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Who wants to be a teacher? Findings from a survey of undergraduates in England

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ABSTRACT

This paper presents the results of a large-scale survey of undergraduates in England, concerning their envisaged career choices and how they made them. This gives a more complete account of those who do and do not want to be teachers than usual in the existing literature based primarily on prospective/existing teacher accounts. The paper looks at the issue of shortages, the reasons why people might be deterred from teaching, and summarises the methods used in our new study, followed by the results. The results cover descriptive analyses, and a comparison of responses from those who considered being a teacher (or not), those who had applied to train as a teacher (or not), and those intending to teach. These results are put together in two logistic regression models, one predicting/explaining who considered teaching, and the second explaining who then intends to become a teacher. Conclusions are drawn in the final section.

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KEYWORDS

Teacher shortages; teacher supply; career choice; logistic regression; financial incentives

Introduction

This paper presents the results of a large-scale survey of undergraduates in England, asking about their envisaged career choices and how they made them. The purpose was to give a more complete account of those who do and do not want to be teachers than is usual in the existing literature which is based primarily on existing teachers and prospective teacher accounts. The first section of this paper looks at the issue of shortages, and then covers the reasons why people might be deterred from teaching. A summary of the methods used in our new study, is followed by sections of results. The results cover descriptive analyses of the overall responses, and then a comparison of responses from those who considered being a teacher (or not), those who had applied to train as a teacher (or not), and those intending to teach. These results are put together in two logistic regression models, one predicting/explaining who considered teaching, and the second explaining who then intends to become a teacher. Conclusions are drawn in the final section.

The demand for teachers

Ensuring an adequate supply of qualified and knowledgeable teachers is important for the provision of a good education system. It is widely acknowledged that teachers can

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make a difference to children's academic and lifelong outcomes, and a shortage of teachers can have a detrimental effect on the life chances of children (Gerritsen, Plug, and Webbink 2016, Sorenson and Ladd 2018).

Yet many countries have reported a widespread shortage of teachers (European Commission/EACEA/Eurydice 2018). In England and the US, a teacher shortage is predicted to get worse as the pupil population is rising and more teachers are leaving before retirement (Hayes 2017). In England, shortages are particularly acute in some subjects and regions (House of Commons 2017).

Such shortages are often attributed to the relatively poor pay of teachers. The idea behind this is that improvements in the economic and employment cycles, which can make teaching a less attractive career, are linked to the prevailing shortage of teachers (Aldeman 2015; Dee and Goldhaber 2017). Consequently, many policy initiatives have addressed shortages through pay and other financial incentives, such as bursaries and scholarships, to attract more people into the teaching profession. There is some evidence that these approaches are effective, at least in terms of attracting people who were already considering teaching anyway (See et al. 2020a). However, financial incentives are not enough to keep teachers in schools once the payments are removed. And official government data has consistently shown that academically-strong prospective teachers are less likely to progress through the teacher supply pipeline than their academically weaker peers (Bowsher 2016).

The shortage of teachers is also reportedly partly the result of people leaving the profession prematurely. Teaching has often been characterised as an occupation with a high level of turnover especially among new teachers (Ingersoll and Smith 2003). While all occupations experience some degree of turnover and career change, turnover in teaching is particularly high in the first few years compared to many other professions (Ingersoll and Perda 2010), and in England early attrition is particularly acute for maths, science and languages teachers (Worth and De Lazzari 2017). Among the secondary teachers who qualified in 2010–2012 only around 66% stayed on in state-funded schools by the fifth year (DfE 2018).

Part of the problem may be lack of adequate preparation for dealing with the stress and workload associated with teaching (Cooper-Gibson Research 2018). In England, the government have set out a series approaches including the Early Career Framework (ECF) (DfE 2019a), as part of the wider Teacher Recruitment and Retention strategy, to support new teachers (DfE 2019b).

Studies indicate that teachers' perception of workload are strong predictors of their decision to leave teaching (Lynch et al. 2016; Higton et al. 2017). Workload, policy changes and accountability pressure were among the top reasons cited as reasons for teacher attrition in a survey of over 1,000 teachers in England (DfE 2017). In 2014, the Department for Education (DfE) in England launched the Workload Strategy to tackle unnecessary and unproductive tasks teachers undertake in the course of their duty. The Teacher Workload Survey carried out in 2019 in England by the DfE showed a reduction in teachers' working hours, but workload was still a major challenge for secondary school teachers (Walker, Worth, and Van Den Brande 2019).

However, the biggest problem for teacher supply may be that government planning for it takes place too late, and in isolation from other inter-linked areas of education and wider policy. See and Gorard (2019) suggest a radical reconsideration of the current

selection processes for initial teacher training, an independent review of the Teacher Supply Model, and a long-term approach to teacher supply planning, considering other policy changes, that may also affect teacher supply, in a more coordinated way.

How to address teacher shortages

Various initiatives have been used to try and attract trainee teachers to shortage areas and subjects. These include targeted advertising, bursaries and scholarships for shortage subjects, loan forgiveness, paid internships, incentive payments for teaching in shortage regions, and more specific local approaches like the UK Future Scholars programme. These programmes are rarely robustly evaluated, and there is little evidence that any of them are effective (See et al. 2020b).

A major problem is that so much of the prior research in this area has only been based on evidence collected from teachers in training, or from existing and resigning teachers. In the same way that so much research on widening participation to higher education is distorted by only considering those who apply to or enter university (Gorard 2018), work on teacher supply largely ignores the key group of those who might have become teachers but decide against. It is surely the barriers and facilitators from the perspective of this group that we need to uncover if we wish to improve teacher supply. Those already training or already practising may have useful views on the process, but whatever problems they have faced these have not deterred them so far. It is remarkable that so little prior research has taken this into consideration.

We therefore know quite a lot about the self-reported motivations of those who have already decided on teaching as a career. A review by Heinz (2015) reported 41 studies examining the motivations of students who go into teaching. However, 39 out of 41 studies contacted only pre-service teachers. In other words, they investigated the reasons why people choose to go into teaching without examining the views of people who do not want to go into teaching. Only two studies had a sample both of students who chose or did not choose to go into teaching, and a further small study, including students who did not want to become teachers, was not in the review (Kyriacou and Coulthard 2000). One of the two was so old that its findings are probably no longer relevant (Valentine 1934). The other study had a sample of 1,845 students from both teaching and other undergraduate courses in institutions in south Wales and south-west England (See 2004). The new study reported in this paper is a continuation of that work, and extends it to a national sample for England.

According to existing trainee teachers in some small prior studies, their salary, pay and other financial considerations are not the key motivators (Davies and Hughes 2018). Bursaries and other incentives might only attract people to train who have no intention to stay on as teachers (Higher Education Policy Institute 2017). Doubts about the usefulness of bursaries and incentives to attract teachers have been expressed by the National Audit Office (2016), and other commentators.

Instead trainees tend to emphasise intrinsic attractors such as the enjoyment of working with children (Goller et al. 2019), or a desire to help others, perhaps stemming from negative childhood experiences of their own (Kass and Miller 2018). Larger survey studies report similar findings (General Teaching Council 2003). See also Kyriacou et al. (2003), and Wang (2019). Teachers claim that they did not take up teaching just as a fall-back, or

After questions about their choice of career, and the reasons for this choice, students were asked whether they had considered a career in teaching, and whether they had applied for teaching training, and intended to become a teacher.

The instrument was piloted for both content and method of delivery in two universities, and then discussed via focus groups. Students were invited to complete the questionnaire on-line, by post, or face-to-face at careers fairs, or at the start or end of a lecture. Most responses came from data collection by the researchers at lectures. The instrument also asked students if they were happy to be interviewed about the same kinds of issues, and 20 agreed. These interviews were for illustrative purposes, and some extracts are used in this paper where relevant to the larger findings.

For most categorical variables, any missing values were recoded as “not known”, or not known to be so for any category. Most variables had few missing values (of the order of 10 from 4,500). The exception was parental occupation, mostly because the question was asked for two parents/carers and many respondents only reported for one. A single parental occupation variable was created, recording the most prestigious of the responses for two parents/carers, where there were two, using the categories:

- University lecturer, doctor, dentist, solicitor, scientist (or similar)
- Technical, health, welfare, education professional (or similar)
- Clerical, administrative assistant, secretary (or similar)
- Craft related jobs
- Small employer
- Not usually employed.

For the 11-point ratings, the small number of missing values were noted, and replaced by the overall mean score. This retains the important information from other variables of any case missing a specific value, does not disturb the mean, and the standard deviation of only the complete cases can be used when computing “effect” sizes (Gorard 2021). University entry qualification (tariff) points were capped at 168 (a normal maximum for students aged 18 from state-funded schools, equivalent to three top grades at A level).

The categorical variables are summarised as frequencies and percentages, and cross-tabulated with the four categories of students who did not consider, considered, applied for, or intended to teach. The ratings variables are summarised with means and standard deviations, and the means are compared across the three categories of considered, applied for, or intending to teach (using SPSS27). These comparisons are also converted into “effect” sizes by dividing the differences between the means for each group of respondents by their overall standard deviations.

Putting these patterns all together, we also created two binary logistic regression models. The first is based on predicting the outcome “considered becoming a teacher” or not. The second is based on predicting the outcome “intend to become a teacher” or not. Because intending and applying for teaching are so similar in their descriptive results (see below), there is no additional model for applying or not. Each model is computed in stages, with the predictors being entered in steps representing student family background, the university stage, factors relating to their desired careers, sources of

information about careers, whether they intend to become a teacher, factors relating to this choice, and the role of financial incentives to become a teacher. This permits a consideration of the relationship between the predictors in each step net of the influence of the predictors in all previous steps.

An overview of the survey responses

The survey had 4,469 valid responses from current undergraduates. Of these 58% were female, 67% reported a White ethnic origin, 16% South Asian, 4% Black, 4% mixed, and 10% other ethnicity. And 56% had a parent with a degree or equivalent, and 32% had a parent with a higher professional occupation, 28% with a lower professional occupation, 16% with a clerical occupation, and 10% with a manual or craft-related job.

The undergraduates were studying in 53 different universities in England, and covered a wide range of subjects from dentistry to classics. Around 34% were studying maths or physical sciences, and 32% social sciences. These figures are mostly a consequence of the universities and departments that agreed to take part in the survey. Most were UK home students (77%), and the rest (7%) were from the European Economic Area (EEA) and beyond (16%).

Most of the students were in their second year (56%) at university, with 6% in the first year, and 38% in their third or subsequent year. They had entered university with A level qualifications (67%), International Baccalaureate (6%), BTEC (7%), a combination of these (3%), Access (4%) or some other route (13%) including overseas qualifications. The A levels are the most common form of academic qualifications in sixth form (up to age 18+) in England. BTEC is the most common form of vocational qualification in sixth form.

The various UK qualifications common for entry to HE can be converted to a common point (tariff) score. The mean tariff scores for respondents' qualifications on entry (where known) were 135 points. Students reported that their most common expected degree result (where relevant) was a 2:1 or upper second class classification (53%), with 31% hoping for a first class degree, 4% a 2:2 (lower second class degree) or lower, and 12% not known or not relevant. Some courses do not have degree classifications.

When considering their likely future career (with no focus on teaching yet), respondents were mostly concerned with job satisfaction/enjoyment (Table 1). Pay, job security, promotion prospects, an opportunity to develop new skills, and interest in their subject of study, were all also highly rated. Following a family tradition was the least important factor, along with the status of the job, getting an introductory bonus, and the chance for an internship.

The most important sources of reported information for choosing a career were respondents' (expected) university qualifications, and previous work experience. Things like adverts, media stories, and government websites were generally considered the least important.

Of the total respondents, 2,619 (59%) had considered teaching as a career, of whom 881 (20%) intended to become a teacher, and 859 (19%) had either applied or were planning to apply for teacher training. These likely teachers were approximately evenly divided between plans to teach in primary and secondary phases. Most

Table 1. Ratings for generic career drivers, all respondents.

Ratings	Mean	Standard deviation
Job satisfaction, enjoyment	8.8	1.4
Interest in my subject area	7.7	2.3
Career prospects	7.6	1.9
Opportunity to develop skills	7.6	2.0
Job security	7.5	2.0
Pay, salary	7.3	2.0
Kinds of people I will be working with	7.0	2.4
Intellectual stimulation	7.0	2.3
Job that suits my temperament	6.9	2.4
Chance to give something back	6.8	2.6
Job responsibility	6.6	2.2
Autonomy, scope for initiative	6.5	2.2
Chance to share my knowledge	6.3	2.5
Chance to use academic knowledge	6.3	2.6
Ease of getting a job in that field	6.0	2.6
The workload required	5.9	2.4
Convenience, ease of travel	5.8	2.7
A financial incentive to train	5.8	3.1
Length of working day, holidays	5.7	2.7
Opportunity for internship	4.8	3.0
Status, public perception of the job	4.4	2.9
An introductory bonus when starting job	4.3	3.0
Family tradition	2.1	2.7

undergraduates felt that it would be easy to enter a career other than teaching with their degree (83%).

Thinking specifically about teaching as a possible career, the biggest reported attractors for all respondents was the long holidays, and the chance to give something back to society (Table 2). The biggest deterrent to a teaching career was that teacher salaries are not considered to be high enough. Respondents generally did not agree that teaching is a career for those unable to do anything else, or one especially suited for women (a factor that was included because it has been reported in other studies).

Four slightly different existing, or possible, incentives for becoming a teacher all had similar ratings (Table 3). All are reported to be generally influential, with little discrimination between them.

All of the findings reported so far are for all respondents. What is perhaps of more interest is the extent to which these characteristics, views and career drivers differ between those who want to become teachers and all others. Therefore, the following tables compare the characteristics and responses of those who did not consider teaching as a career, considered teaching as a career (compared to those who did not), those who have applied for teacher training (of those who considered teaching), and those who report intending to become teachers.

The possible determinants of wanting to be a teacher

Background characteristics

Female students were somewhat more likely to have considered being a teacher (62% v 55%) than males, and much more likely to intend to become a teacher (24% v 14%)

Table 2. Ratings for drivers to go into teaching, all respondents.

Ratings	Mean	Standard deviation
The long holidays are attractive	7.8	2.2
Teachers' salaries are not high enough	7.5	2.1
It allows you to give something back to society	7.4	2.0
Good teachers at school can encourage people to go into teaching	7.3	2.2
It's for those who enjoy working with young people	7.0	2.4
A good experience at school can encourage people to go into teaching	6.9	2.3
Teaching has high job security	6.5	2.2
There is a problem with poor discipline in schools	6.4	2.4
Working hours in teaching are family friendly	6.3	2.8
It allows you to continue your academic interest	6.2	2.6
Teaching offers intellectual stimulation	6.0	2.5
Learning to teach makes you more employable	5.4	2.4
It has good career/promotion prospects	5.3	2.3
It is a high status profession	5.0	2.4
People who have teachers in their family are more likely to go into teaching	4.8	2.6
Teachers' workload is manageable	4.7	2.5
It's for people who are academic stars	2.9	2.4
It's for those who can't do anything else	2.2	2.5
It's a more suitable career for women	2.0	2.6

Table 3. Ratings for teaching incentives, all respondents.

Ratings	Mean	Standard deviation
Being paid a salary while receiving training	6.9	2.2
Tax free bursary or scholarship for training to teach	6.8	2.2
A loan to support your living expenses	6.7	2.4
A loan to cover your tuition fees	6.6	2.5

(Table 4). It follows that 38.3% of females, and 45.2% of males, did not consider becoming a teacher, 77% of females had not applied to become a teacher, and so on.

The different ethnic groups have similar levels of interest in teaching, with white students the most interested in general, while South Asian origin students are the most likely to turn that consideration into an application or intent (Table 5). Black and mixed ethnic origin students expressed the least interest in teaching.

Students whose parents do not have a degree (and presumably mostly did not attend university themselves) are more likely to consider, and to apply for, teaching (Table 6). This is the first of several indicators throughout the survey suggesting that prospective teachers more often come from less educated and professional backgrounds, with lower qualifications and expected degree results themselves, than their peers in HE.

Teacher applications are most likely from students whose parents are not usually employed, or who have a craft-related or manual occupation (Table 7). They are least likely to come from students whose parents are higher-level professionals.

Table 4. Percentage of position on teaching, by gender.

Percentages	Considered	Applied	Intend
Female	61.7	23.0	23.6
Male	54.8	13.9	14.1
Other	51.8	14.8	16.2

Table 5. Percentage of position on teaching, by ethnicity.

Percentages	Considered	Applied	Intend
South Asian	55.8	21.7	22.0
Black	52.9	15.7	12.2
East Asian	54.9	18.6	19.5
White	60.7	19.7	20.2
Mixed	52.8	10.8	11.4
Other	52.8	16.1	18.7

Table 6. Percentage of position on teaching, by parental education.

Percentages	Considered	Applied	Intend
Parent(s) has a degree	54.6	15.1	15.4
Parent(s) does not have a degree	65.5	26.0	26.4
Not known	54.7	16.8	18.7

Table 7. Percentage of position on teaching, by parental occupation.

Percentages	Considered	Applied	Intend
University/college lecturer, doctor, dentist, solicitor, scientist	52.6	15.9	14.7
Technical, health, welfare or education professionals	63.4	19.8	21.4
Clerical, administrative assistant, secretary	60.0	18.9	20.4
Craft related jobs	66.7	29.1	28.9
Small employer (under 10 employees)	58.0	18.8	18.8
Not usually employed	67.3	28.6	30.6
Not known	53.9	18.6	20.3

Note: students were asked which category was most like the job that their parent/carer had, or could simply write a different answer. The categories were not displayed to respondents in this order.

The university stage

Consideration of a career in teaching is most common among students who enter university with a BTEC (the most common vocational level 3 qualification in England at the time), or a combination of BTEC and A levels, rather than purely academic qualifications (Table 8). A very high proportion of those with vocational qualifications intend to go into teaching. This difference in terms of type of prior qualification is remarkable. Students with an International Baccalaureate (perhaps more often from private schools), and those with other or unknown qualifications (mostly from overseas), are least interested in teaching.

Prospective teachers enter university with lower average points for their university entry qualifications than their peers. And, according to the “effect” sizes, the firmer their

Table 8. Percentage of position on teaching, by prior qualification type.

	Considered	Applied	Intend
A Level	59.2	16.5	17.0
International Baccalaureate	43.7	17.4	13.7
BTEC, GNVQ, other professional diploma	72.6	40.6	43.9
Access to higher education diploma	63.7	28.5	27.9
Scottish Highers or Advanced Highers	50.0	5.0	5.0
A Level and BTEC/IB	76.4	45.5	49.6
Foundation year	66.7	16.7	8.3
Other or not known	49.6	15.1	15.8

intentions to teach become the bigger this difference is (Table 9). The highest academic achievers are generally much less interested in teaching as a career.

Home students from the UK are most likely to consider teaching, and to intend to become teachers (Table 10). European/EEA students are least likely to consider teaching as a career.

Table 11 is intriguing because it shows that students are less likely to report having considered teaching with each year at university. Yet, assuming that this would be true for each cohort, previous “consideration” of a career cannot go down over time like this. A student who considered teaching in the first year or earlier must, by definition, have considered it by the second year as well, even if they had earlier rejected the idea, or no longer considered teaching in year two. Yet in Table 12 consideration declines with each year cohort, and almost as many first year students intend to become teachers as second years who just thought about the idea. One possible explanation is that this is a product of the specific courses that the first and other years come from, but the more likely explanation is that as students move towards the end of their course they become more focussed on specific objectives and this narrows their view and their interpretation of what having “considered” any other career means. A similar result was found by Dolan, Metcalfe, and Navarro-Martinez (2012).

Students taking courses related to sports, languages and English are most likely to consider becoming a teacher, and those in more clearly occupationally-related areas such as medicine, law and architecture are least likely (Table 12). The pattern is linked to whether each degree area has a clear specific occupational outcome, like being a lawyer, or not. Reports of whether the respondents have applied, and actually intend,

Table 9. Average prior qualification tariff points, by position on teaching.

KS5 tariff points	Mean	SD	Effect size
Considered teaching	133.8	23.7	
Not considered	137.2	20.6	−0.15
Applied for teacher training	127.5	25.4	
Not applied	137.0	21.3	−0.42
Intend to become a teacher	127.3	25.6	
Not intend	137.2	21.2	−0.44
Total	135.2	22.5	

Table 10. Possible teachers by country of origin.

	Considered	Applied	Intend
UK/Home student	61.8	20.3	21.1
EEA student (European Economic Area)	41.5	12.4	9.7
International student	51.5	17.9	17.9
Other	44.9	11.8	13.4

Table 11. Percentage of position on teaching, by year of study.

	Considered	Applied	Intend
First	78.4	51.6	54.4
Second	57.6	17.9	18.2
Third	57.6	17.7	17.6
Fourth and above	54.7	11.1	12.4

Table 12. Percentage of position on teaching, by subject area.

	Considered	Applied	Intend
Sport-related courses	75.5	41.2	42.8
Languages, English, classics	70.3	25.6	26.2
Other courses	66.7	16.7	16.7
Social, economic and political sciences, education and humanities, psychology	65.8	26.8	27.0
Creative arts and design, library and information science, media studies	65.1	23.3	22.9
Physical and mathematical sciences, computing, engineering and technology, earth sciences	52.7	11.2	11.8
Business, accountancy and administrative studies	41.7	8.3	14.2
Medicine, Dentistry, Biological Sciences, Veterinary Sciences, Agriculture, Forestry	40.4	6.6	5.6
Law, architecture, building and planning	34.1	4.2	4.2

to become teachers show a similar pattern. A very high proportion of students following sports-related courses intend to become teachers.

For the three highest classifications of expected degree outcomes, the likelihood of considering, applying and intending to become a teacher increases with lower grades (Table 13). The picture is particularly marked for those applying and intending to become teachers. Teaching is generally a career attracting lower (prospective) qualified graduates. Very few respondents reported expecting a third class degree or worse, and some institutions/courses do not classify their degrees in this way, so little can be deduced from these figures.

General career choices

When considering a career, those who later in the survey identify as potential teachers are more motivated by having a chance to share their knowledge and give something back to society, than their peers are (Table 14). These differences become clearer for those who decide to apply for teacher training, and intend to become teachers. They are somewhat less concerned with status, pay, and career prospects than their peers. Studies that focus only on teachers, as exemplified at the start of this paper, might downplay the importance of these extrinsic motivators in comparison to the more altruistic ones. Issues like pay and career prospects are more important to the students who might otherwise have become teachers (according to their own reports). Crucial findings like this are lost when there is no appropriate comparator group. This issue is taken up again in the conclusion. Potential teachers and their peers are largely equivalent in terms of concern for recruitment workload, incentives, and autonomy.

A sociology student from the survey considered becoming a teacher but has changed their mind partly because of the low pay:

Table 13. Percentage of position on teaching, by expected degree outcomes (where degrees are classified).

	Considered	Applied	Intend
1st	54.5	15.3	16.8
2:1	61.2	21.7	21.3
2:2	69.9	29.3	30.8
3 rd or pass	56.7	16.7	20.0
Not known or not relevant	54.9	16.4	17.3

Table 14. Effect sizes for ratings of general career choice factors.

	Considered	Applied	Intend
Chance to give something back	+0.28	+0.48	+0.44
Chance to share knowledge	+0.25	+0.47	+0.42
Kinds of colleagues	+0.17	+0.26	+0.25
Interest in subject	+0.16	+0.28	+0.22
Suits temperament	+0.13	+0.18	+0.17
Use academic knowledge	+0.12	+0.26	+0.22
Length of working day	+0.12	+0.18	+0.17
Ease of getting job	+0.09	+0.28	+0.28
Convenience	+0.08	+0.01	+0.01
Job satisfaction	+0.07	+0.11	+0.07
Workload	+0.05	+0.02	+0.04
Job security	-0.01	+0.13	+0.16
Incentive to train	-0.01	-0.02	0
Family tradition	-0.02	+0.07	+0.10
Chance to develop skills	-0.03	-0.08	-0.03
Responsibility	-0.03	+0.19	+0.17
Intellectual stimulation	-0.04	-0.12	-0.18
Introductory bonus	-0.04	+0.01	+0.01
Autonomy	-0.06	0	-0.02
Job status	-0.12	-0.05	-0.05
Career prospects	-0.13	-0.08	-0.13
Opportunity for internship	-0.16	-0.17	-0.19
Pay	-0.23	-0.27	-0.27

Note: these “effect” sizes are all computed in relation to the other respondents. For example, the mean rating for the importance of pay was 7.07 for those who considered teaching as a career (2,619 cases), and 7.53 for those who did not consider teaching (1,850 cases). The overall standard deviation of responses to pay was 2.032. The difference between the means divided by the standard deviation is therefore -0.226 , listed in the table as -0.23 .

It’s the pay as well, because the teaching because like I said, I have a mother who’s in teaching and I have an auntie. It’s not a nine to five. It’s like a nine to five, plus your weekends and plus hours afterwards that many people don’t realise is that the hours of a barista without being appreciated in the same way in terms of money.

Another sociology student considered Teach First (with training while in the job) because they feel there might be another vocation for them later, except that there is a barrier:

So they go into underprivileged schools, and they teach core subjects. Now, that I would definitely do, but they don’t do the subject that I want to teach. [Teach First do not admit sociology teachers]

An architecture student, not intending to teach, told us:

I personally have never looked at salaries when I am choosing anything to do, for instance now I am taking part in a competition which for the time I’m putting it is not worth the reward that I’m getting but I’m really enjoying it so I am taking part in it nonetheless.

Another student of international relations, not intending to teach, told us:

Uh, I mean, I mean they could like maybe increase the pay, but to be honest, it’s more my, my problem is more . . . it’s not that I don’t think teaching is a, is a great profession or whatever. It’s just me as an individual, I don’t think I’d be good at teaching. [. . .] It’s not really anything about the position itself, it’s more how like I interact with the children, I don’t think I could be advantageous.

In fact, several students interviewed who did not want to be teachers suggested that pay was not the issue. Here is another, studying Chemical Engineering:

Honestly, um, as a person teaching does not really suit me. Um, that's the only reason why I didn't choose to look into teaching, I know is a really rewarding job and it must feel good to be giving back to young kids especially when you've been in that sort of situation before. As a person I know it doesn't really matter to me what teachers get paid or anything like that, I just don't think it suits me as a career. That's why I didn't choose to look into it.

A maths student wants to be a teacher, and has wanted this for several years, based on envisaged job satisfaction:

I plan to complete an ITT [initial teacher training] year and then become a secondary school teacher. This has been my goal for the last four or five years and with each placement and work experience I complete I become surer. The main factors for me wanting to be a teacher is how much enjoyment I would get from it, how rewarding it would be and whether or not I was happy. I definitely think that I will be happy as a teacher based on the experience I have had of it. The encouraging bursaries and schemes to help you as a trainee also helped.

Potential teachers report being more influenced by advice at school, government websites, and working as a volunteer, than their peers. Again, the differences grow between potential teachers and the rest, as their intention becomes firmer. And again such a finding could be misleading when focussing only on teachers. Respondent accounts suggest that volunteering and previous work experience can play an important role in providing information about future jobs (as the prior literature cited above had suggested).

A student intending to become a teacher told us:

[In sixth form] I did a peer mentoring program at school where I was paired with a year seven and I was kind of part of a learning support group and I would kind of just meet with them once to twice a week, see if you had any issues, helped them with homework, you know, check if everything's alright at home, all those kinds of little things. And that was another different side to teaching that I had not seen before, that is not just being stood in front of the class.

A maths student who wants to be a teacher has found advice from several sources:

I had brilliant maths teachers throughout school and it made me appreciate the value of good teaching. My family were very encouraging once they saw how much I enjoyed it and was passionate about it. Some friends have been discouraging, quoting the typical things about salary, workload, etc. My work experience has been huge in making me sure I want to teach. Media coverage has been at times encouraging (the department of education for example) and at times discouraging (news stories on the problems with teaching for example).

A student of music was still undecided about teaching, partly because they felt there was not enough information available to them:

I am still undecided about teaching because the main reason I was looking into it is because I want a career that is rewarding and allows me to help people. whilst I know teaching would allow me to do this but I also think there may be other careers that could also do this that I haven't explored yet. Last academic year I did a placement at a tutor group and this showed me that I am capable of teaching, however, I am not sure I want to do it on a large scale. This has made me want to look into teaching on a small scale. Other than this experience, I am not sure if there is much else to help me make the decision about whether or not to go into teaching.

Table 15. Percentage of position on teaching, by ease of getting another job.

	Considered	Applied	Intend
My degree made it hard to get a job other than teaching	61.6	24.9	25.1
My degree made it easy to get another job	58.0	18.1	18.6

Table 16. Effect sizes for ratings of incentives to teach.

Incentives to teach	Considered	Applied	Intend
Bursary for training	+0.48	+0.55	+0.62
Training salary	+0.47	+0.54	+0.58
Loan for tuition	+0.42	+0.57	+0.58
Loan for maintenance	+0.40	+0.56	+0.57

becoming a teacher

Unsurprisingly, the possible teachers are more likely to report that their degree has not made it easy for them to get a job other than teaching, but the differences are not large (Table 15).

In terms of incentives, potential teachers report that they would be influenced by financial incentives to train, more so than those who did not consider teaching, with each version of incentives scoring a similar amount (Table 16). The reported importance of such inducements is greatest for intending teachers.

Teaching career factors

Thinking about teaching as a career, potential teachers reported altruistic reasons, coupled with prior good experiences of schooling, and academic interest, as drivers (Table 17). They are reportedly not any more or less interested in holidays, working hours, workload, or poor discipline than their peers. Such factors are often reported in relation to teacher dropout, but at this stage they are not a concern for potential teachers,

Table 17. Effect sizes for ratings of teacher career factors.

	Considered	Applied	Intend
Good school experience	+0.41	+0.38	+0.37
Career prospects	+0.37	+0.59	+0.62
Intellectual stimulation	+0.33	+0.57	+0.51
More employable	+0.31	+0.40	+0.39
Had good teachers	+0.30	+0.26	+0.26
Academic interest	+0.29	+0.46	+0.43
Chance to give something back	+0.28	+0.37	+0.31
High status	+0.27	+0.37	+0.40
Teacher salaries are too low	+0.14	+0.07	+0.04
Working with young people	+0.09	+0.17	+0.11
Job security	+0.08	+0.13	+0.17
Teachers in family	+0.02	-0.13	-0.13
Long holidays	+0.01	-0.05	-0.04
Academic stars	+0.01	+0.01	-0.02
Suitable for women	-0.01	-0.01	-0.01
Poor discipline	-0.02	-0.11	-0.16
Working hours	-0.08	-0.03	-0.01
Workload manageable	-0.13	0	+0.02
Can't do anything else	-0.31	-0.33	-0.35

or even for those not intending to be teachers. This is very different from the views portrayed in the wider literature, based solely on existing or trainee teachers.

One Chemical Engineering student not planning on being a teacher, did raise the issue of workload, but more about the style than the hours:

I have had teachers at school which I really like at school and teachers that I didn't like. But the main reason why I say I don't really feel suited to those actual roles would be because I think like the environment I'm in, I rather work in an office space than being around young people every single day as a career and in terms of the work load teachers have as well. I would rather be set a task which I can work on individually or in small groups, rather than me, standing up and literally giving out information five to six hours a day.

A maths student is considering Teach First to increase job-related skills and then find a different job:

My parents say it's like the easiest job in the world and it's really not stressful and great big holidays and um, you know, super easy to get on with the kids. But then I talk to like actual teachers that my friends and stuff. Um, and uh, yeah. And they say, you know, it's just really hard and the kids are a nightmare and you get barely any holiday time because you just have the planning and that's, you're kind of getting bullied by the government to raise grades, when really the government's in control of the grades. Yeah. Definitely mixed reports.

Regression models for considering or intending teaching

Having considered all of these responses in isolation, and then compared them between likely future teachers and the rest, this section of the paper now uses all available variables to model the overall differences between the groups. The following models are based on only 3,381 cases, representing all home and EEA students in their first three years of full-time undergraduate study. The opportunities and motivations of overseas and pre- or post undergraduate students might be very different, and so are not included here.

The first model compares the 2,049 who reported considering teaching as a career with the other 1,332 who did not. Around 60.6% of cases had considered teaching, and so the base figure for the logistic regression model is 60.6. We could predict whether any student had considered teaching with 60.6% accuracy just by guessing that they had done so, with no other information. The second model uses only those who considered teaching, and compares the 715 students who reported intending to teach to the 1,334 not intending to teach (but who had considered teaching as a career). So the base figure for the second logistic regression model is the 65.1% not intending to teach. Nearly two thirds of students who report considering teaching had rejected the idea (or at least said they were not pursuing it).

Adding information on student background – sex, ethnicity, parental education and occupational group – in the first step does little to the accuracy of either prediction (Table 18). The two models each increase their accuracy by less than one percentage point. Background indicators like gender and parental occupation and education are generally seen as strongly related to education outcomes. But this model shows that intention to teach is not very stratified, for this group of students, who have already been selected for entry to university on the basis of prior attainment.

Table 18. Percentage predicted correctly at each stage of the two logistic regression models.

Block	% predicted correctly – Considered teaching or not	Increase on pre- vious figure	% predicted correctly – Intending to teacher or not	Increase on pre- vious figure
Base	60.6	-	65.1	-
Background	61.2	0.6	65.6	0.4
University	65.5	4.3	71.1	5.5
Career	68.1	2.6	79.4	8.3
Teacher factors	70.5	2.4	80.0	0.6
Incentives to teach	71.5	1.0	80.0	0

A bigger increase in the accuracy of both models, by around five percentage points, comes from the relatively simple variables related to being at university – such as their year of study, and broad subject area of degree. The biggest increase for the second model predicting intention to be a teacher, over eight percentage points, comes from reports of students' general career concerns. Net of these factors, asking students what they think of teaching adds little to the base figure for either model, and the role of incentives to teach now becomes negligible or non-existent. Given the apparent importance of incentives based on the raw figures, the results from this model show the crucial relevance of context when considering such factors. It also shows the danger and distortion that arises in the findings from the traditional approach of only asking teachers/trainees.

Table 19 looks at the odds ratios (coefficients) for the predictor variables. It only includes variables whose inclusion in the model increased the accuracy of the predicted outcome for each model. Looking at the variables used at each step, males are more likely to consider teaching than females, as are students from less prestigious occupational backgrounds, or with less educated parents. Net of these factors, home UK and first year students are more likely to consider teaching. Students studying sports, humanities and languages are still much more likely to consider teaching as a career than those in subjects like law and medicine. Once these differences have been taken into account, the coefficients for all career choice factors are generally small, or irrelevant. However, students who considered teaching as a career are slightly more likely to want give something back to society, to share their knowledge, and to be interested in the long holidays than all other students.

As importantly, the “negative” findings (shaded in Table 19), looked at in this biographical order, show that those *considering* teaching are no different to others in terms of prior attainment and qualification type. These groups also show no differences in terms of career factors like job satisfaction, job security, autonomy, opportunity to develop skills, chance to use academic knowledge, ease of getting job, interest in subject area, the kind of colleagues, the job suits my temperament, workload, family tradition, convenience, intellectual stimulation, a financial incentive to train, and an introductory bonus. They show no difference in terms of factors relating to teaching as a career such as teacher working hours, high job security, poor discipline, teacher in family, academic stars, working with young people, good teachers at school, continue academic interest, more suitable for women, high status, become more employable, and intellectual stimulation. Incentives to become a teacher have generally low coefficients, and being offered a loan to support training is now irrelevant to the model. These are very different findings to

Table 19. Coefficients for each predictor in the two models.

Block	Variable	Values	Odds ratios for Considered teaching	Odds ratios for Intend to teach		
Background	Sex	Male	1.42	2.75		
		Female	1.08	1.67		
		Other	-	-		
	Ethnicity	Asian			0.86	
		Black			0.37	
		East Asian			0.67	
		White			0.69	
		Mixed			0.39	
		Other		-	-	
	Parent degree	Yes		0.86	0.64	
		No		1.33	1.14	
		Not known		-	-	
	Parent occupation	University/college lecturer, doctor, dentist, solicitor, scientist		1.07		
				1.51		
		Technical, health, welfare or education professionals		1.17		
				1.42		
		Craft related jobs		1.68		
			1.25			
Small employer (under 10 employees)			-	-		
			1.92			
University	Student	Home	1.92			
		EEA				
	Year of study	First	1.97	3.45		
		Second	1.02	1.07		
		Third	-	-		
	Main entry qualifications	A Level			1.07	
					1.27	
		International Baccalaureate			1.84	
					1.53	
		BTEC, GNVQ, other professional diploma			0.58	
					3.88	
		Access to higher education diploma			0.00	
					-	
	Scottish Highers or Advanced Highers			0.989		
	A Level and BTEC/IB					
Foundation year						
Other or not known						
Prior qualification points	Subject area of study	Medicine, Biological Sciences, Veterinary	1.80	6.621		
		Physical and mathematical sciences, computing, engineering	3.26	14.98		
		Sport-related courses	8.23	27.87		
		Business, accountancy and administrative studies	0.88	6.267		
		Social sciences, education and humanities	5.05	21.82		
		Languages, English, classics	6.56	27.16		
		Creative arts and design, media studies	5.07	19.81		
		Law	-	-		
		Career	Pay		0.95	0.92
			Career prospects		0.96	0.91
Job responsibility			0.94			
Chance to give back			1.06	1.08		
Chance to share knowledge			1.09	1.14		

(Continued)

Table 19. (Continued).

Block	Variable	Values	Odds ratios for Considered teaching	Odds ratios for Intend to teach
	Job status		0.95	
	Holidays		1.07	
	Opportunity for internship		0.93	0.92
	Job security			1.11
	Ease of getting a job in that field			1.13
	Job that suits my temperament			0.94
	Intellectual stimulation			0.88
	An introductory bonus			1.06
Sources	My teachers		1.14	1.30
	Media stories		0.94	0.93
	Career advice		0.94	0.92
	Volunteering		1.04	1.11
	Government website		1.11	1.19
	People I know			0.95
	Publicity campaigns, adverts			0.89
	My lecturers in university			0.89
Teacher factors	Teacher salaries low		1.07	
	Good career prospects		1.09	1.19
	Teacher workload ok		0.96	
	Good school experience		1.13	
	Give something back		1.08	
	Teachers in family			0.94
	More employable			1.07
Incentives	Salary while training		1.12	
	Tax free bursary		1.08	1.29
	Loan for tuition fees		1.05	

Note: “-” in the table denotes the comparator group for each categorical predictor. The preceding odds ratios are in relation to this group. A blank shaded cell denotes a predictor variable that made no difference to the percentage of cases predicted correctly (Table 18), and so is not included in the model. In effect, the coefficient for these variables is 1.

those in the literature (above) based largely on asking existing teachers/trainees, without a comparator.

The second model compares those who have only considered teaching as a career with those who intend to become teachers. In some respects the results are similar to the first model, but with more extreme differences in terms of the predictor coefficients. Males, and Asian students are more likely to report intending to be teachers than Black and mixed ethnicity students, or those whose parents have a degree. First year, BTEC and Access students (with vocational prior qualifications) are more likely to want to be teachers than those with A levels (the most common academic prior qualification). Those with lower prior qualification points on entry to university are more likely to intend to teach. Teaching is again more popular for those taking sports, humanities and

language degrees. Most career factors, net of the foregoing, are relatively neutral between the two groups. A chance to give back and share knowledge are predictors, but now so are job security and ease of getting a job. A desire for intellectual stimulation predicts not intending to be a teacher. The only incentive for teachers that matters is a tax free bursary for training (perhaps some undergraduates are not thinking beyond the next few years).

As importantly, many possible predictor variables are again irrelevant to the outcome. These include job satisfaction, autonomy, opportunity to develop skills, job responsibility, chance to use knowledge, subject interest, kinds of colleagues, workload, family tradition, status, length of working day, convenience, and a financial incentive to train. More specific to choice of teaching as a career, the following are also irrelevant – teacher salaries, working hours, job security, workload, poor discipline, long holidays, academic status, working with young people, good teachers, academic interest, women, school experience, high status, a chance to give something back, and intellectual stimulation. Again, these findings are different to those from the standard approach.

Discussion

The research described here is unusual in that it involves teachers, those interested in teaching *and* those not interested in teaching. In several respects, this alters the kinds of findings produced by standard research based only on the views of teachers. In attempting to improve the recruitment of new teachers, therefore, a key consideration for policy and research must be about who is intended to be attracted to teaching. This paper looks at three main groups – those never considering teaching, those considering and rejecting teaching, and those who intend to become teachers. Presumably the first group is not a fruitful area for new recruitment. A lot of these students are studying subjects at university like accountancy, law, medicine, architecture and engineering, which have their own clear professional or vocational outcomes. A lot are planning a career in their specialist subject area, at this stage at least. They are perhaps most likely to be attracted to teaching if their career plans change for any reason.

At the other extreme, a focus only on those firmly intending to become teachers would lead to the same, probably misleading, answers as standard research in this area, that does not have a suitable comparator and/or does not look at the predictors in biographical order. In general, teaching is currently disproportionately attracting students from less educated families with less prestigious occupational backgrounds, who have somewhat lower attainment prior to university. Prospective teachers also tend to expect lower degree results, and come from the some of the most generic subject areas (like sport, English, classics, and history). However, in the short term, student background characteristics, prior experiences and course choices are not malleable, and so these differences do not help much in deciding how to attract *more* people into teaching.

For the purposes of this paper, the key distinction seems to be between intending teachers, and those who express some interest in teaching, but do not now intend to become teachers. It is the views of this second group, not the first as is usually portrayed, that surely provide clues to how to attract more people into teaching.

Once pre-existing differences have been accounted for, there is little difference between prospective teachers and others in terms of generic career drivers, or the appeal of financial incentives. As well as incentives being largely irrelevant, many of the issues that teachers/

trainees report as negative (in studies only of teachers) do not discriminate between prospective teachers and others. These issues include heavy workload, and poor student discipline. Such headline-grabbing factors simply disappear when a genuine comparative design is used, as here. Policy-makers and other stakeholders need to learn the lesson that teacher supply will not only (or at all) be addressed by tackling the largely bureaucratic and status issues that existing teachers complain about. The reason why most students do not intend to become teachers is much deeper and long-standing. Policies need to be devised to make teaching more attractive to them, totally distinct from policies to try and retain existing teachers. Working towards these is the next step in our project.

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