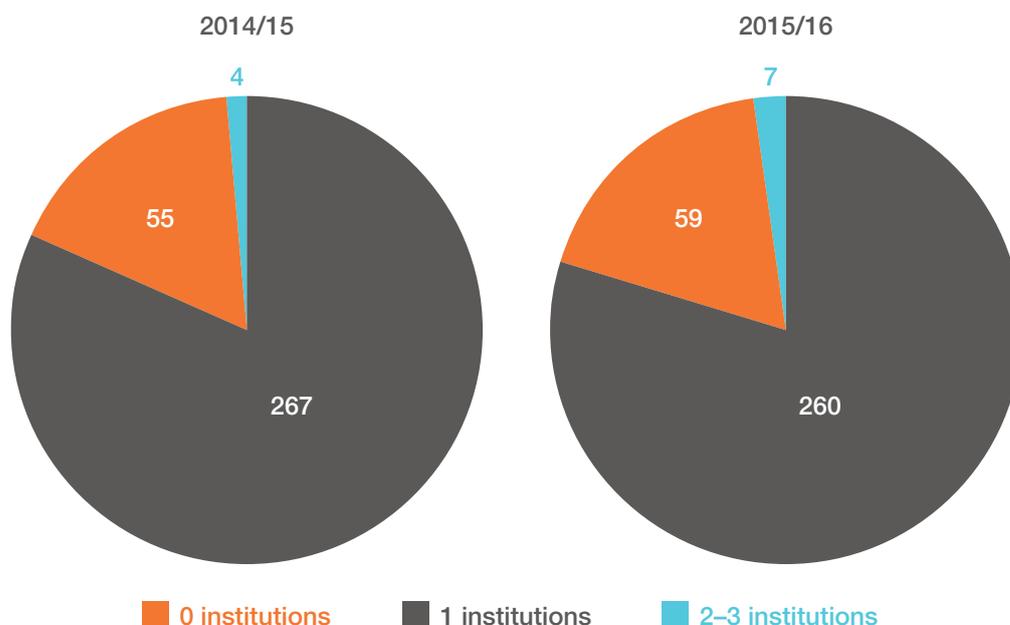
According to region, the highest number of 14–19 institutions are found in the East of England, the North West and the West Midlands, which each have 11. At the other end of the spectrum, Yorkshire and the Humber has three and the North East just two.

This spread is also evident when looking at how many 14–19 institutions are concentrated in particular local authority districts. For the 2014/15 academic year, of the 326 districts, 267 had no 14–19 institutions, 55 had one, 3 had two, and 1 had three. For the 2015/16 academic year, 260 had no 14–19 institutions, 59 had one, 5 had two, and 2 had three. Interestingly, the growth in 14–19 institutions between the two years was disproportionately in districts where provision already existed.

FIGURE 5.1

The vast majority of English local authority districts do not contain a 14–19 institution, and in those that do it is rare for there to be more than one

Concentration of 14–19 institutions among English local authority districts, 2014/15 and 2015/16 academic years



Source: IPPR analysis of data from the Department for Education’s National Pupil Database (DfE 2015b)

The location of 14–19 institutions is not related to the quality of existing schools in the local education market.

You might expect to see 14–19 institutions emerge in places where the existing school provision is of a poor quality in order to offer parents and pupils a high-quality alternative at age 14. However, our analysis fails to show any such correlation, and in fact shows that there is no clear relationship between the presence of a 14–19 institution in a local area and key variables relating to the quality of local schools, such as Ofsted scores, GCSE results, GCSE value-added, and the admissions appeal rate.

The location of 14–19 institutions is not related to local labour market or demographic factors.

Part of the rationale for the establishment of 14–19 institutions is that they will help to fill local skills shortages in key sectors by providing pupils with a high-quality, technical education. However, our analysis shows there to be no clear relationship between the presence of a 14–19 institution within a local area and key area-level variables, such as the presence of particular occupational sectors; the local unemployment rate; the qualification levels of the local population; and the ethnicity of the local population. There are just two exceptions of note:

1. There is a positive correlation between the presence of 14–19 institutions and the percentage of the local population employed in occupations within the hotel, distribution and restaurant sectors.
2. There is a negative correlation between the presence of 14–19 institutions and the percentage of the local population who are employed in associate professional and technical occupations, such as mechanical or electrical engineering.

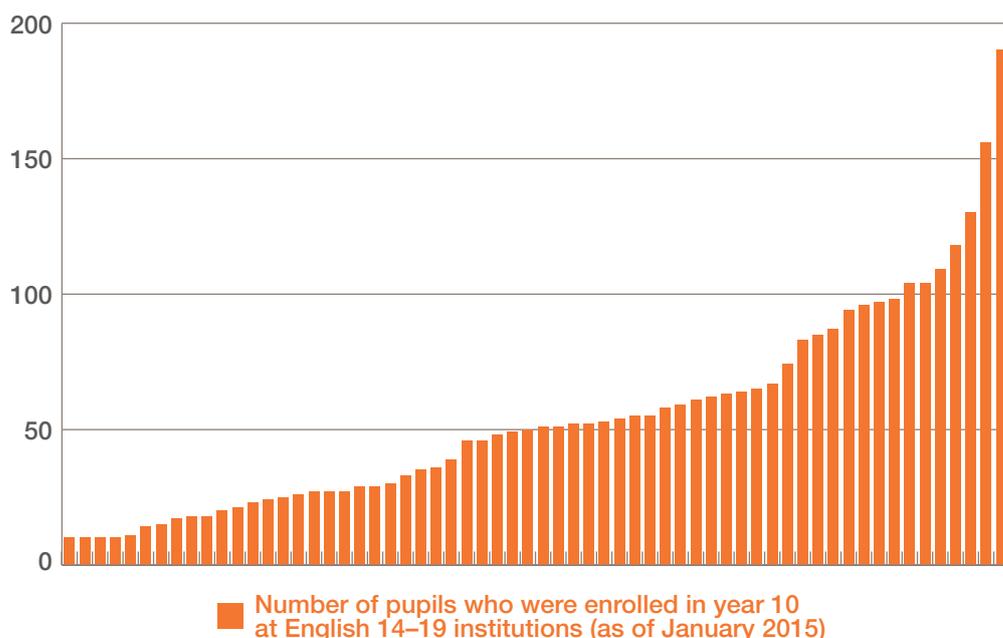
The admission rates of 14–19 institutions are significantly lower than these schools’ capacity.

The average intake into year 10 across the 14–19 institutions included in our study was 50 pupils. This is considerably smaller than the average year 10 cohort in a mainstream secondary school, which is 174 (according to 2012 data) (DoE 2012). However, the average size of 14–19 institutions masks a wide variation at either extreme. One school recorded admission numbers for year 10 in the single figures for the 2014/15 academic year, while another was able to recruit 190 pupils.

FIGURE 5.2

There is wide variation in the size of the year 10 intake across 14–19 institutions in England, although just one recorded an intake higher than the 2012 average intake for mainstream secondary schools

Number of pupils who were enrolled in year 10 at English 14–19 institutions (as of January 2015) (schools with an intake of less than 10 have been stated as having an intake of 10 pupils due to statistical disclosure control)



Source: IPPR analysis of data from the Department for Education’s National Pupil Database (DfE 2015b)

This suggests that 14–19 institutions face significant problems recruiting at age 14, and that a large number are operating under capacity, sometimes significantly. This supports the findings of a separate study of 15 UTCs operating in 2014/15, which found them to be, on average, just 50 per cent full, with two filling just 14 per cent of available places (Robertson 2016).

The ability of 14–19 pupils to recruit pupils has received growing attention in recent months, with a number of institutions closing due to a lack of pupils. This continues to be a major cause for concern. We will examine the barriers to recruitment at age 14 in more detail in the second phase of our research project.

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