

Institute for  
Fiscal Studies



---

# The costs and benefits of initial teacher training for schools

Ellen Greaves

# Introduction

- Chris has summarised the **central costs** for government for each initial teacher training route
- How do costs (and benefits) for schools affect the **overall cost** of each route?
- This strand of the research uses information from a survey of primary and secondary schools to provide evidence on:
  - The direct costs and benefits (for example recruitment fees, salary, and payments to and from ITT providers)
  - The indirect costs and benefits (for example staff time taken to mentor a trainee and extra capacity provided by the trainee)
- There are other costs and benefits we can't consider:
  - Retention (hopefully at a later date)
  - Economies of scale (recruitment, training, supervision)

# Outline

- Description of our sample of schools and data
- Recruitment:
  - What are the characteristics of potential teachers that choose each route?
  - What are the characteristics of schools that choose to take trainee teachers via each route?
- Training:
  - What indirect costs are imposed on schools?
  - What are the benefits to schools?
  - What are the short-term differences in the effectiveness of departments receiving trainee teachers (for pupils' academic attainment)?
  - What are the total costs for each training route?

4. Which route is/was the trainee on? Please tick one option. If B.Ed., please indicate which year of training, and if PGCE, please indicate which placement.

B.Ed.	<input type="checkbox"/>	1	<i>Year of training</i>	1	<input type="checkbox"/>	2	<input type="checkbox"/>	3	<input type="checkbox"/>
PGCE	<input type="checkbox"/>	2	<i>Placement</i>	First	<input type="checkbox"/>	Second	<input type="checkbox"/>	Third	<input type="checkbox"/>
GTP	<input type="checkbox"/>	3							
School Direct (salaried)	<input type="checkbox"/>	4							
School Direct (unsalaried)	<input type="checkbox"/>	5							
SCITT	<input type="checkbox"/>	6							

# DESCRIPTION OF OUR SAMPLE OF SCHOOLS AND DATA

# Survey design

- Collected detailed information from primary and secondary schools
- Primary: one survey to head teacher
- Secondary: one survey to ITT co-ordinator (central costs and benefits for the school) and surveys to six subject leaders (subject specific costs and benefits)
- Some questions relate to a specific trainee:
  - Survey specified which route to prioritise

## Survey response: Primary

Route	Sampled	Achieved sample	Response rate
<b><i>Head teacher</i></b>			
BEd	596	52	8.7%
HEI-led PGCE	597	49	8.2%
SCITT	697	68	9.8%
School Direct	1099	122	11.1%
Teach First	0	Na	Na

## Survey response: Secondary

Route	Sampled	Achieved sample	Response rate
<b><i>ITT Co-ordinator</i></b>			
BEd	0	Na	Na
HEI-led PGCE	300	63	21.0%
SCITT	300	67	22.3%
School Direct	600	133	22.2%
Teach First	299	57	19.1%
<b><i>Subject Leader</i></b>			
BEd	0	Na	Na
HEI-led PGCE	1800	124	6.9%
SCITT	1800	122	6.8%
School Direct	3600	310	8.6%
Teach First	1794	106	5.9%

## Survey response: Secondary

Route	Sampled	Achieved sample	Response rate
<b><i>Both ITT Co-ordinator and Subject Leader</i></b>			
BEd	0	Na	Na
HEI-led PGCE	300	38	12.7%
SCITT	300	42	14.0%
School Direct	600	89	14.8%
Teach First	299	27	9.0%



# Survey representativeness

- Compare characteristics of schools that responded to the survey with the characteristics of schools that were sampled
  - Primary schools: broadly representative
  - Secondary schools: broadly representative
- This suggests that results from the survey are representative of schools involved with different initial teacher training routes
  - Caveat: some suggestion at both primary and secondary level that schools that responded to the survey for School Direct routes had higher a Ofsted rating, on average, than those sampled.
  - This could reflect differences in the probability of responding to the survey, or successfully recruiting a School Direct trainee.

# Administrative data

- Linked to survey and used independently to inform central costs (student loans model)
  - School Workforce Census
  - EduBase
  - School performance tables
  - Ofsted inspection data
  - National Pupil Database

# RECRUITMENT



# CHARACTERISTICS OF POTENTIAL TEACHERS

# What are the characteristics of potential teachers that choose each route? Primary

Characteristic	BEd	HEI-led PGCE	GTP	SDS	SDUS	SCITT
Percentage of trainees rated 'very good' or 'good'						
Resilience	76	75	89	81	83	81
Social Skills	93	84	100	95	90	88
Subject Knowledge	54	67	53	62	62	71
Behaviour Management	56	56	63	59	48	76
Confidence in the Classroom	73	54	72	64	62	73
Commitment to Teaching	90	85	84	90	90	88
Potential to be a Good Teacher	93	82	89	86	90	88

Confidence in classroom: lower for HEI-led PGCE than BEd

Social skills: GTP significantly higher than HEI-led PGCE, School Direct salaried and SCITT trainees

# What are the characteristics of potential teachers that choose each route? Secondary

Characteristic	HEI-led PGCE	Teach First	GTP	SDS	SDUS	SCITT
Percentage of trainees rated 'very good' or 'good'						
Resilience	73	75	82	68	74	77
Social Skills	78	89	85	84	80	79
Subject Knowledge	75	89	77	66	79	69
Behaviour Management	46	44	66	53	51	49
Confidence in the Classroom	62	64	69	67	63	64
Commitment to Teaching	81	78	83	81	89	90
Potential to be a Good Teacher	79	83	83	81	83	79

Subject knowledge: TF significantly higher than HEI-led PGCE, SDS and SCITT

Behaviour management: GTP significantly higher than HEI-led PGCE

# Summary

- According to ratings of initial impressions by head teachers/subject leaders:
  - The majority of trainees have “good” or “very good” potential to be good teachers
  - There are few significant differences across different routes (with some exceptions)
  - This indicates that there is not a large degree of sorting across routes according to trainee “quality”



# CHARACTERISTICS OF SCHOOLS



# What are the characteristics of schools that choose to take trainee teachers from each route?

## Primary

Characteristic	All	BEd	HEI-led PGCE	GTP	SDS	SDUS	SCITT
Ofsted: overall effectiveness	2.04	1.83	1.83	1.71	1.58	1.50	1.64
Average point score	28.63	29.02	29.04	28.99	29.00	29.20	29.49
EAL (prop.)	0.13	0.16	0.17	0.18	0.20	0.16	0.13
FSM (prop.)	0.17	0.16	0.16	0.16	0.18	0.16	0.12
Tenure less than one year (prop.)	0.13	0.13	0.13	0.13	0.16	0.09	0.11
Tenure between one and two years (prop.)	0.15	0.11	0.12	0.14	0.16	0.15	0.11
Upper pay scale (prop.)	0.32	0.34	0.33	0.29	0.24	0.31	0.39

Ofsted: schools involved with training have significantly higher ratings, on average. Also true for sub-domains: quality of teaching and effectiveness of leadership.

Pupil attainment: schools involved with training have significantly higher pupil attainment, on average.

# What are the characteristics of schools that choose to take trainee teachers from each route? Secondary

Characteristic	All	HEI-led PGCE	Teach First	GTP	SDS	SDUS	SCITT
Ofsted: overall effectiveness	2.06	1.81	2.17	1.78	1.68	1.73	1.86
Average point score	348.0	351.6	335.7	353.0	356.0	352.9	347.0
EAL (prop.)	0.13	0.12	0.26	0.15	0.16	0.13	0.09
FSM (prop.)	0.16	0.15	0.28	0.15	0.15	0.14	0.14
Tenure less than one year (prop.)	0.12	0.09	0.10	0.10	0.10	0.08	0.1
Tenure between one and two years (prop.)	0.14	0.13	0.17	0.14	0.14	0.13	0.13
Upper pay scale (prop.)	0.36	0.38	0.37	0.35	0.34	0.37	0.38

Ofsted: TF significantly worse while schools that have other routes are significantly better than average

Similar story for APS and pupil composition

# Summary: recruitment

- Some differences in the characteristics of trainees on different ITT routes, but these are largely not statistically significant
  - This suggests that the selection of trainees to each route will not bias the estimated cost-effectiveness of each route
- Schools that choose to take trainees (in particular school-based trainees) have better Ofsted ratings and pupil attainment, on average
  - This suggests that findings from these schools are not generalisable to all schools
- Schools that take Teach First trainees have lower Ofsted ratings, more pupil deprivation and lower pupil attainment, on average
  - This suggests that findings from these schools are not generalisable to all schools

# TRAINING

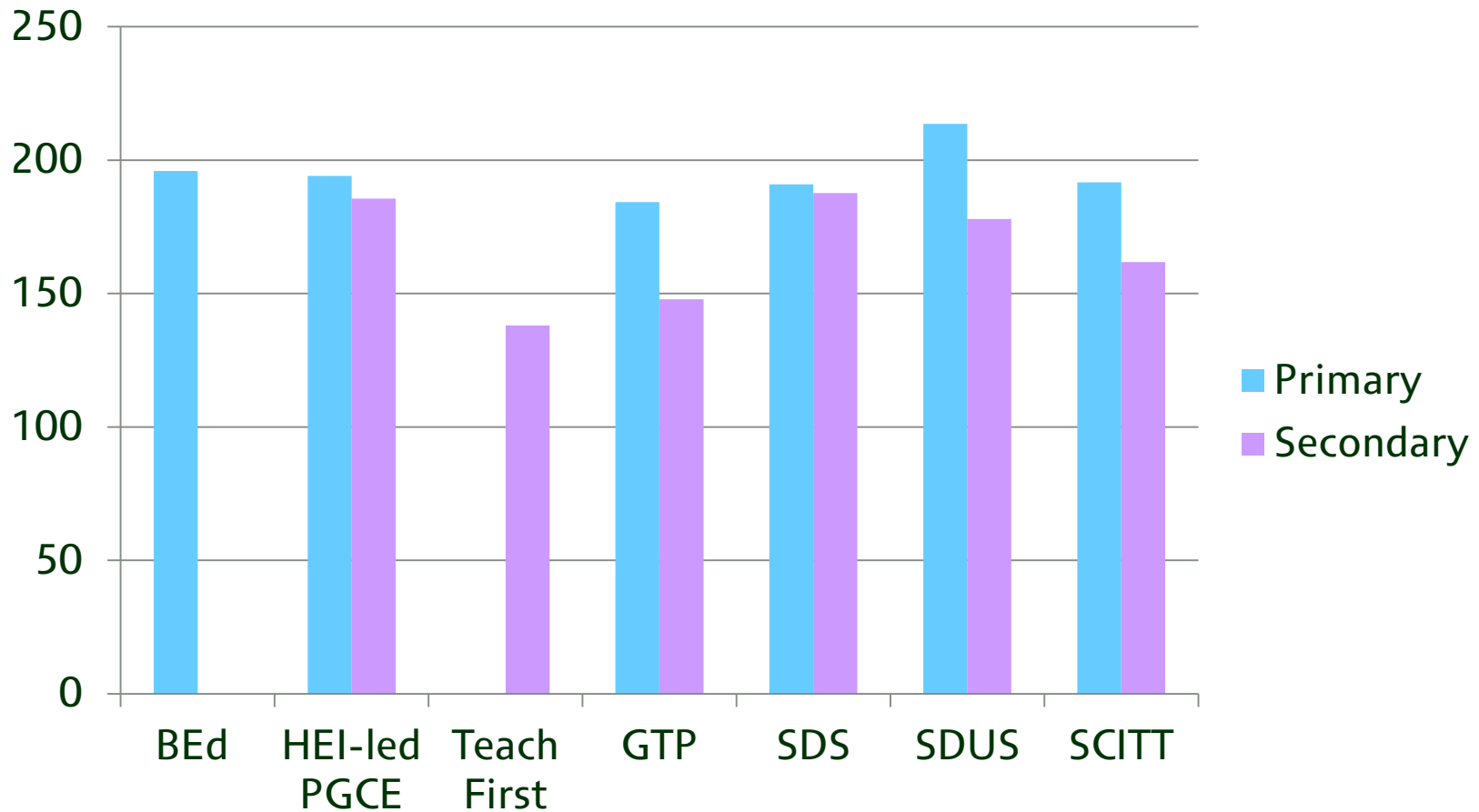


# INDIRECT COSTS FOR SCHOOLS

# What indirect costs are imposed on schools? (£ per week)

Indirect cost for schools	Primary Mode pay grade/average		Secondary Mode pay grade/average	
Mentoring	Leadership	48	Upper	34
Observations	Upper	40	Upper	67
Lesson planning support	Upper	36	Upper	24
Written assessment of trainee	Leadership	12	Upper	11
Liaising with ITT provider	Leadership	21	Upper	16
Admin/paperwork	Leadership	17	Upper	8
Arranging training/observations	Leadership	6	Upper	3
Liaising with other schools	Leadership	13	Upper	12

# What indirect costs are imposed on schools? By route (£ per week)



# Summary

- The largest indirect costs for schools are the cost of mentoring and observations (including feedback)
- Variation between primary and secondary in pay grade of staff member
  - £32 per hour for leadership in primary, £23 per hour for upper in secondary
- Reasonably large cost per week (especially considering total cost of placement)
- Little variation in total cost per week by route
  - Teach First lower than HEI-led PGCE in secondary schools: driven by variation in teacher time for observations
- Costs don't depend on trainee's degree class (where observed) or the perception of trainee "quality"



# Additional monetary costs and benefits for school

- Trainee's salary
- Payment to provider
- Payment from provider
- Recruitment cost
- Direct grant funding
- Mentoring grant
- Contribution to teaching (hours per week without direct supervision)
- *Also consider additional overall costs in later sections:*
  - *Voluntary contributions to Teach First*
  - *Net tax receipt from salaried routes*

# Total net costs per placement: Inner London

	Primary	Secondary	Primary	Secondary
	High-priority		Other-priority	
BEd	£1,322		£1,322	
HEI-led PGCE	£1,570	£489	£1,570	£489
SCITT	£5,355	£3,531	£5,355	£3,531
SD unsalaried	£5,166	£3,554	£5,166	£3,554
SD salaried (with uplift)	-£180 (-£2,140)	£347 (-£2,043)	£1,820 (£60)	£6,647 (£4,887)
Teach First		£10,998		£10,898

# Total net costs per placement: Inner London

	Primary	Secondary	Primary	Secondary
	High-priority		Other-priority	
BEd	£1,322		£1,322	
HEI-led PGCE	£1,570	£489	£1,570	£489
SCITT	£5,355	£3,531	£5,355	£3,531
SD unsalaried	£5,166	£3,554	£5,166	£3,554
SD salaried (with uplift)	-£180 (-£2,140)	£347 (-£2,043)	£1,820 (£60)	£6,647 (£4,887)
Teach First		£10,998		£10,898



# BENEFITS FOR SCHOOLS

# What are the benefits to schools? Primary

Benefit	BEd	HEI-led PGCE	GTP	SDS	SDUS	SCITT
Percentage reporting 'agree' or 'strongly agree'						
Provided fresh teaching ideas	74	63	94	70	78	80
Provided CPD opportunities	64	62	83	66	74	76
Gave the school extra capacity	62	48	78	71	74	60
Expect to hire	18	23	71	71	63	62
Financial benefit for the school	31	23	39	32	44	27
Other	56	61	89	90	69	62

# What are the benefits to schools? Secondary (subject leader)

Benefit	HEI-led PGCE	Teach First	GTP	SDS	SDUS	SCITT
Percentage reporting 'agree' or 'strongly agree'						
Provided fresh teaching ideas	77	69	80	56	70	69
Provided CPD opportunities	59	51	75	59	65	66
Gave the school extra capacity	43	43	58	56	47	49
Expect to hire	28	59	56	52	35	34
Financial benefit for the school	30	35	27	18	26	26
Other	62	63	68	62	68	65



# COSTS RELATIVE TO BENEFITS FOR SCHOOLS

## Benefits in relation to costs: primary

Route	Benefit > Cost	Benefit = Cost	Benefit < Cost
BEd	58	19	22
HEI-led PGCE	40	31	29
GTP	72	22	6
School Direct (salaried)	54	17	29
School Direct (unsalaried)	63	22	15
SCITT	68	16	16



# Benefits in relation to costs: secondary subject leaders and (ITT co-ordinators)

Route	Benefit > Cost	Benefit = Cost	Benefit < Cost
HEI-led PGCE	50 (65)	30 (27)	20 (9)
Teach First	61 (62)	19 (26)	19 (12)
GTP	65 (75)	22 (13)	13 (13)
School Direct (salaried)	48 (51)	22 (16)	29 (33)
School Direct (unsalaried)	52 (66)	21 (11)	27 (23)
SCITT	46 (68)	32 (27)	22 (5)

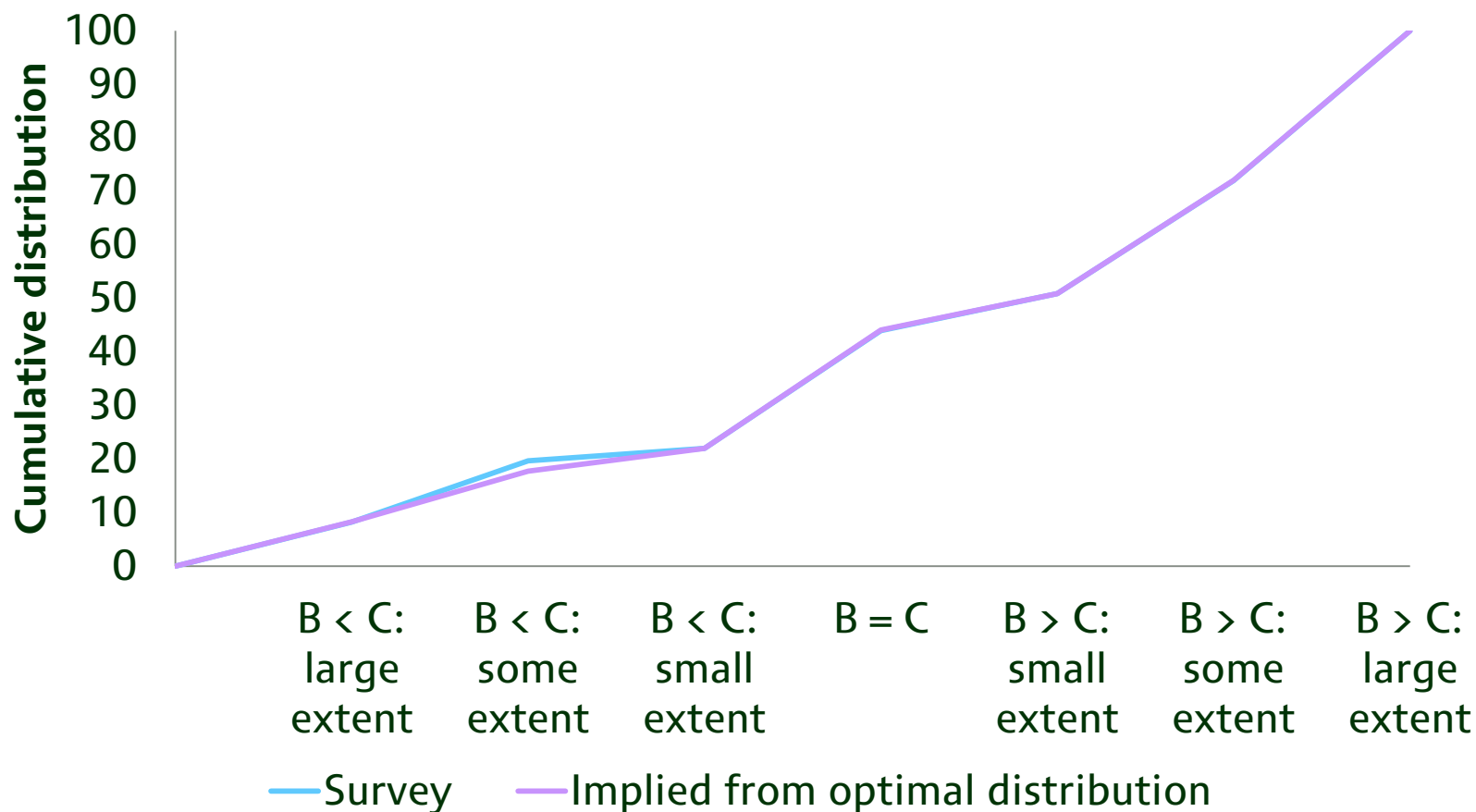
# What influences whether benefits > costs?

- Costs are unrelated to whether the school reports benefits > costs, or school characteristics we consider
- The probability that benefits > costs is related to:
  - The report of benefits (especially contribution to teaching ideas, opportunity for CPD and financial benefit to the school)
  - The characteristics of trainees (especially the potential to be a good teacher and social skills, less so with subject knowledge)
  - Note that the characteristics of trainees are not significantly correlated with the costs for the school

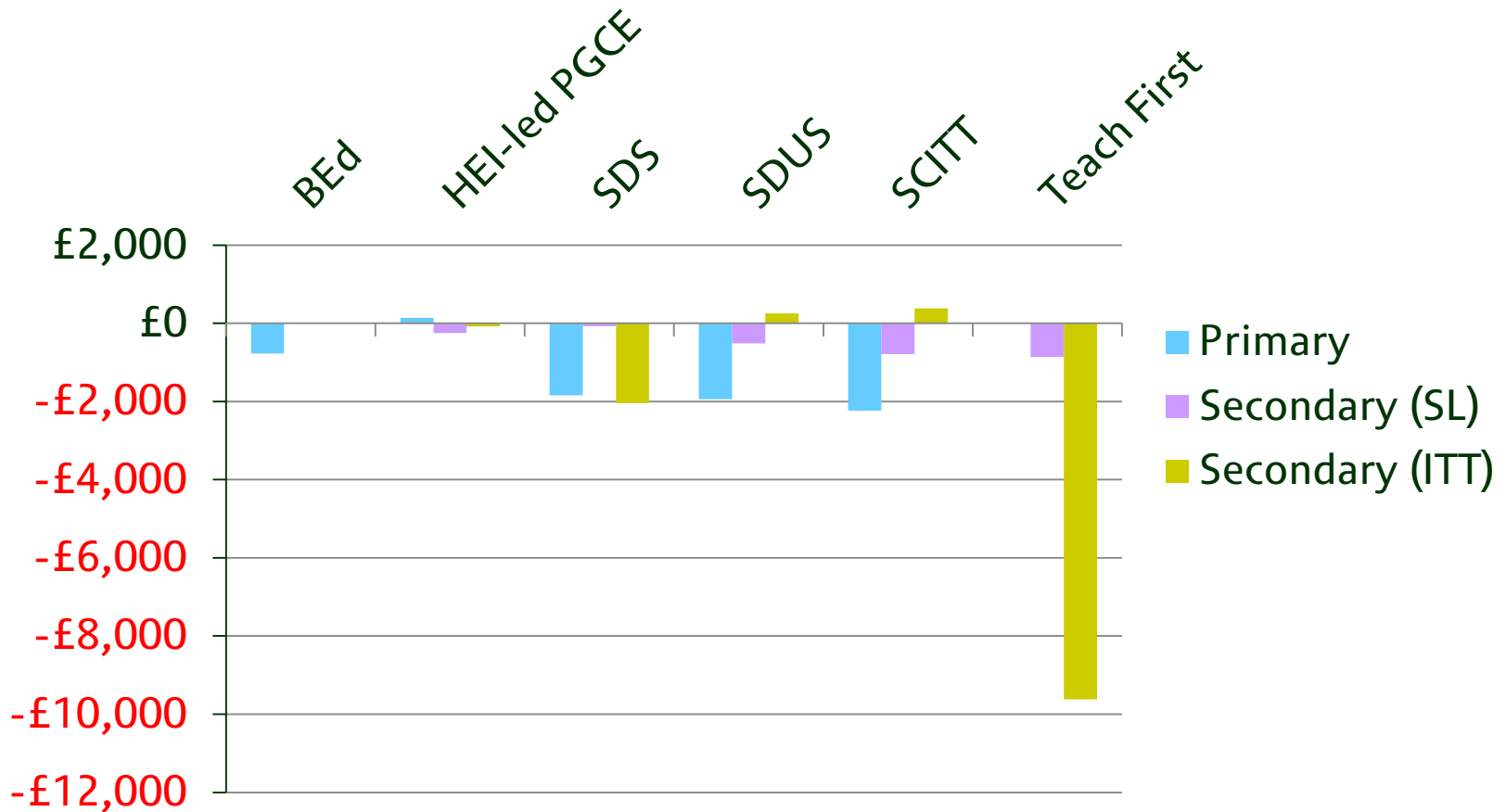
# Monetising the benefits relative to costs (net costs)

- Derive a monetary value for each route, on average
- Use information on the report of benefits relative to costs, and to what extent
- Find the empirical distribution that best fits the survey responses
- Calculate the mean per route based on draws from this distribution
- Illustrate with primary school example...

# Monetising the net costs to schools (1)



# Monetising the net costs to schools (2)



# Summary

- There are multiple benefits for schools of hosting trainees
- Some variation by route, particularly between school-based and university-based routes
- The contribution to teaching of Teach First and School Direct (salaried) trainees is perhaps lower than expected
- The majority of routes are reported to have benefits greater than costs for the school/department (except HEI-led PGCE in primary and SDS in secondary departments)
- Whether benefits are greater than costs depends on the characteristics of the trainee and the specific benefits that are reported, rather than any variation in costs
- Teach First has the largest net benefit to schools, primarily due to the report of ITT co-ordinators



# IMPACT ON PUPIL ATTAINMENT

# Barriers to participation in ITT

	Primary	ITT co-ord.	Subject leader
Don't have the necessary staff capacity to support one or more trainees	66	74	50
Concerns about a potentially negative impact on pupil progress	47	37	34
Poor experience of supporting trainee(s) in the past	21	24	12
Budgetary issues / inadequate payment to host a trainee	20	22	12
Poor experience with ITT provider(s) in the past	20	16	6
There has been a lack of suitable candidates	11	9	24
Have not had an opportunity to host trainees	4	28	14



# What are the short-term differences in pupil attainment with/without trainee teachers?

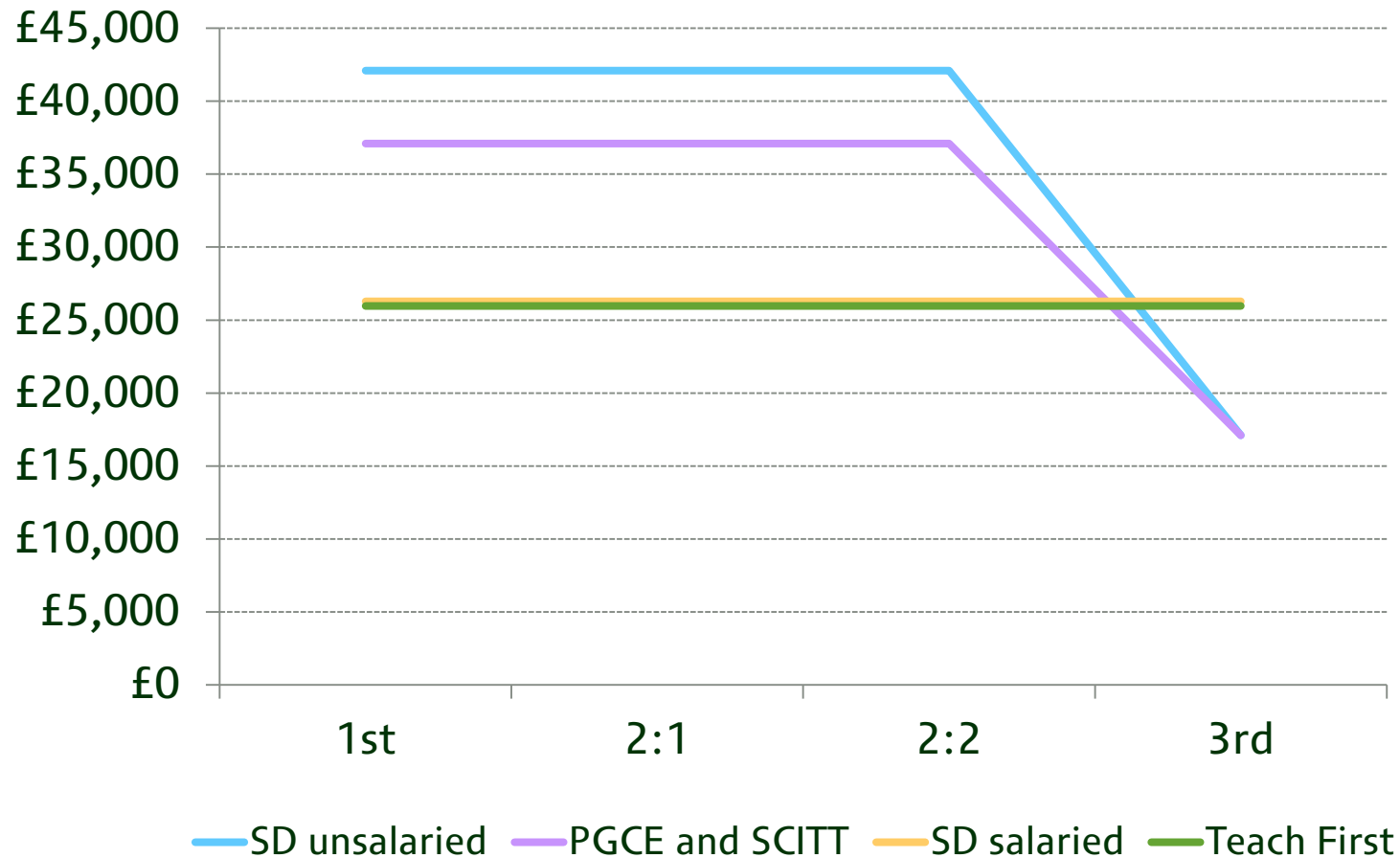
- Compare pupil test results in schools over three academic years: 2011/2012, 2012/2013, 2013/2014
- Sometimes a trainee is present, sometimes not
- Trainee may not have direct contact with pupils in assessment year, but presence may affect other teachers in the school/department
- What is the impact on pupil attainment?
  - No evidence of a statistically significant impact for primary or secondary schools
- Are schools wrong to be concerned about the impact attainment?
  - We may only observe trainees where schools are confident pupil attainment will not be affected
  - Pupil attainment at other ages may be affected



# TOTAL COSTS AND BENEFITS

# Comparison of central costs - Secondary

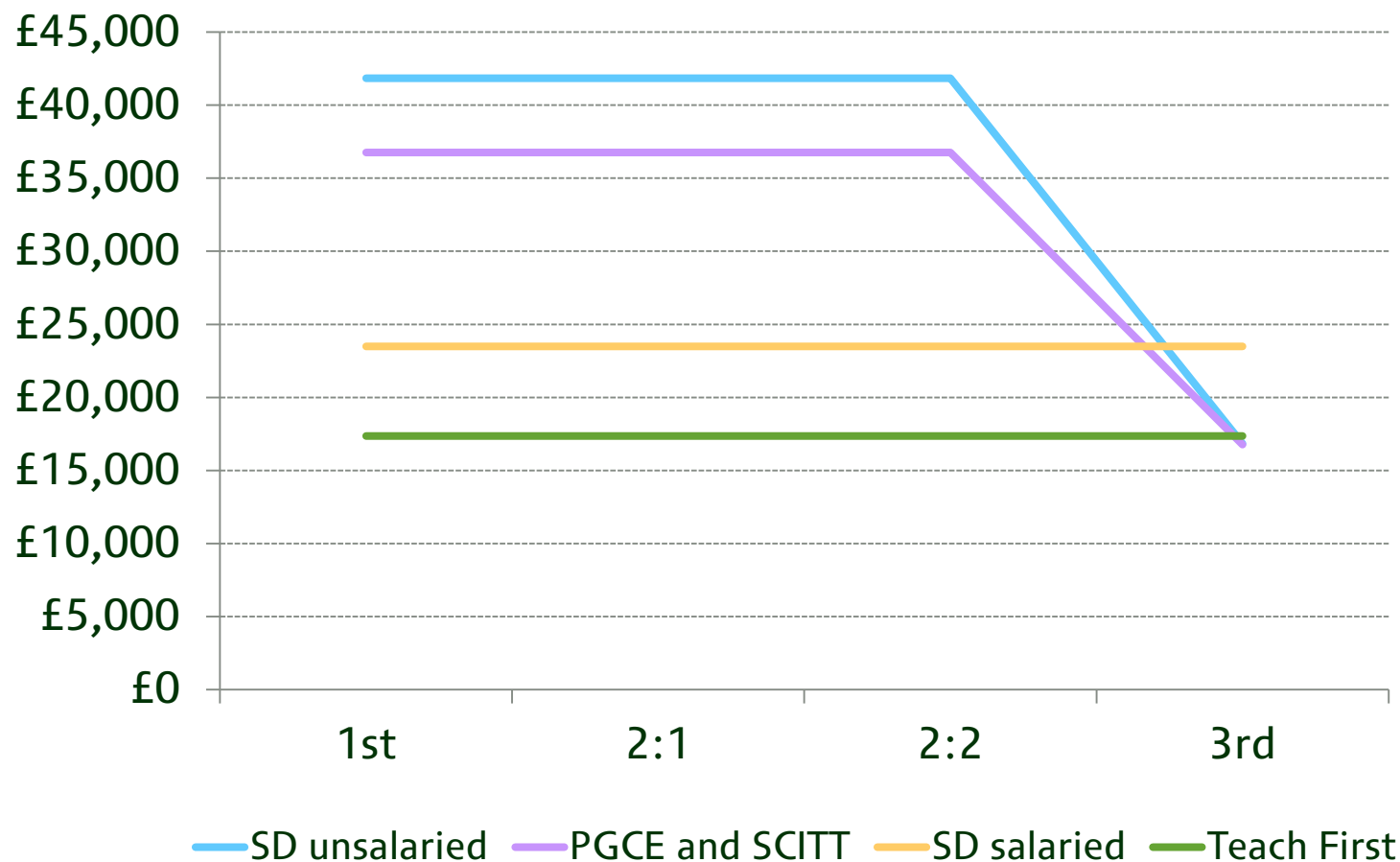
Maximum central cost of a secondary trainee in a high-priority subject by degree class and training route (Inner London)



Source: Figure 4.1 of *The Costs and Benefits of Different Initial Teacher Training Routes*

# Comparison of overall costs - Secondary

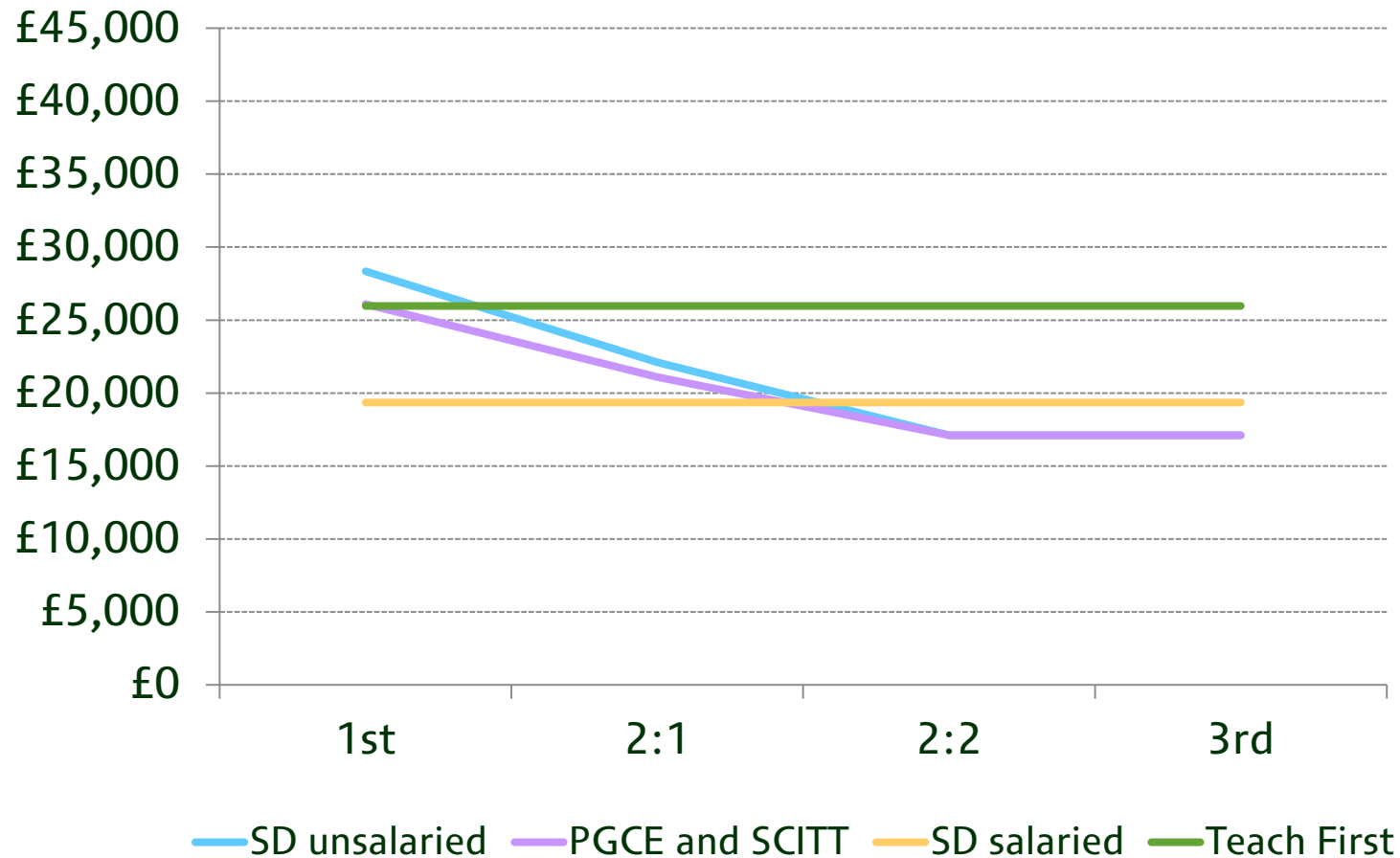
Maximum central cost of a secondary trainee in a high-priority subject by degree class and training route (Inner London)



Source: Figure 4.1 of *The Costs and Benefits of Different Initial Teacher Training Routes*

# Comparison of central costs - Secondary

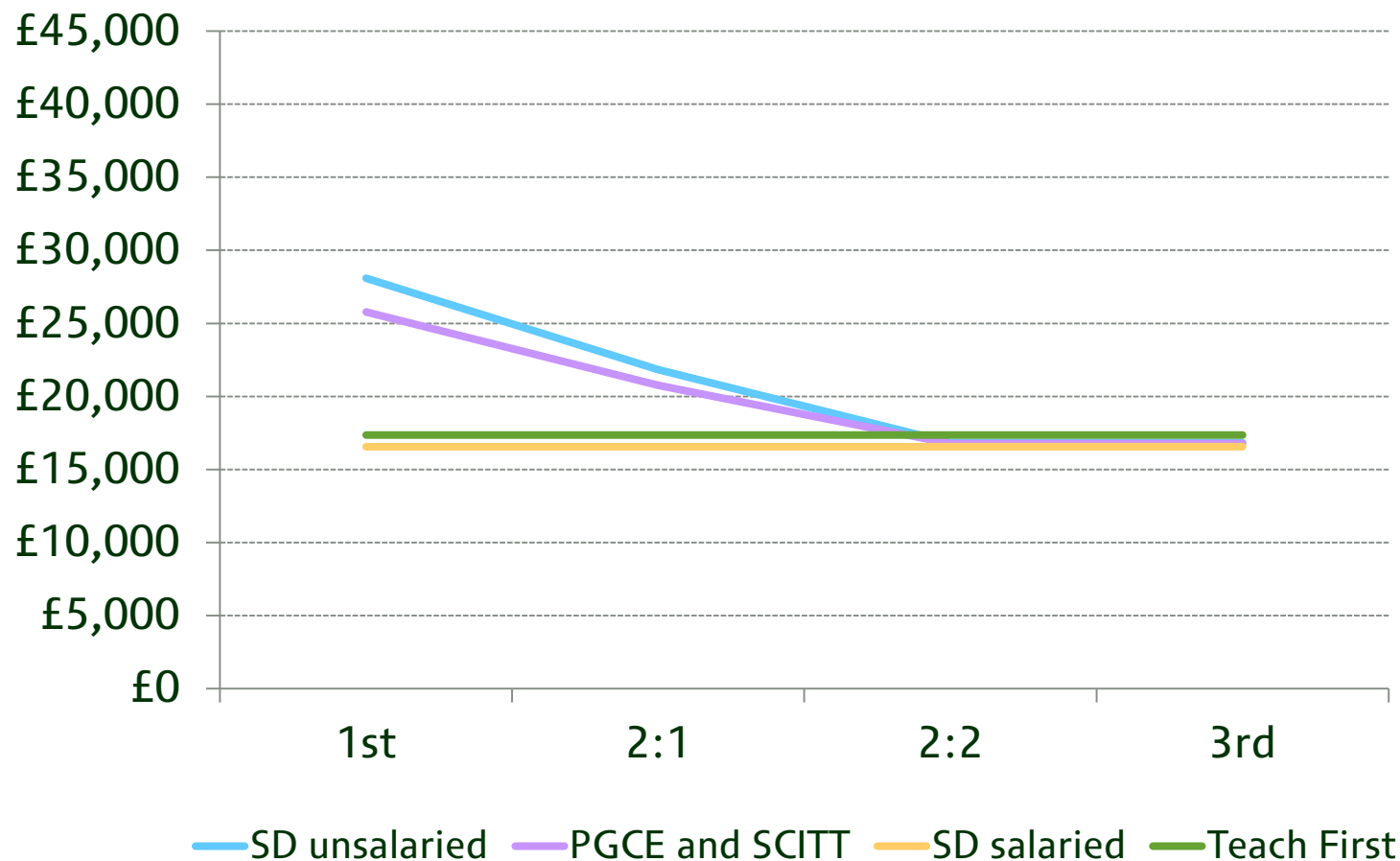
Maximum central cost of a secondary trainee in an other-priority subject by degree class and training route (Inner London)



Source: Figure 4.2 of *The Costs and Benefits of Different Initial Teacher Training Routes*

# Comparison of overall costs - Secondary

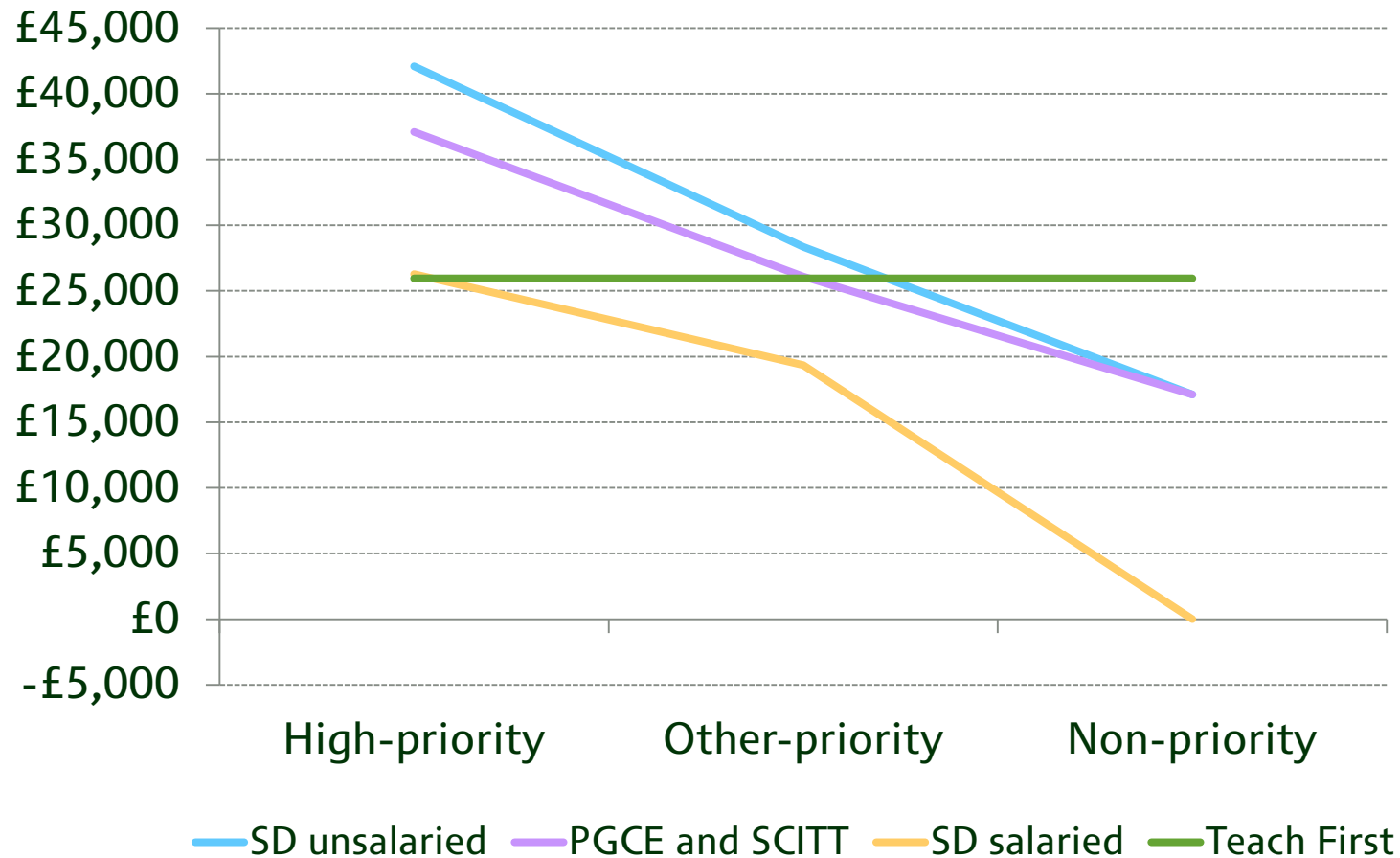
Maximum central cost of a secondary trainee in an other-priority subject by degree class and training route (Inner London)



Source: Figure 4.2 of *The Costs and Benefits of Different Initial Teacher Training Routes*

# Comparison of central costs - Secondary

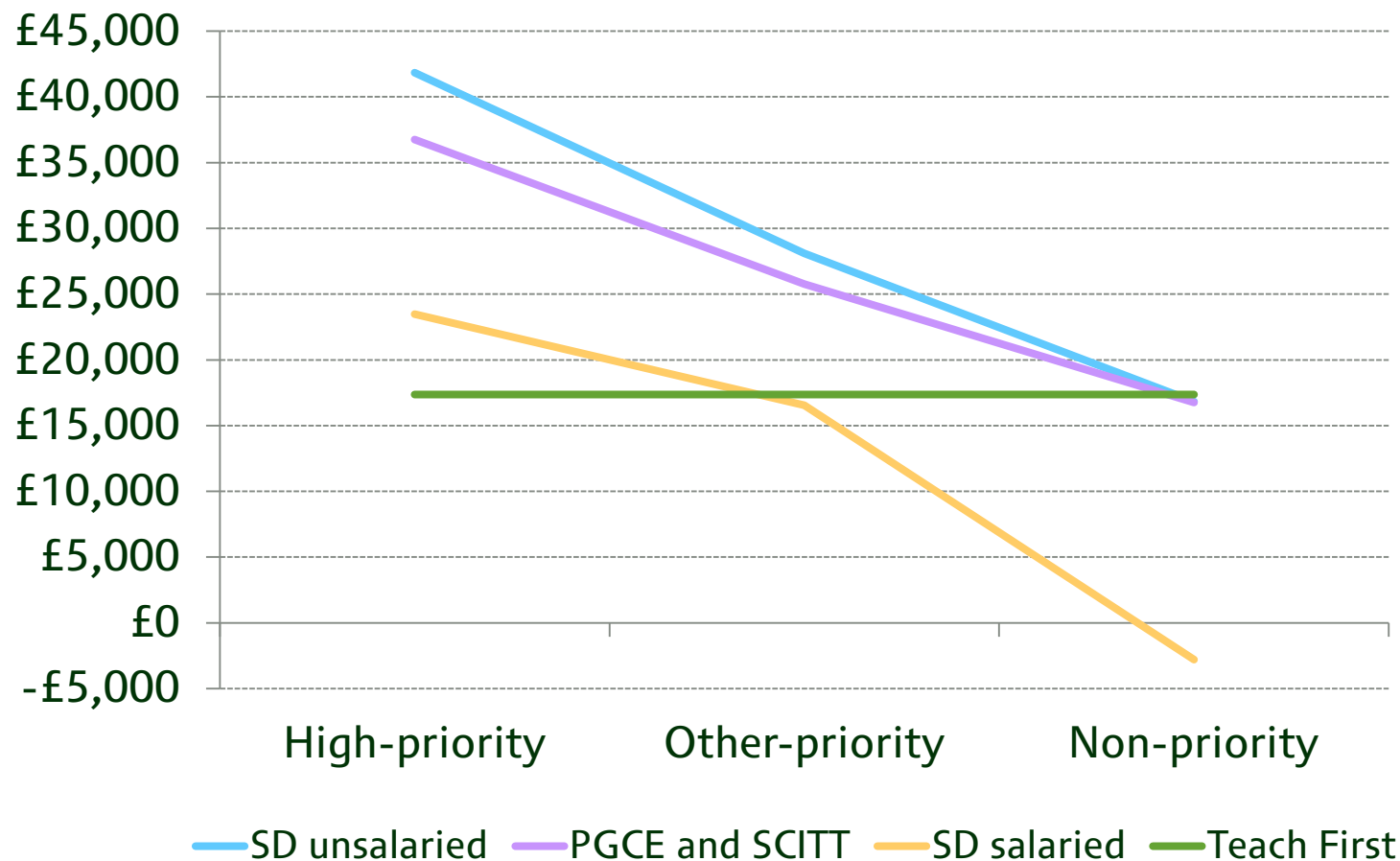
Maximum central cost of a secondary trainee with a first-class degree by subject priority and training route (Inner London)



Source: Figure 4.3 of *The Costs and Benefits of Different Initial Teacher Training Routes*

# Comparison of overall costs - Secondary

Maximum central cost of a secondary trainee with a first-class degree by subject priority and training route (Inner London)

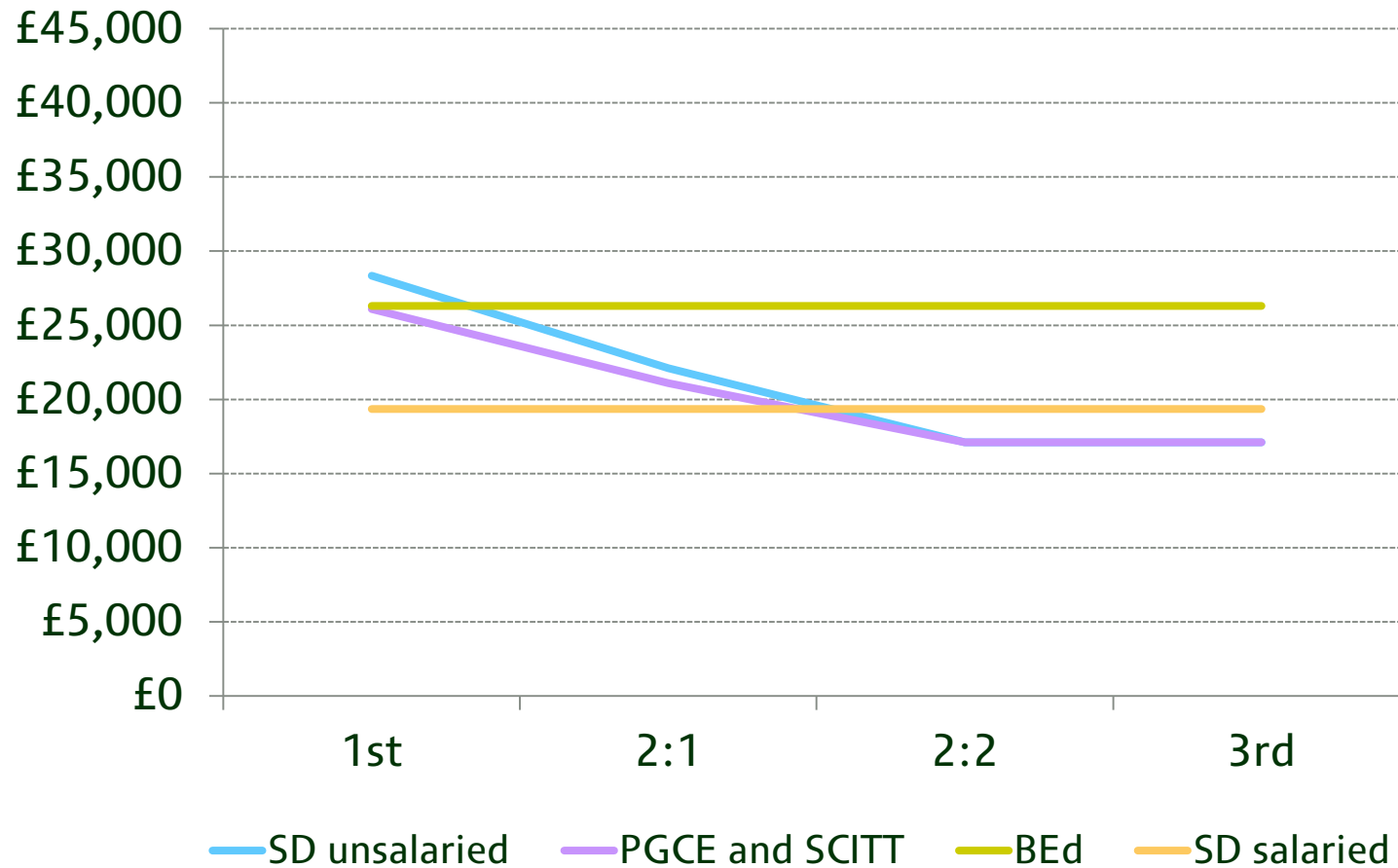


Source: Figure 4.3 of *The Costs and Benefits of Different Initial Teacher Training Routes*



# Comparison of central costs - Primary

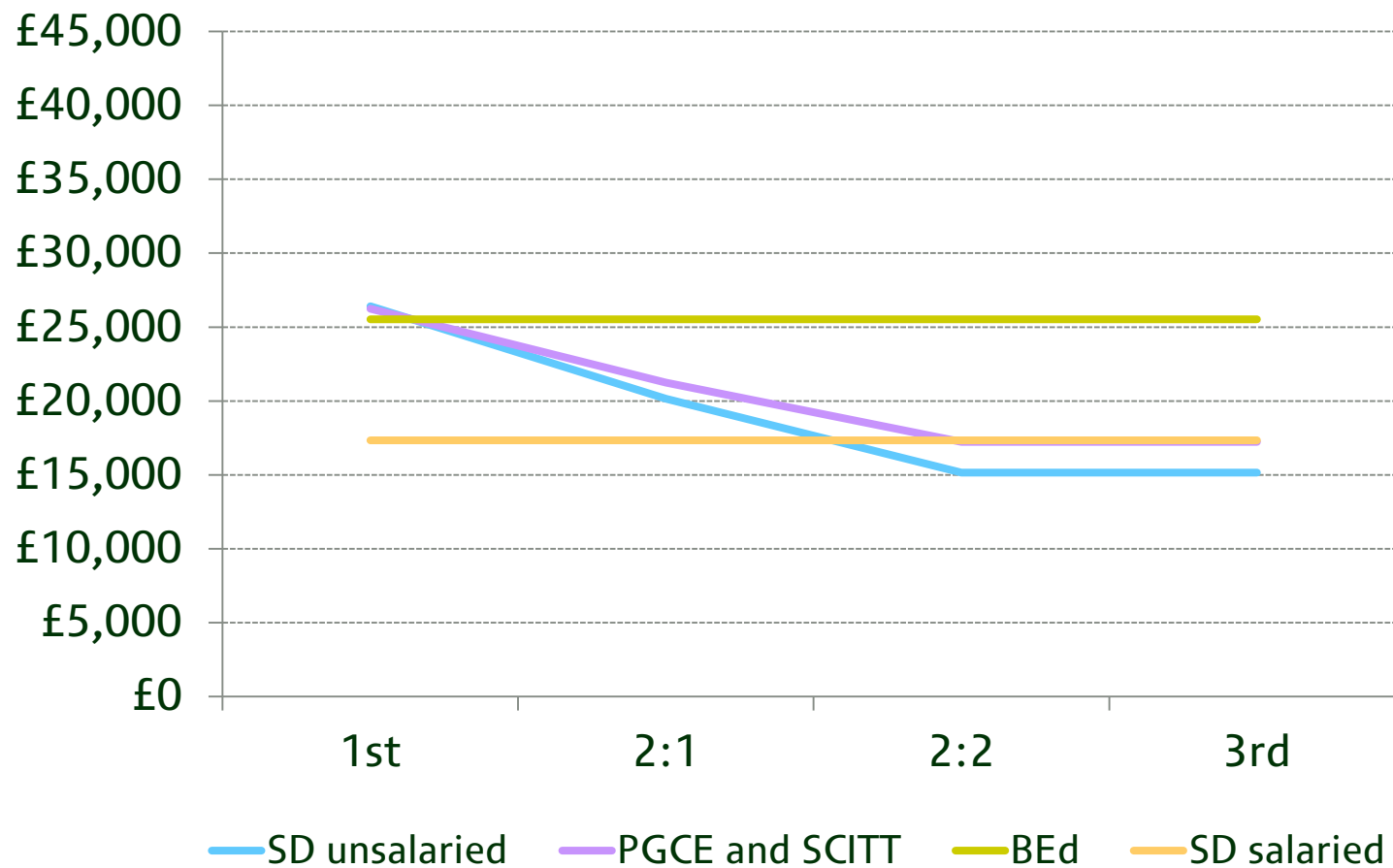
Maximum central cost of a primary non-maths specialist trainee in a by degree class and training route (Inner London)



Source: Figure 4.4 of *The Costs and Benefits of Different Initial Teacher Training Routes*

# Comparison of overall costs - Primary

Maximum central cost of a primary non-maths specialist trainee in a by degree class and training route (Inner London)



Source: Figure 4.4 of *The Costs and Benefits of Different Initial Teacher Training Routes*

# Summary: training

- There are many costs and benefits associated with ITT for schools
- Largest cost per week is mentoring in primary schools and observations and feedback in secondary school departments
  - Little variation by ITT route
  - Little variation with trainee characteristics
- Multiple benefits are reported by schools and departments
  - Some variation by ITT route
  - Variation with trainee characteristics
- Benefits are greater than costs in the majority of primary and secondary schools
  - Some variation by ITT route
  - Variation with trainee characteristics

# Summary: training

- Pupil attainment is not significantly affected by the presence of a trainee
- Central costs largely depend on the DfE grant funding, tuition fee system, subject, and eligibility for scholarship/bursary
  - Relatively small contribution of schools' net cost
  - Teach First has largest monetary cost to schools, but also the largest net benefit to schools (for schools involved)

# Conclusion

- There are currently significant changes to the delivery of initial teacher training
  - What can we conclude regarding the government's transition towards prioritising school-based training?
  - Schools are more likely to state that benefits are higher than costs for school-based routes than for university-based routes
  - BUT, significant variation for School Direct salaried
  - Schools involved with School Direct and Teach First routes also have distinct characteristics, so the benefits may not apply to all schools
- The central costs for each route are most important to the overall short-term total cost

# Conclusion

- An overall assessment of the system of initial teacher training in England requires further information:
  - The retention rate of teachers from different routes (to follow)
  - The impact of the availability of scholarships and bursaries on the supply of potential trainees (and ‘high-quality’ trainees)
  - The long-term effectiveness in raising pupil attainment of teachers trained through different routes
  - System wide costs and benefits:
    - Lower economies of scale in advertising, recruitment and training
    - Possible shortfall in supply of newly qualified teachers