

# SES gradient in Teacher-Student Relationship:

teacher perceptions of academic attitudes of primary school students in England and Scotland

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BIPE Project

Social and ethnic biases in primary education



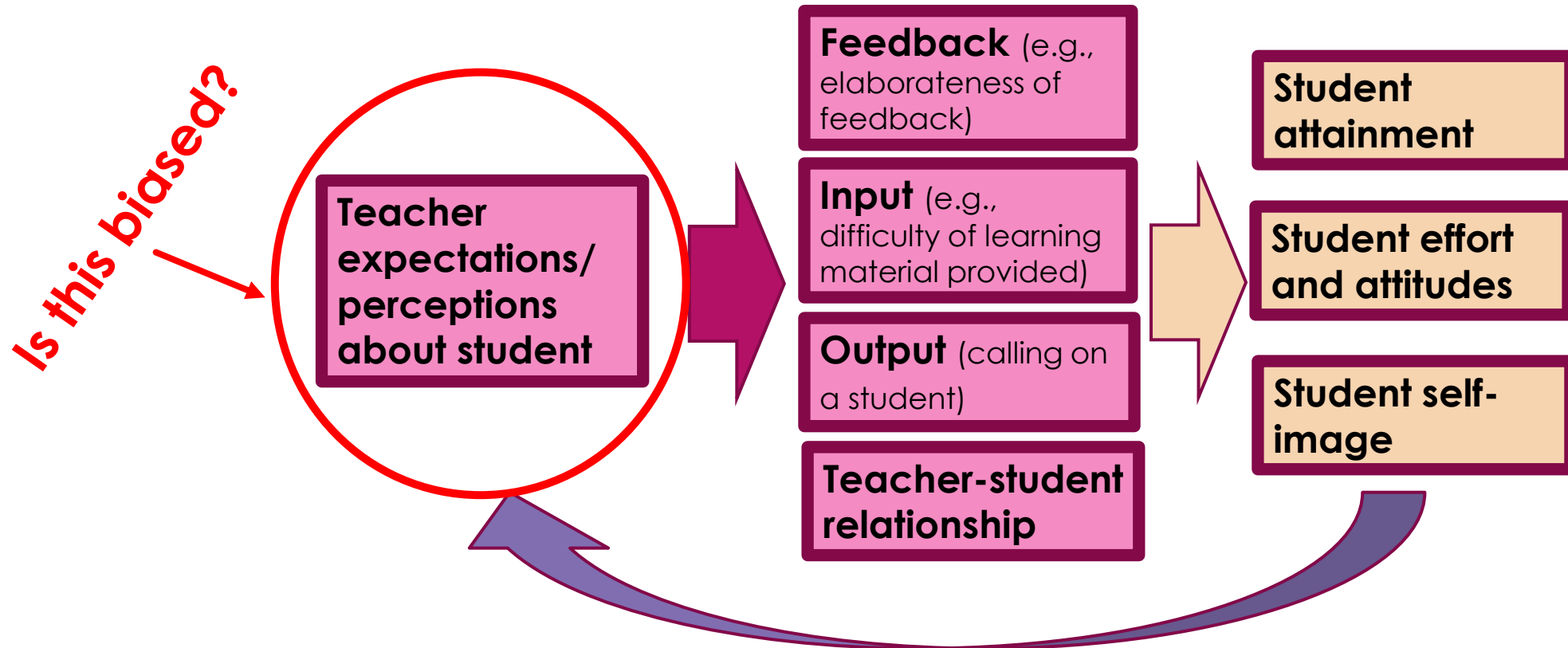
# SES GRADIENT IN TEACHER-STUDENT RELATIONSHIP



(some) context and theoretical background

# Motivation

## Self-fulfilling prophecies and feedback loops



# Context & available empirical evidence

## EMPIRICAL EVIDENCE on SES- and ETHNIC-GRADIENTS

### In **England**:

- Children of socially disadvantaged backgrounds are more likely to be placed in low ability groups – see for example
- Teachers underestimate abilities of students from socially disadvantaged and ethnic minority backgrounds
- Black Caribbean students are more likely to be excluded from school

See for example: Hallam and Parsons, 2013; Parsons and Hallam, 2014; Francis et al., 2017; Olczyk et al., 2022; Campbell, 2015; Demie, 2021; Wright et al., 2005

# Context & available empirical evidence

## TEACHER BIAS: what is it and why does it exist?

What does the **discrepancy**, or **bias**, between teacher and student perception of student's abilities & attitudes to school represent?

→ **Negative teacher-student relationship** (i.e., misunderstandings, conflict)

Grounded in **attachment theory** (Bowlby, 1988)

- ▶ Positive TSR: warm, supportive, *open* communication and interactions (→ few misunderstandings?)
- ▶ Negative TSR: coercive, conflictual communication and interactions (→ lots of misunderstanding?)

Quality of TSR strongly impact on student **academic performance**, **motivation** and **self-image**, especially when children are young

See for example: Longfeng et al., 2022; Hughs and Cao, 2018; Sabol and Pianta, 2012

# Context & available empirical evidence

## TEACHER BIAS: what is it and why does it exist?

What does the **discrepancy**, or **bias**, between teacher and student perception of student's abilities & attitudes to school represent?

→ **mechanism of cultural reproduction**

Grounded in **Bourdieu's cultural capital theory** (Bourdieu and Passeron, 1990)

- ▶ Children of high SES families display behaviours and preferences that are appreciated and rewarded by teachers

A high SES student will be more likely to define, manifest and perform their enjoyment of school or their effort in schoolwork in the same way a teacher would define it

# (some) Theoretical considerations

## The impact of 'macro-factors'

Preliminary thoughts (based on, e.g., Geven et al 2021; Olczyk et al 2022):

- ▶ **Tracking and consequences of primary school performance:** teacher judgements more accurate when they need to select students into tracks/groups
- ▶ **Teacher training and professional development:** do teachers learn about extent and 'causes' of inequalities in school and society? Do they learn to reflect on their own biases?
- ▶ **School accountability and standardized testing:** do teachers need to be accurate, and do they have info from standardized tests which helps them making judgements? But are they under pressure and stress?
- ▶ **Cultural beliefs about meritocracy (in education) and 'growth mindset':** how strong is impact of (perceived) student effort on teacher evaluations? Do teachers believe students can overcome disadvantage?
- ▶ **Level of inequality in education (e.g., access to university):** when high, teachers have more stereotypical beliefs

# SES GRADIENT IN TEACHER-STUDENT RELATIONSHIP



Data & methodology



# Data & Methodology

## DATA SETS

	ENGLAND	SCOTLAND
<b>Data set</b>	<u>Millennium Cohort Study (MCS)</u>	<u>Growing Up in Scotland (GUS)</u>
<b>Primary Sampling Unit</b>	Electoral Wards	(aggregated) Data Zones
<b>Stratification</b>	(within UK countries) – ethnic, disadvantaged, advantaged	Local Authorities
<b>Sample at wave 1</b>	(in England) 11,533 cohort members and their families	5,217 cohort members and their families
<b>Birth Cohort</b>	2000-2001	2004-2005

# Data & Methodology

## ANALYTICAL SAMPLES

Our **target analytical sample(s)** are defined as:  
CMs productive at T2 wave, with a matched T2 teacher survey and a productive T1 record.

		ENGLAND	SCOTLAND
<b>T1 - beginning of primary school</b>		Wave MCS3 – Reception Year, age 4/5	Wave GUS5 – Primary 1, age 4/5
<b>T2 – end of primary school</b>		Wave MCS5 – Primary 7, age 10/11	Wave GUS8 – Primary 6, age 9/10
<b>TARGET ANALYTICAL SAMPLE</b>		5,843	1,776
<b>ACHIEVED ANALYTICAL SAMPLE</b>	Student <u>enjoys</u> school	5,416 (92.3%)	1,580 (89.0%)
	Student <u>tries</u> their best at school	5,463 (93.5)	1,596 (90.0%)

# Data & Methodology

## VARIABLES - I

### STUDENTS' ATTITUDES

	ENGLAND	SCOTLAND
ENJOYS	<ul style="list-style-type: none"><li>• How often do you like school?</li><li>• How often do you find school interesting?</li></ul>	<ul style="list-style-type: none"><li>• I enjoy learning at school</li><li>• I look forward to going to school</li><li>• I feel happy at school</li><li>• How often do you find school interesting?</li></ul>
TRIES	<ul style="list-style-type: none"><li>• How often do you try your best at school?</li></ul>	<ul style="list-style-type: none"><li>• How often do you try your best at school?</li></ul>

### TEACHER'S PERCEPTIONS of STUDENTS' ATTITUDES

	ENGLAND	SCOTLAND
ENJOYS	How often do you think the child seem to enjoy school?	How often does the child seem to enjoy: <ul style="list-style-type: none"><li>• listening &amp; talking?</li><li>• reading?</li><li>• writing?</li><li>• numeracy and mathematics?</li></ul>
TRIES	How often do you think the child try their best at school?	How often does this child seem to try their best in: <ul style="list-style-type: none"><li>• reading?</li><li>• writing?</li><li>• numeracy and mathematics?</li></ul>

# Data & Methodology

## VARIABLES - II

	(harmonised) ENGLAND & SCOTLAND
<b>Income quintile</b>	Income quintiles based on national thresholds of equivalised income
<b>Mother's education</b>	NVQ-equivalent of highest academic & vocational qualification achieved by the main parent/carer at the time of interview
<b>Social class</b>	Highest Parental NS-SeC (National Statistics Socio-economic Classification), 5 classes <ul style="list-style-type: none"><li>• [1+2] Higher &amp; Lower managerial, administrative and professional occupations</li><li>• [3] Intermediate occupations</li><li>• [4] Small employers and own account workers</li><li>• [5] Lower supervisory and technical occupations</li><li>• [6+7] Semi-routine &amp; Routine occupations</li><li>• N/A – not in work</li></ul>
<b>Socio-emotional difficulties</b>	Parent-reported <u>Strength &amp; Difficulties Questionnaire</u> subscales (Emotional Symptoms, Conduct Problems, Hyperactivity & Inattention, Peer Relationship Problems, Prosocial Behaviour) <i>see (SDQ; Goodman 1997)</i>
<b>T1 cognitive assessments</b>	VERBAL KNOWLEDGE - <u>T-scores of BAS II Naming Vocabulary</u>
	NON-VERBAL REASONING - <u>T-scores of BAS II Picture Similarities</u>

# Data & Methodology

## ANALYSIS METHOD

### ▶ DESCRIPTIVES

How do students' attitudes and their perceptions by teachers compare across England & Scotland (and between the two different attitude studied)?

### ▶ DECOMPOSED DESCRIPTIVES

Is there an SES gradient to the students' attitudes and their perceptions by teachers?

### ▶ STEP 1: ESTIMATE RESIDUALS

Are teacher's perceptions accurate or inaccurate, i.e., are they negatively or positively biased?

### ▶ STEP 2a: UNIVARIATE ANALYSIS

Is there a SES gradient in (biased) teacher perceptions?

### ▶ STEP 2b: MULTIVARIATE ANALYSIS (PREDICTING RESIDUALS)

Is there a SES gradient in (biased) teacher perceptions when controlling for prior cognitive abilities & socio-emotional difficulties?

# ESTIMATE RESIDUALS

## RESIDUALS as measure of DISCREPANCY/BIAS

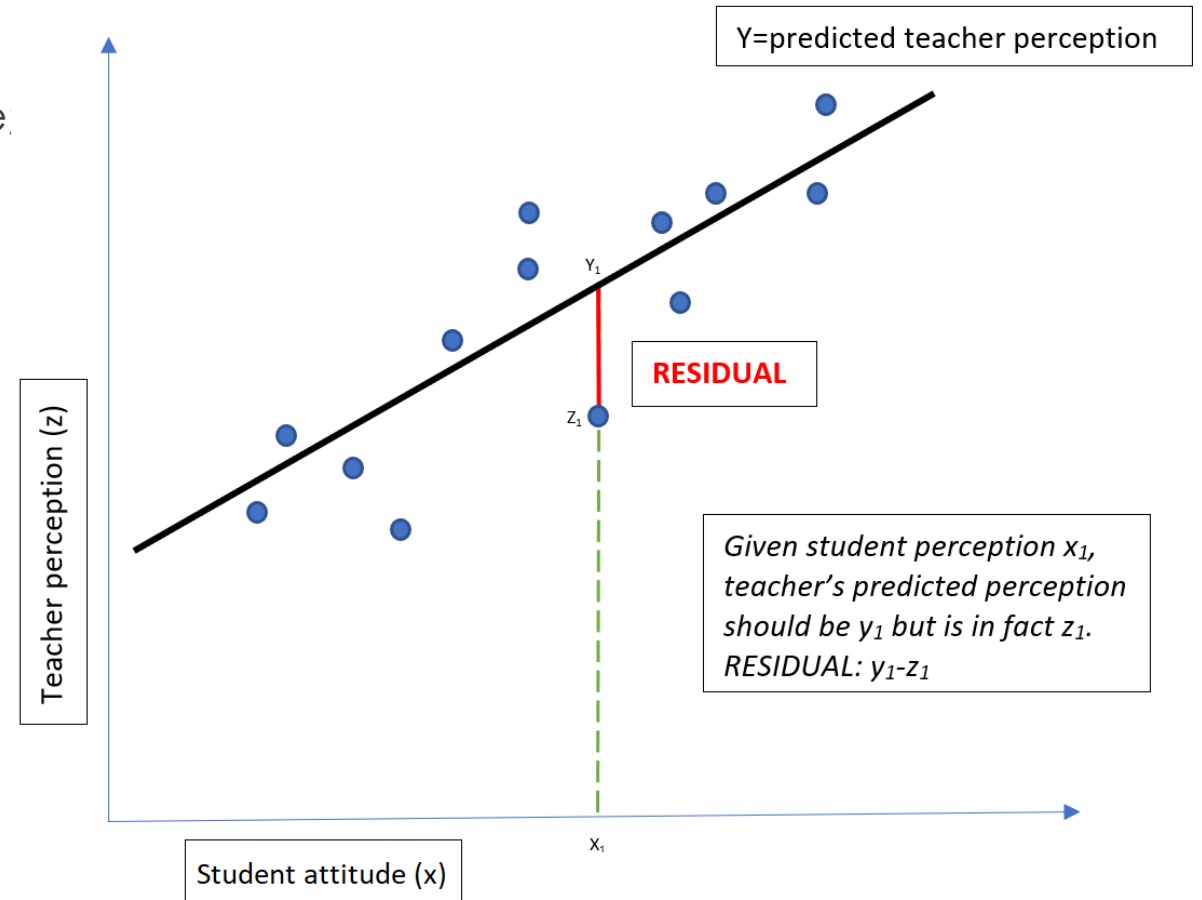
For each attitude:

1. Standardise teacher perception & student measure.
2. OLS regression of teacher perception on corresponding student measure
3. Compute residuals
4. Standardise residuals

➔ **POSITIVE** residuals = teacher overestimates student's attitude

➔ **NEGATIVE** residuals = teacher underestimates student's attitude

See Madon et al., (1997); Gentrup et al., (2020); and Hinnant et al., (2009).



# PREDICTING RESIDUALS

Is there a SES gradient in (biased) teacher perceptions when controlling for prior cognitive abilities & socio-emotional difficulties?

For each attitude:

1. M0: only predictor is SOCIAL CLASS
2. M1: SOCIAL CLASS + INCOME QUINTILES
3. M2: SOCIAL CLASS + INCOME QUINTILES + SDQ subscales + PRIOR COGNITIVE ABILITIES

# SES GRADIENT IN TEACHER-STUDENT RELATIONSHIP



Results





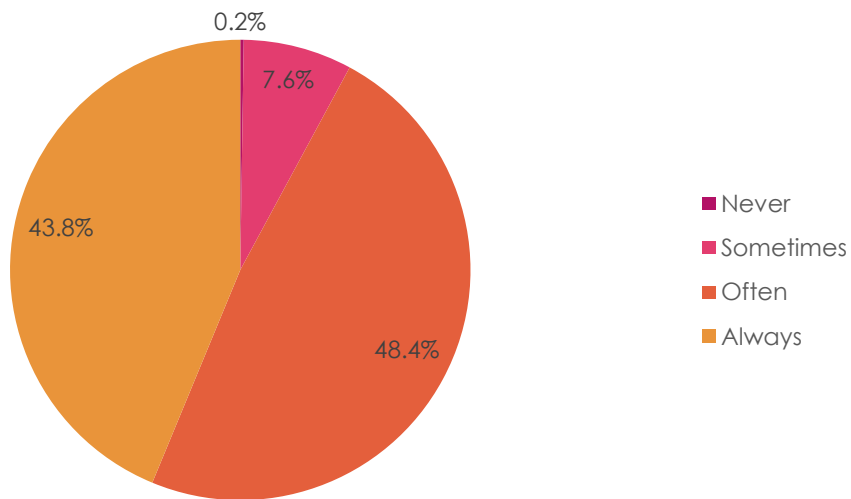
DESCRIPTIVES

# DESCRIPTIVES – I a (enjoys)

How do students' attitudes and their perceptions by teachers compare across England & Scotland (and between the two different attitude studied)?

## ENGLAND

TEACHER PERCEPTION: How often does this child seem to enjoy school?



## SCOTLAND

TEACHER PERCEPTIONS: How often does this child seem to enjoy ...?

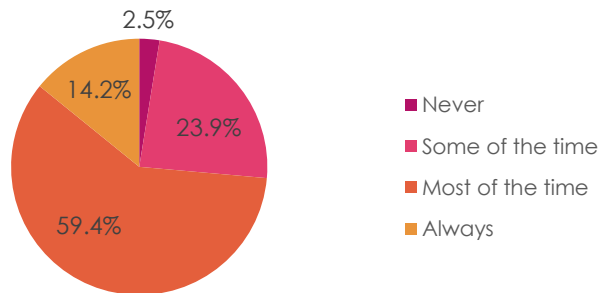


# DESCRIPTIVES – I b (enjoy)

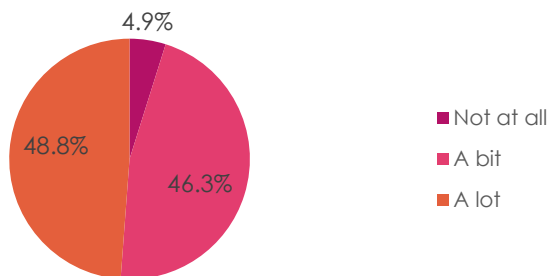
How do students' attitudes and their perceptions by teachers compare across England & Scotland (and between the two different attitude studied)?

## ENGLAND

STUDENT PERCEPTION: How often do you find school interesting?

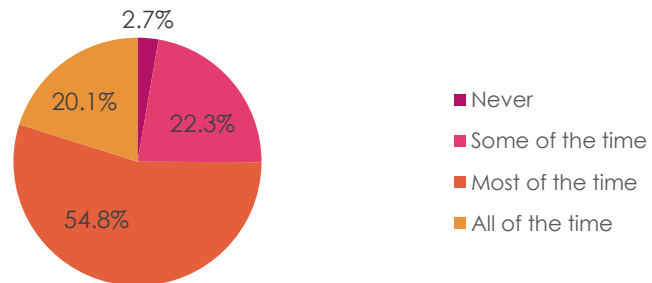


STUDENT PERCEPTION: How much do you like school?

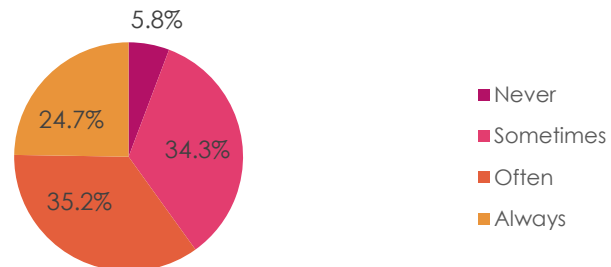


## SCOTLAND

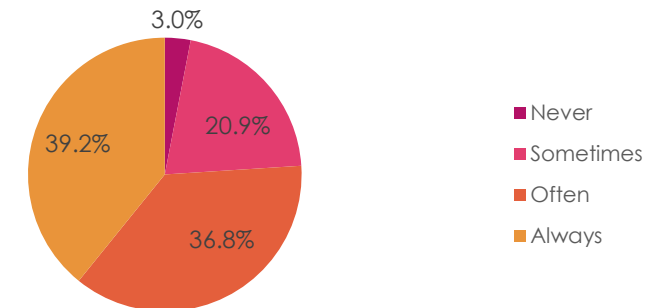
STUDENT PERCEPTION: How often do you find school interesting?



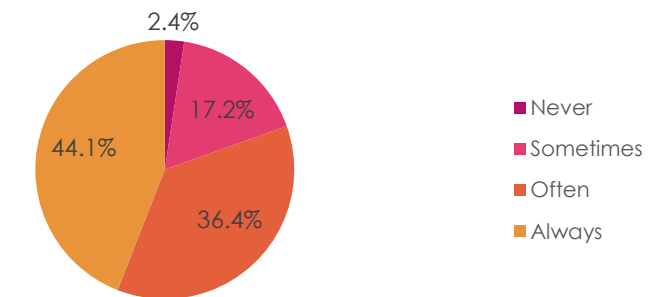
STUDENT PERCEPTION: I look forward to going to school



STUDENT PERCEPTION: I enjoy learning at school



STUDENT PERCEPTION: I feel happy at school

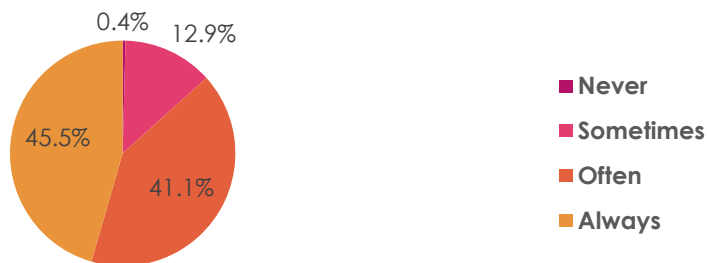


# DESCRIPTIVES – II (tries)

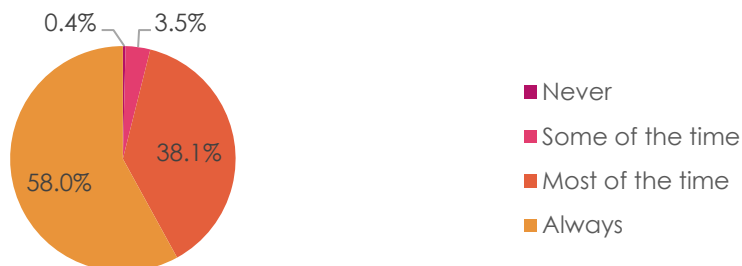
How do students' attitudes and their perceptions by teachers compare across England & Scotland (and between the two different attitude studied)?

## ENGLAND

TEACHER PERCEPTION: How often does this child try their best at school?

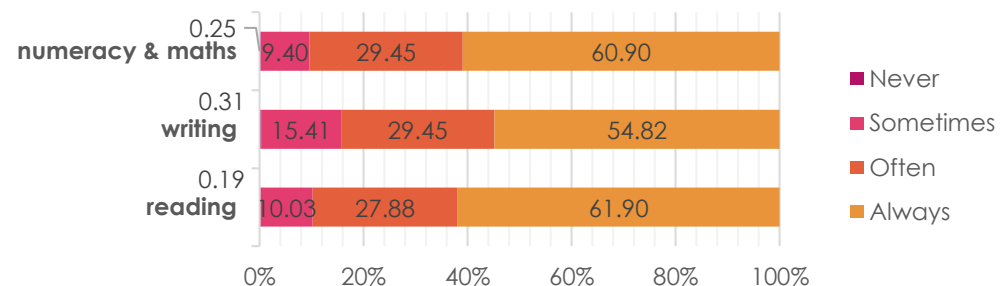


STUDENT PERCEPTION: How often do you try your best at school?



## SCOTLAND

TEACHER PERCEPTIONS: How often does this child seem to try their best at ...?



STUDENT PERCEPTION: How often do you try your best at school?





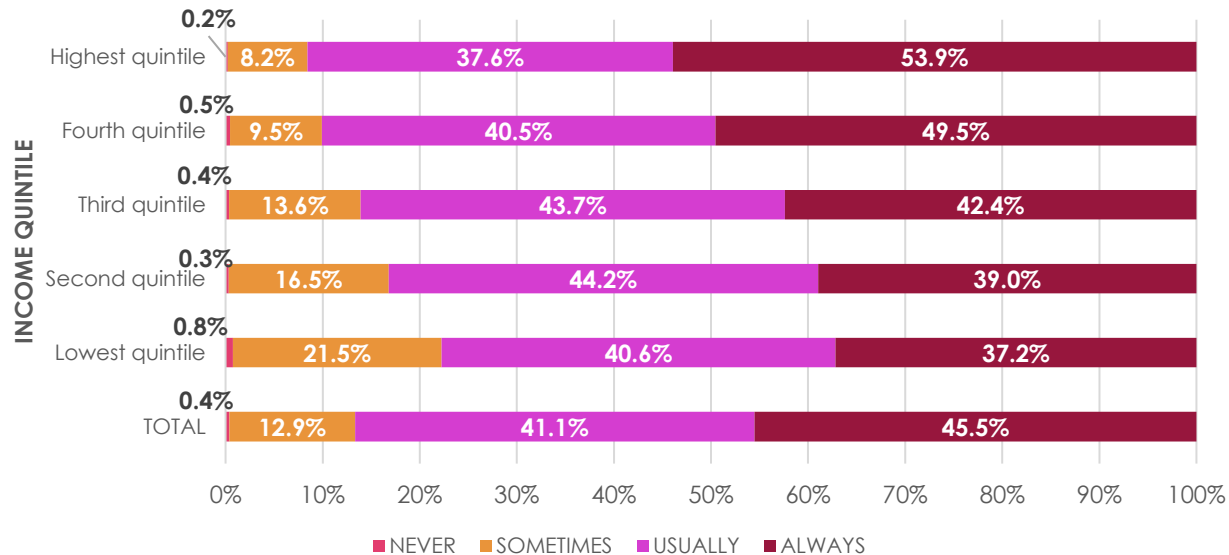
## DECOMPOSED ESCRIPTIVES

# DECOMPOSED DESCRIPTIVES - I

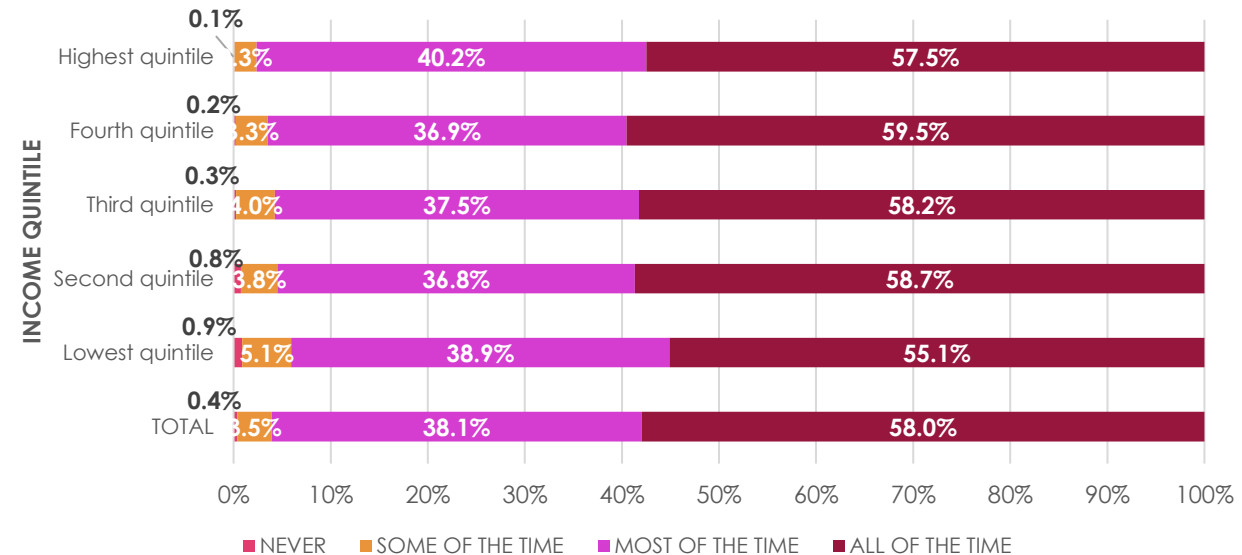
Is there an SES gradient (income quintile) to the students' attitude 'tries' and its perception by teachers?

## ENGLAND

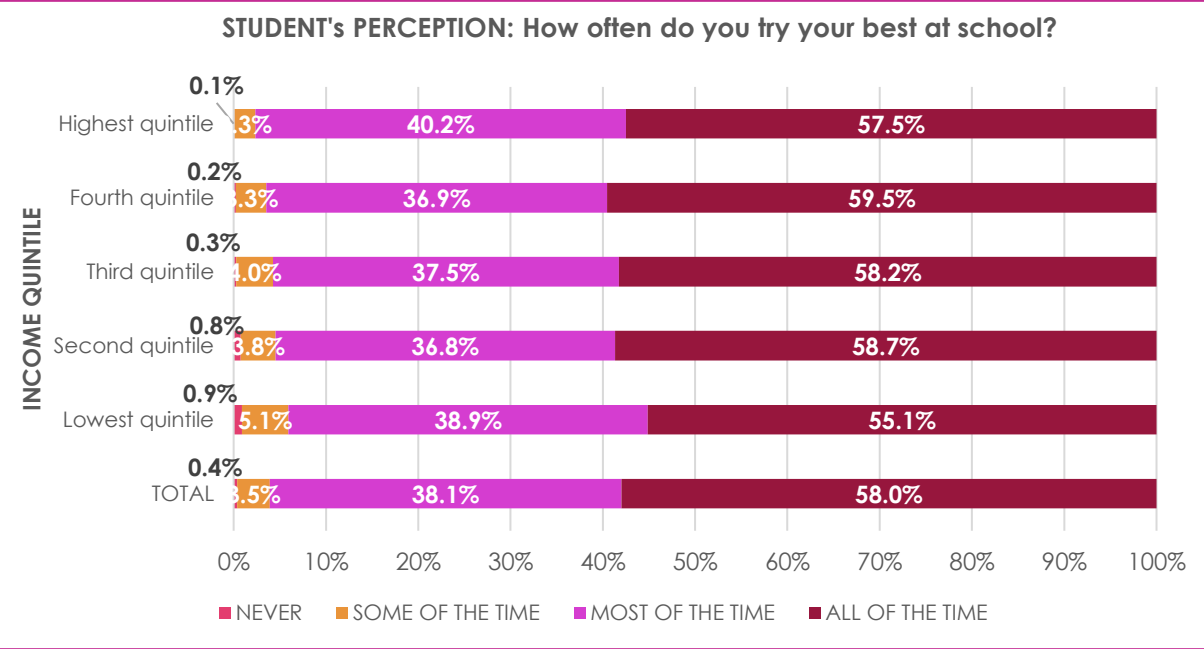
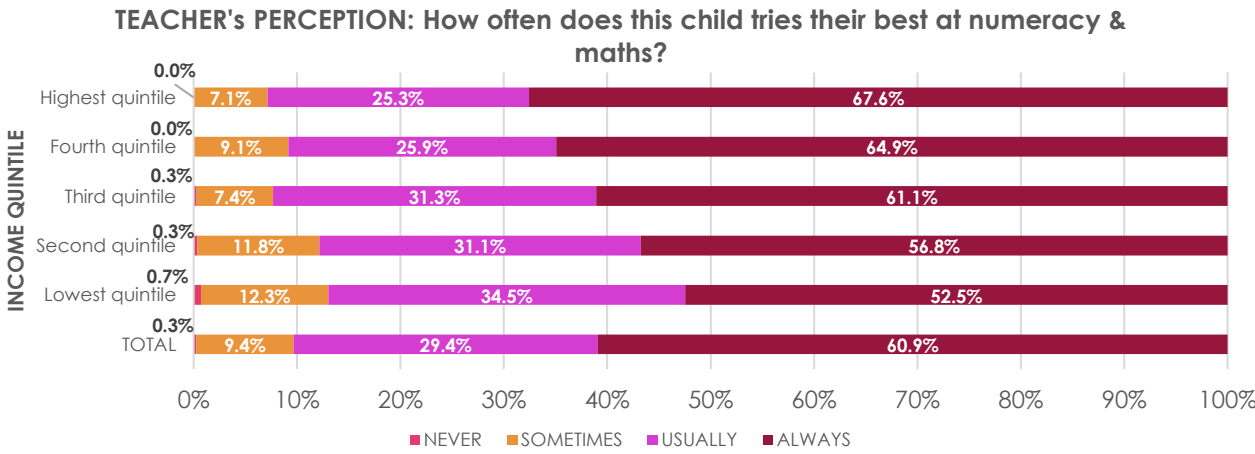
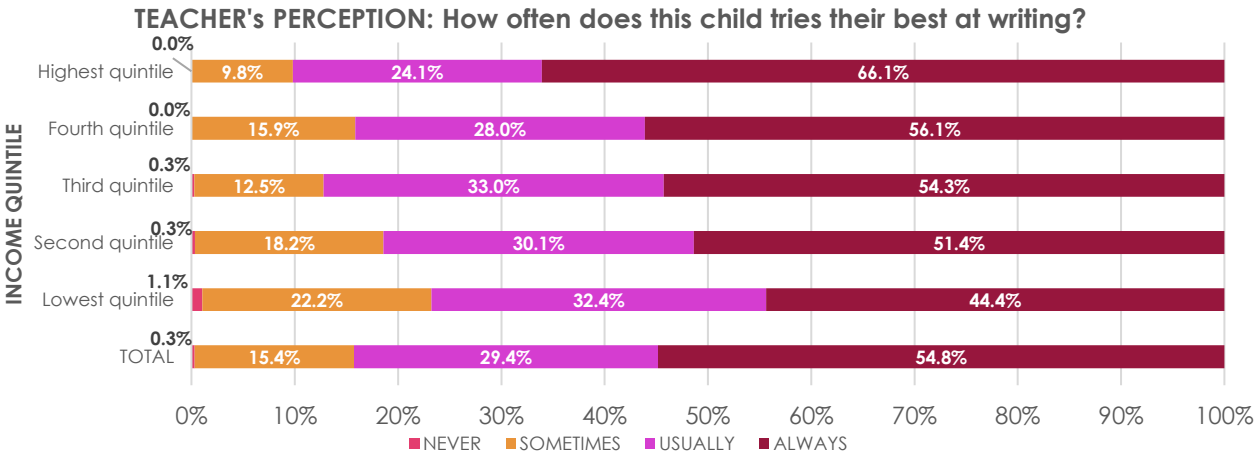
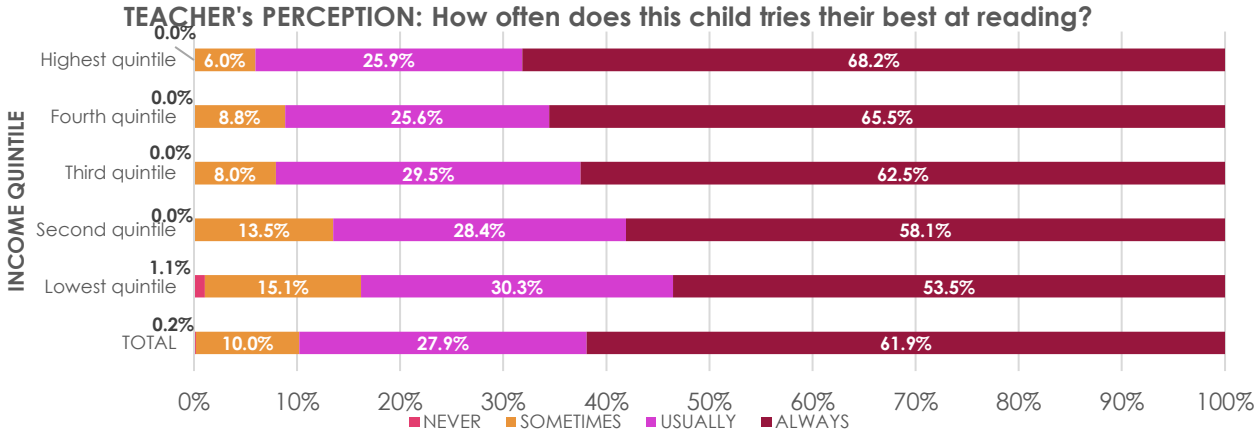
TEACHER'S PERCEPTION: How often does the child try their best at school?



STUDENT'S PERCEPTION: How often do you try your best at school?



# SCOTLAND

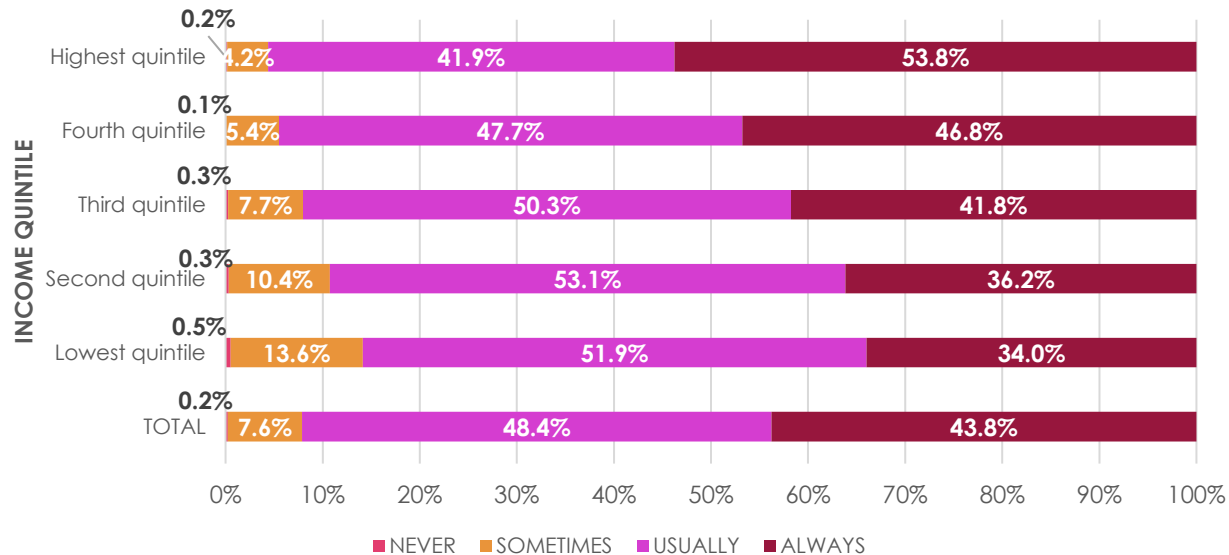


# DECOMPOSED DESCRIPTIVES - II

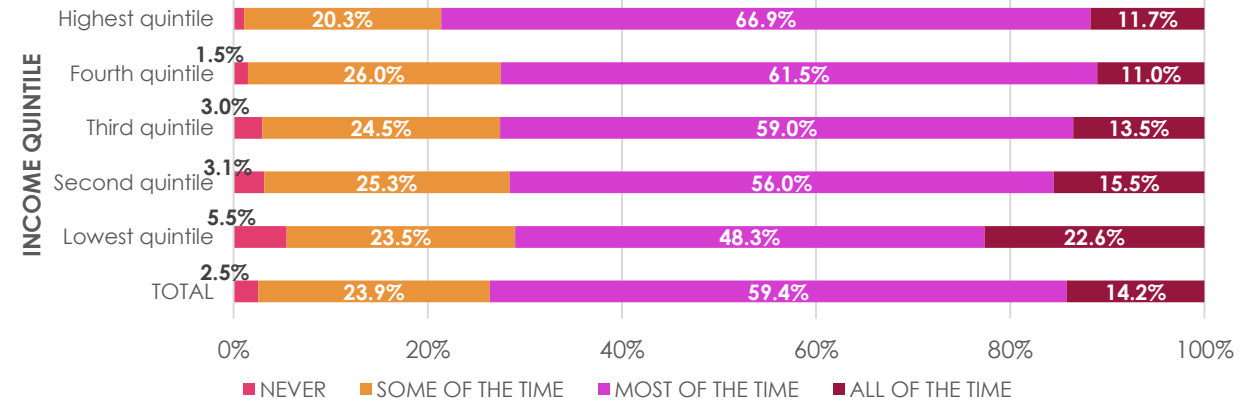
Is there an SES gradient (income quintile) to the students' attitude 'enjoys' and its perception by teachers?

## ENGLAND

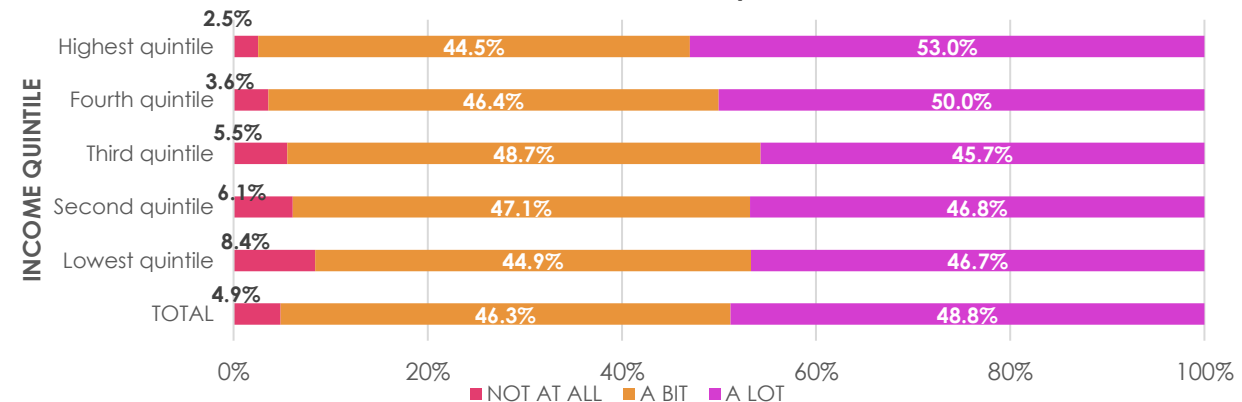
TEACHER'S PERCEPTION: How often does the child seem to enjoys school?



STUDENT'S PERCEPTION: How often do you find school interesting?



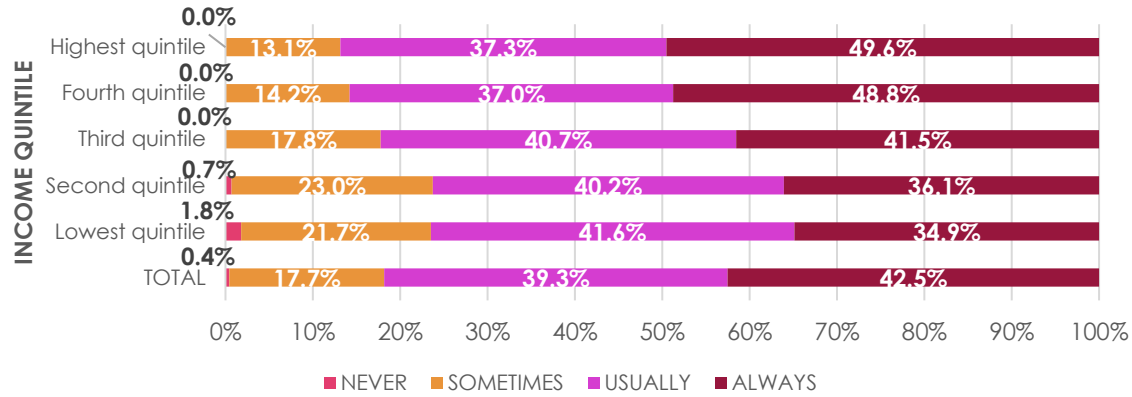
STUDENT'S PERCEPTION: How often do you like school?



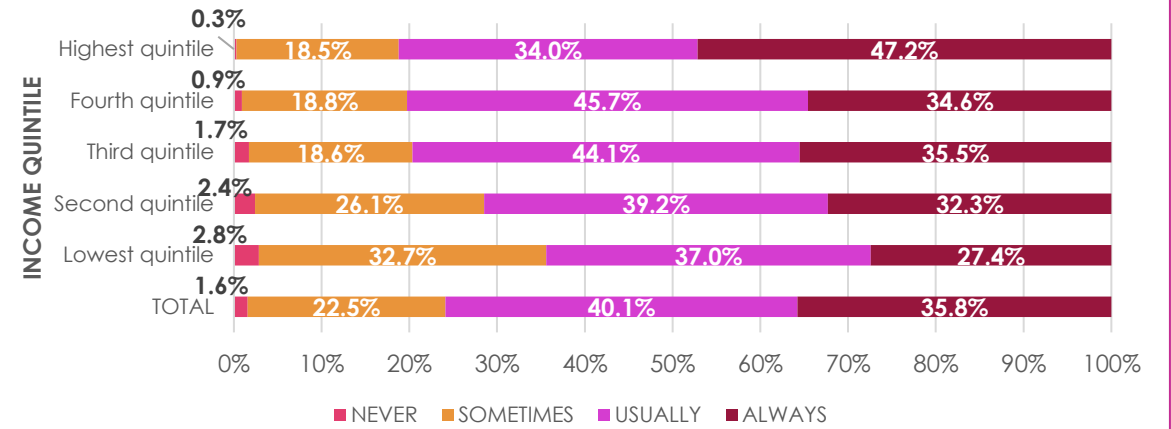


# SCOTLAND teacher's perceptions

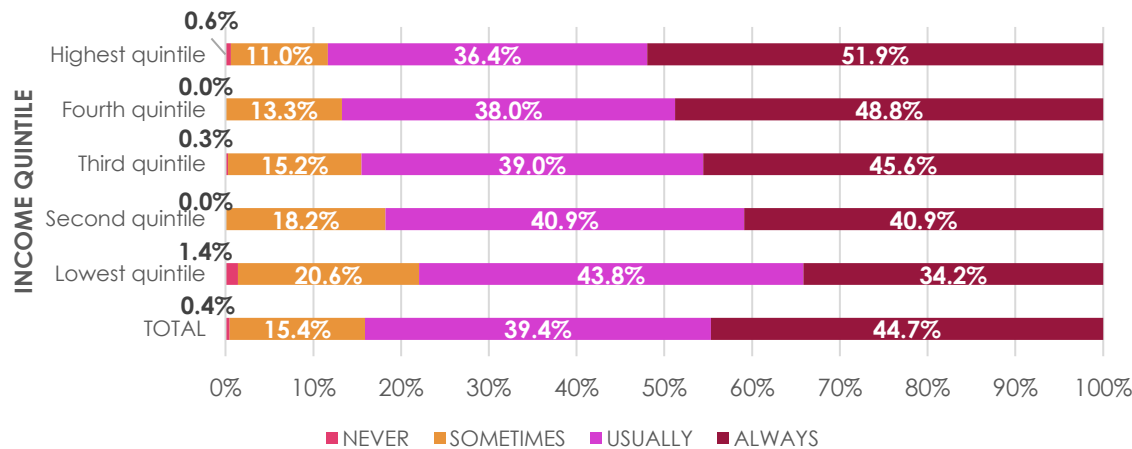
TEACHER's PERCEPTION: How often does this child seem to enjoy listening & talking?



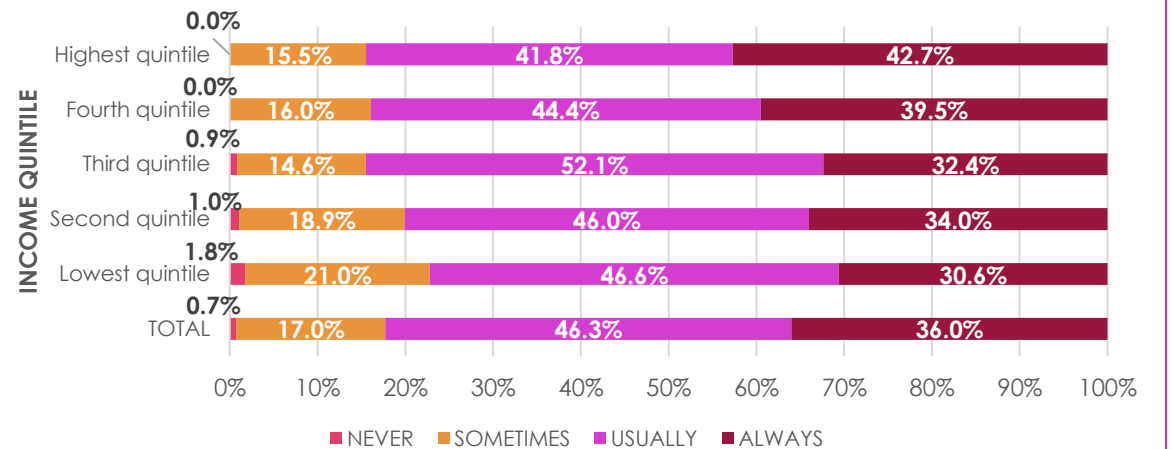
TEACHER's PERCEPTION: How often does this child seem to enjoy writing?



TEACHER's PERCEPTION: How often does this child seem to enjoy reading?

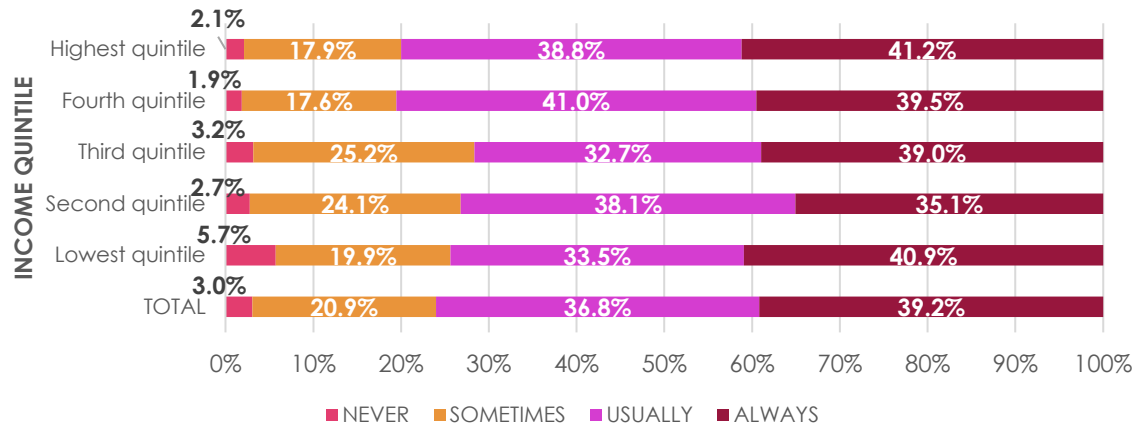


TEACHER's PERCEPTION: How often does this child seem to enjoy numeracy & maths?

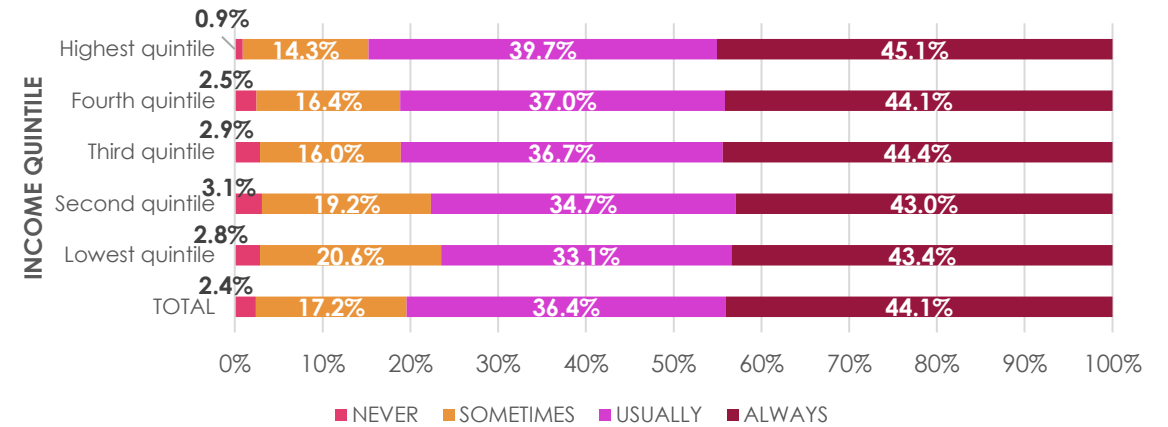


# SCOTLAND student's measures

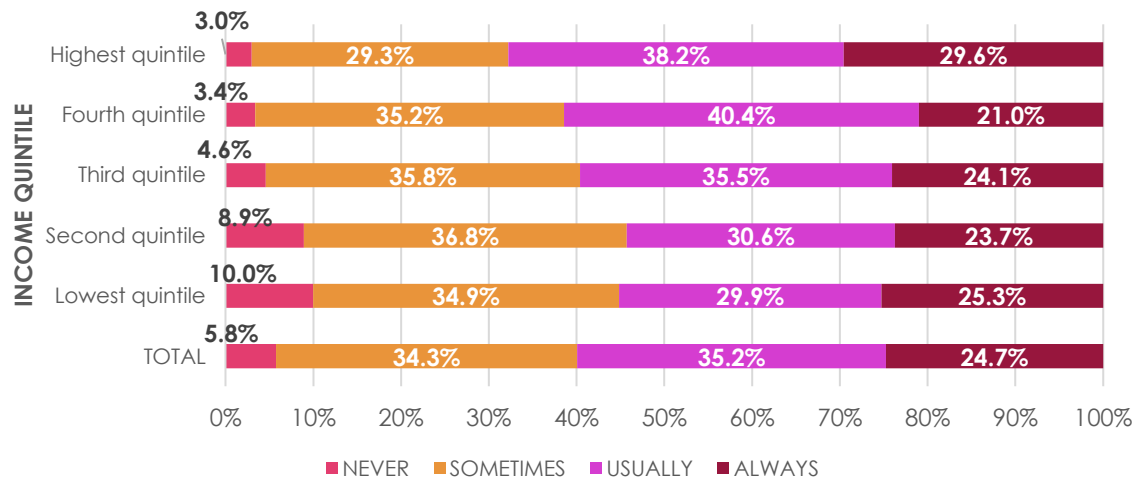
STUDENT's PERCEPTION: I enjoy learning at school



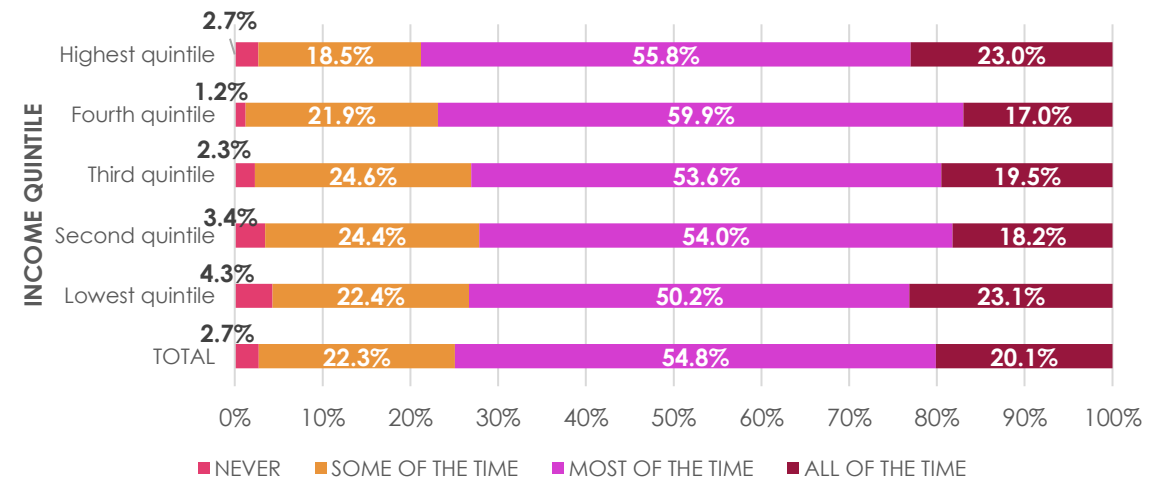
STUDENT's PERCEPTION: I feel happy at school



STUDENT's PERCEPTION: I look forward to going to school



STUDENT's PERCEPTION: How often do you find school interesting?





STEP 1: ESTIMATE RESIDUALS

# STEP 1: ESTIMATE RESIDUALS

Are teacher's perceptions negatively or positively biased?

## STATISTICAL SIGNIFICANCE

+	p<0.10
*	p<0.0
**	p<0.01
***	p<0.001

## TEACHER-REPORTED PERCEPTION (dependent variable Y)

		ENGLAND		SCOTLAND	
		(std) Child seems to enjoy school	(std) Child tries their best at school	(std) Average of measures pertaining to child seems to enjoy school	(std) Average of measures pertaining to child seems to try their best at school
<b>STUDENT'S MEASURE (predictor x)</b>	(std) Average of measures pertaining to child is enjoying school	0.275*** (0.013)		0.236*** (0.024)	
	(std) Child tries their best at school		0.244*** (0.013)		0.199*** (0.025)
<b>Constant</b>		-0.000 (0.013)	0.000 (0.013)	0.000 (0.024)	0.000 (0.025)
<i>N° of Observations</i>		5411	5458	1580	1596
<i>R<sup>2</sup></i>		0.076	0.060	0.055	0.040
<i>F</i>		F(1, 5409) = 442.82	F(1, 5456) = 345.47	F(1, 1578) = 92.68	F(1, 1594) = 65.80
<i>Prob &gt; F</i>		0.000	0.000	0.000	0.000



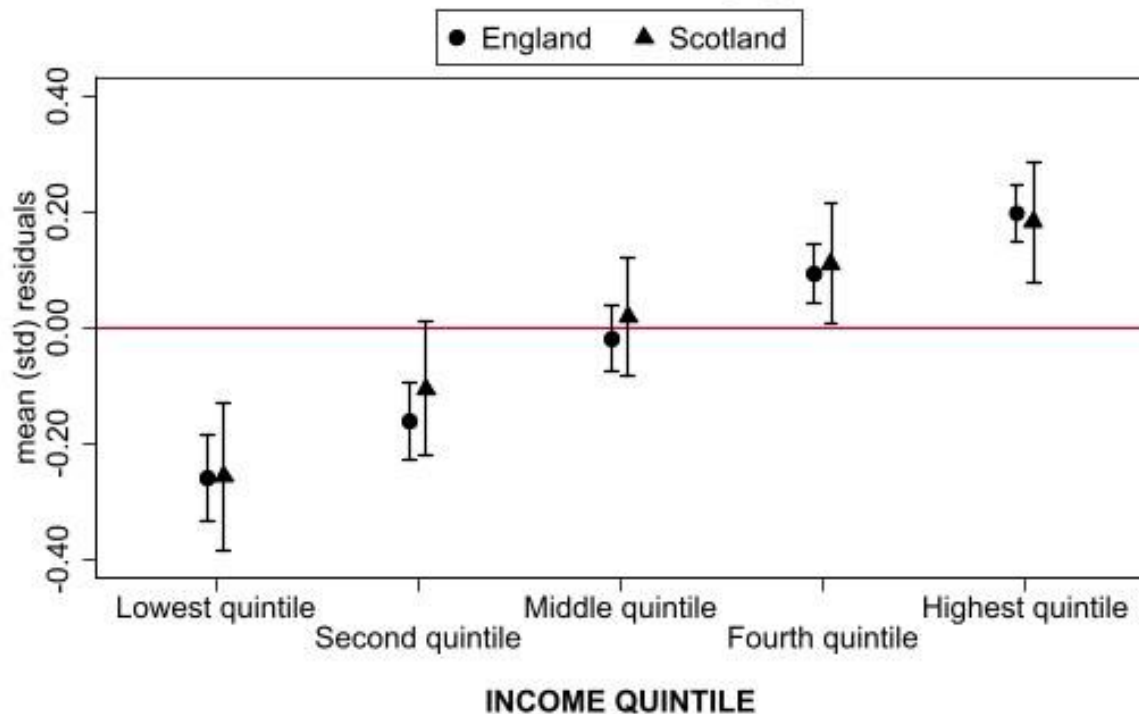
## STEP 2a: UNIVARIATE ANALYSIS

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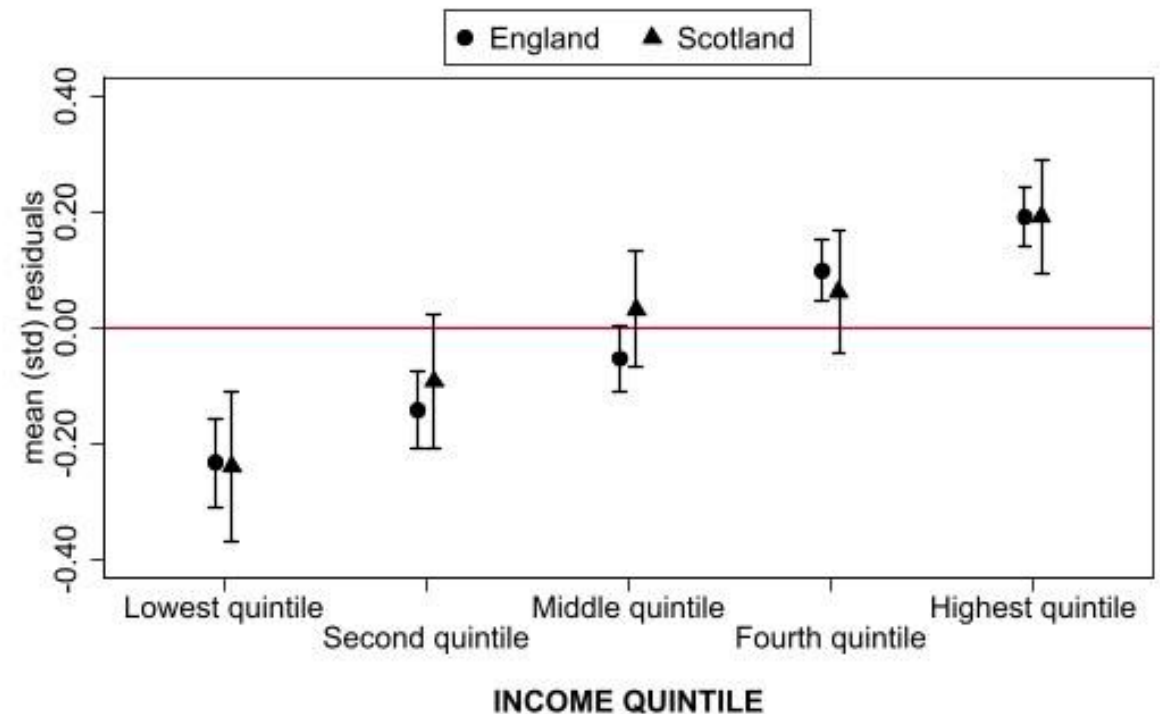
Is there a SES gradient in (biased) teacher perceptions?

SES: Income quintile

**ATTITUDE: Student enjoys school**



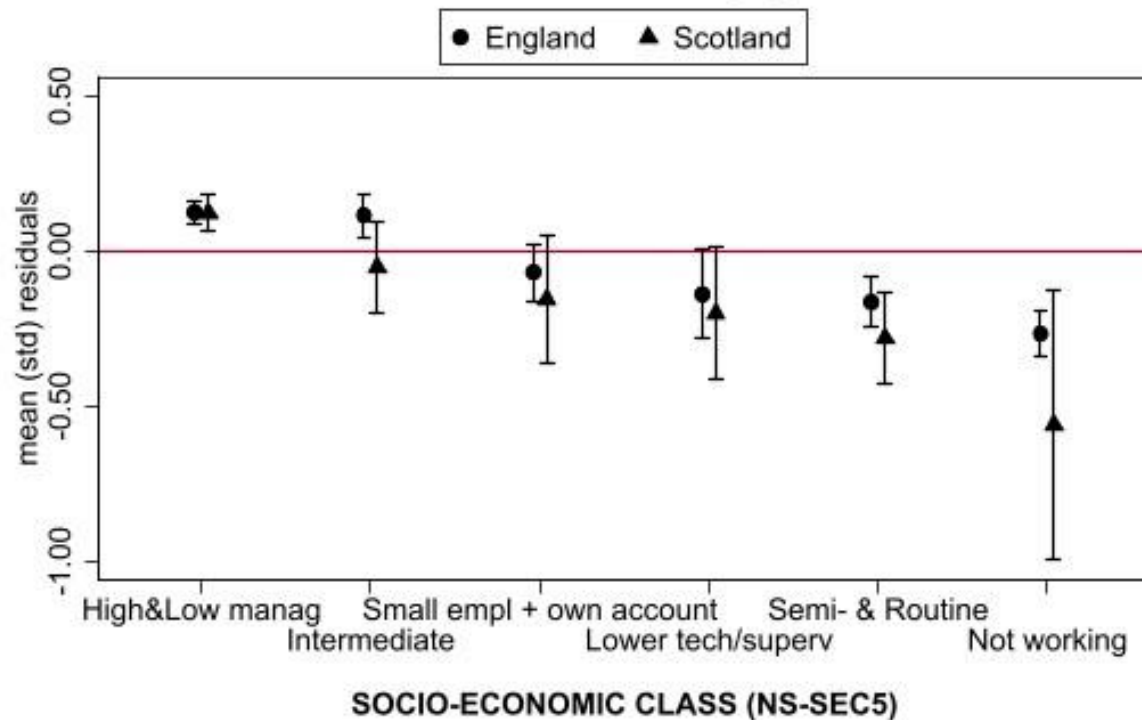
**ATTITUDE: Student tries their best at school**



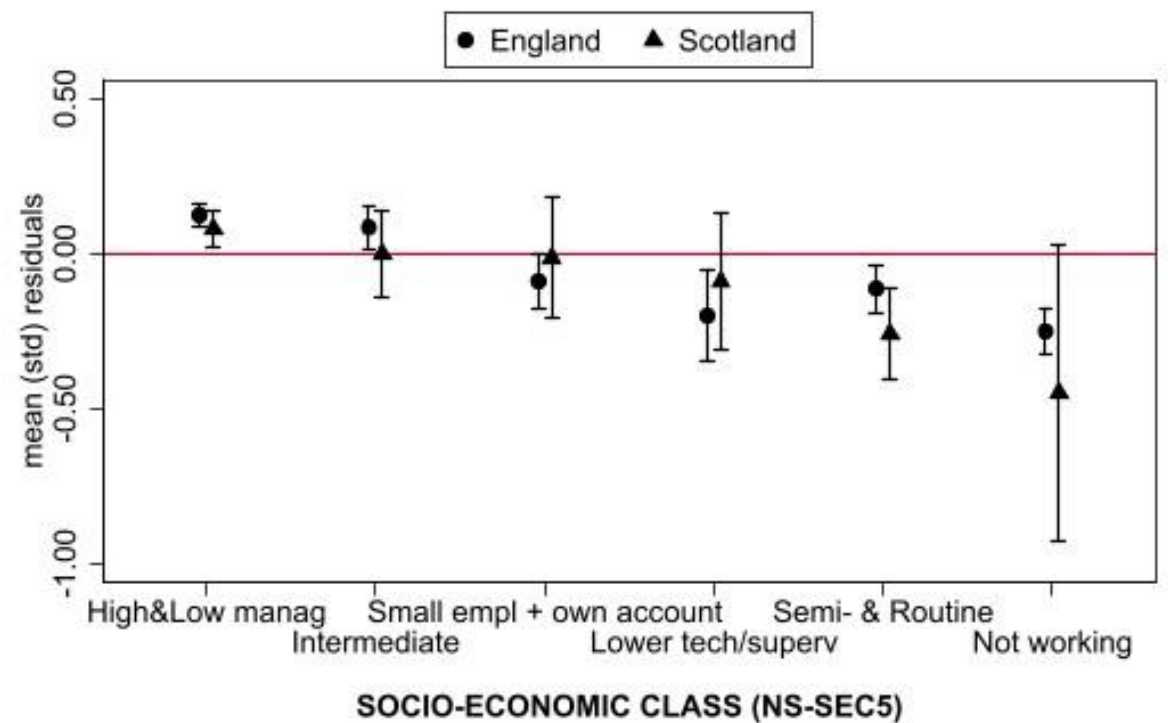
# STEP 2a: UNIVARIATE ANALYSIS

Is there a SES gradient in (biased) teacher perceptions?  
SES: Socio-economic class

**ATTITUDE: Student enjoys school**



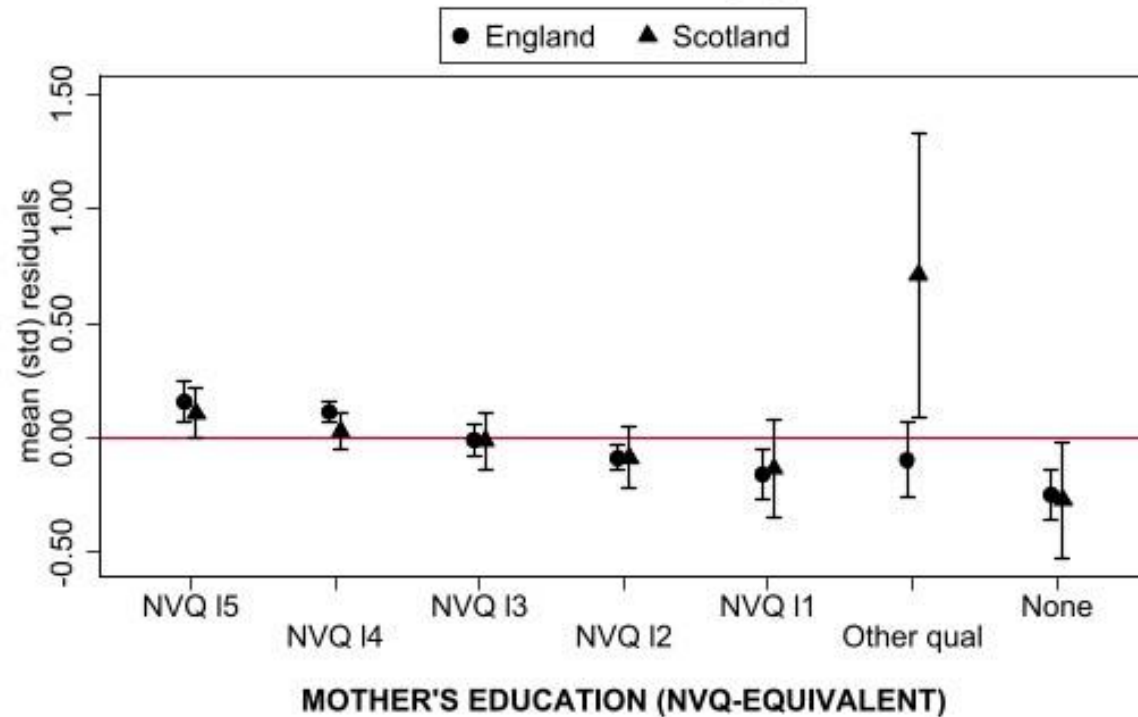
**ATTITUDE: Student tries their best at school**



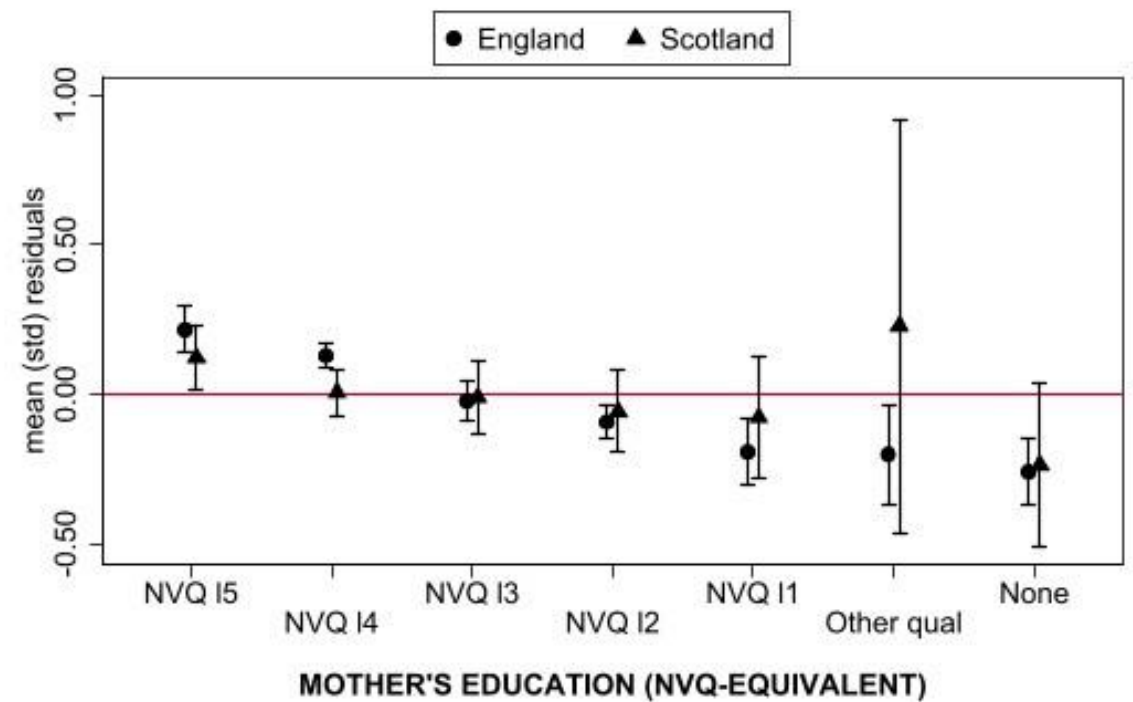
# STEP 2a: UNIVARIATE ANALYSIS

Is there a SES gradient in (biased) teacher perceptions?  
SES: Mother's education

**ATTITUDE: Student enjoys school**



**ATTITUDE: Student tries their best at school**





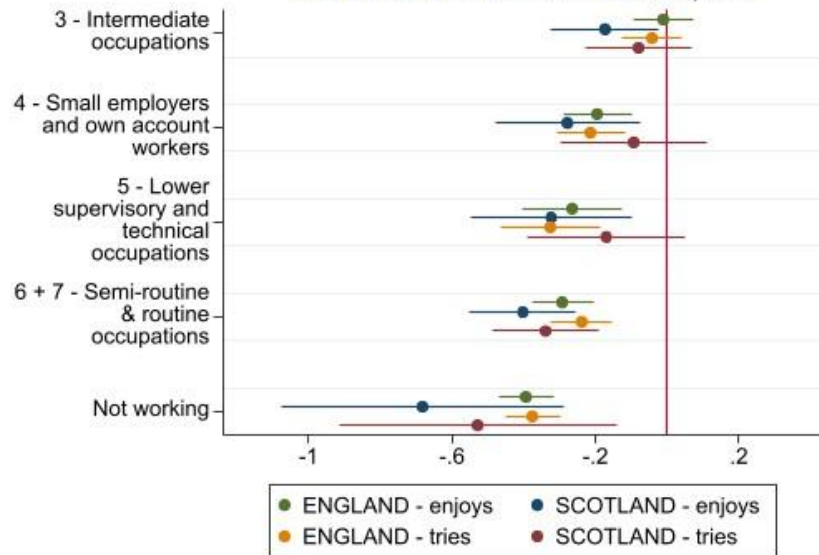


## STEP 2B: MULTIVARIATE ANALYSIS

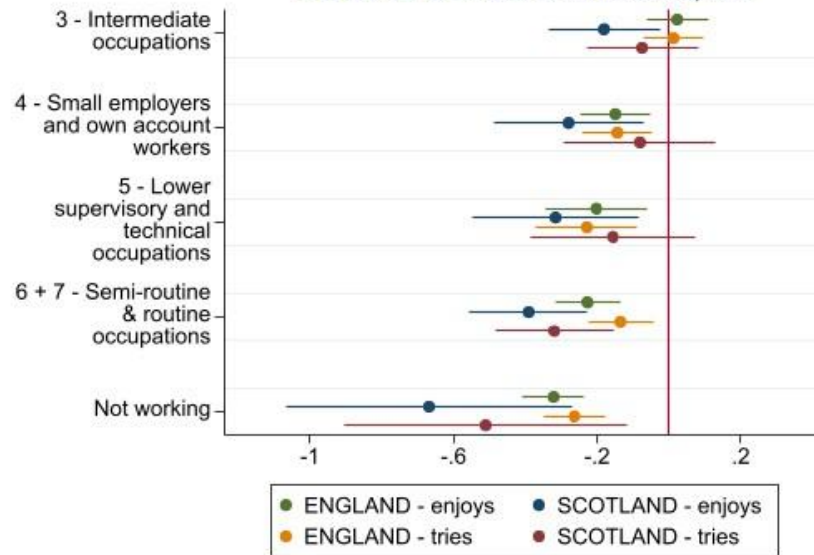
# STEP 2b: MULTIVARIATE ANALYSIS

Is there a SES gradient in (biased) teacher perceptions when controlling for prior cognitive abilities & socio-emotional difficulties?

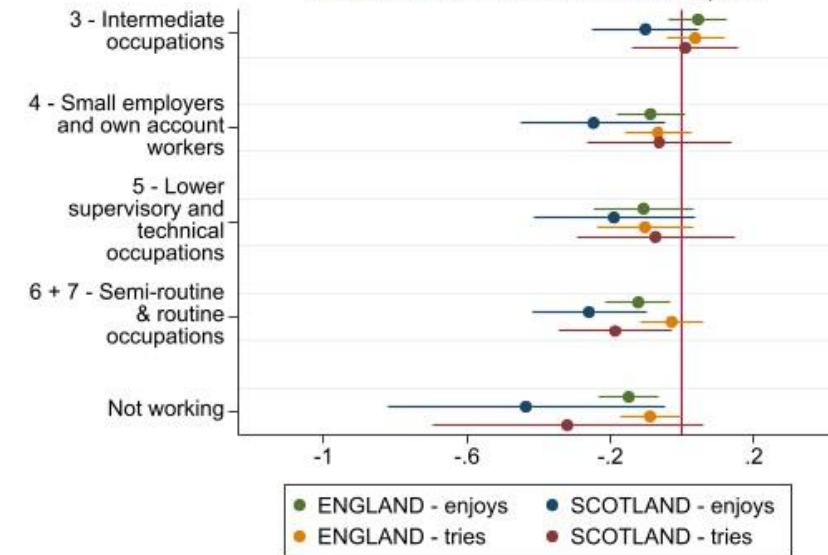
SOCIAL CLASS coefficients, M0



SOCIAL CLASS coefficients, M1



SOCIAL CLASS coefficients, M2



Is there a SES gradient in (biased) teacher perceptions when controlling for prior cognitive abilities & socio-emotional difficulties?

		(std) RESIDUALS for Child seems to enjoy school									
		M0		M1		M2		M2a		M2b	
		ENG	SCOT	ENG	SCOT	ENG	SCOT	ENG	SCOT	ENG	SCOT
SOCIAL CLASS	1 + 2 - HIGHER & LOWER MANAGERIAL ADMINISTRATIVE AND PROFESSIONAL OCCUPATIONS	0.000 (.)	0.000 (.)	0.000 (.)	0.000 (.)	0.000 (.)	0.000 (.)	0.000 (.)	0.000 (.)	0.000 (.)	0.000 (.)
	3 - INTERMEDIATE	-0.012 (0.042)	-0.174* (0.076)	0.024 (0.043)	-0.180* (0.079)	0.043 (0.042)	-0.102 (0.076)	0.038 (0.042)	-0.111 (0.077)	0.032 (0.043)	-0.164* (0.078)
	4 - SMALL EMPLOYERS AND OWN ACCOUNT WORKERS	-0.195*** (0.049)	-0.278** (0.103)	-0.150** (0.050)	-0.280** (0.106)	-0.088+ (0.048)	-0.248* (0.103)	-0.107* (0.048)	-0.273** (0.103)	-0.118* (0.050)	-0.250* (0.105)
	5 - LOWER SUPERVISORY AND TECHNICAL OCCUPATIONS	-0.265*** (0.071)	-0.323** (0.114)	-0.203** (0.072)	-0.315** (0.119)	-0.108 (0.070)	-0.190+ (0.115)	-0.127+ (0.070)	-0.247* (0.115)	-0.168* (0.072)	-0.242* (0.118)
	6 + 7 - SEMI-ROUTINE & ROUTINE OCCUPATIONS	-0.293*** (0.044)	-0.402*** (0.076)	-0.226*** (0.047)	-0.391*** (0.084)	-0.123** (0.045)	-0.259** (0.082)	-0.140** (0.045)	-0.292*** (0.082)	-0.196*** (0.047)	-0.346*** (0.083)
	N/A - NOT WORKING	-0.393*** (0.039)	-0.682*** (0.200)	-0.322*** (0.043)	-0.669** (0.204)	-0.149*** (0.043)	-0.435* (0.198)	-0.171*** (0.043)	-0.483* (0.199)	-0.281*** (0.044)	-0.596** (0.202)
	MOTHER'S EDUCATION	NVQ 5			0.000 (.)	0.000 (.)	0.000 (.)	0.000 (.)	0.000 (.)	0.000 (.)	0.000 (.)
NVQ 4				-0.019 (0.050)	-0.050 (0.071)	-0.004 (0.048)	-0.024 (0.068)	-0.007 (0.048)	-0.026 (0.069)	-0.013 (0.050)	-0.045 (0.070)
NVQ 3				-0.107+ (0.058)	-0.012 (0.086)	-0.042 (0.056)	-0.002 (0.083)	-0.054 (0.056)	-0.030 (0.084)	-0.085 (0.058)	0.021 (0.085)
NVQ 2				-0.144** (0.054)	-0.024 (0.095)	-0.067 (0.053)	0.054 (0.091)	-0.081 (0.052)	0.028 (0.092)	-0.117* (0.054)	0.010 (0.094)
NVQ 1				-0.160* (0.072)	-0.054 (0.121)	-0.047 (0.070)	-0.000 (0.117)	-0.063 (0.070)	-0.045 (0.118)	-0.129+ (0.072)	-0.000 (0.120)
OTHER				-0.076 (0.094)	0.653+ (0.379)	0.036 (0.091)	0.644+ (0.364)	0.003 (0.091)	0.645+ (0.367)	-0.023 (0.094)	0.654+ (0.374)
NO QUALIFICATIONS				-0.196** (0.071)	-0.070 (0.142)	-0.070 (0.070)	0.066 (0.138)	-0.111 (0.069)	-0.006 (0.138)	-0.127+ (0.072)	0.020 (0.141)
(std) SDQ Subscale: Emotional Symptoms						-0.012 (0.015)	0.008 (0.028)	-0.014 (0.015)	0.004 (0.028)		
(std) SDQ Subscale: Conduct Issues					0.049*** (0.015)	0.025 (0.027)	0.049*** (0.015)	0.025 (0.027)			
(std) SDQ Subscale: Hyperactivity & Inattention					-0.137*** (0.016)	-0.184*** (0.029)	-0.143*** (0.016)	-0.198*** (0.029)			
(std) SDQ Subscale: Peer Problems					-0.087*** (0.015)	-0.029 (0.029)	-0.089*** (0.015)	-0.029 (0.030)			
(std) SDQ Subscale: Prosocial Behaviour					-0.064*** (0.017)	-0.058+ (0.030)	-0.063*** (0.017)	-0.058+ (0.030)			
(std) T-score BAS II Picture Similarities					0.014 (0.014)	0.044+ (0.025)			0.037* (0.014)	0.057* (0.026)	
(std) T-score BAS II Naming Vocabulary					0.046** (0.015)	0.113*** (0.026)			0.066*** (0.015)	0.131*** (0.027)	
CONSTANT		0.126*** (0.020)	0.121*** (0.032)	0.181*** (0.045)	0.148* (0.059)	0.076+ (0.044)	0.077 (0.057)	0.096* (0.043)	0.103+ (0.058)	0.145** (0.045)	0.114+ (0.059)
N° of Observations		5416	1580	5416	1580	5416	1580	5416	1580	5416	1580
R^2		0.025	0.028	0.028	0.031	0.097	0.110	0.094	0.093	0.035	0.055

STATISTICAL SIGNIFICANCE	
+	p<0.10
*	p<0.0
**	p<0.01
***	p<0.001

Is there a SES gradient in (biased) teacher perceptions when controlling for prior cognitive abilities & socio-emotional difficulties?

		(std) RESIDUALS for Child tries their best at school									
		M0		M1		M2		M2a		M2b	
		ENG	SCOT	ENG	SCOT	ENG	SCOT	ENG	SCOT	ENG	SCOT
SOCIAL CLASS	1 + 2 - HIGHER & LOWER MANAGERIAL ADMINISTRATIVE AND PROFESSIONAL OCCUPATIONS	0.000 (.)	0.000 (.)	0.000 (.)	0.000 (.)	0.000 (.)	0.000 (.)	0.000 (.)	0.000 (.)	0.000 (.)	0.000 (.)
	3 - INTERMEDIATE	-0.042 (0.042)	-0.080 (0.076)	0.012 (0.043)	-0.075 (0.079)	0.037 (0.041)	0.010 (0.075)	0.031 (0.041)	0.006 (0.075)	0.022 (0.043)	-0.068 (0.079)
	4 - SMALL EMPLOYERS AND OWN ACCOUNT WORKERS	-0.214*** (0.048)	-0.093 (0.103)	-0.143** (0.050)	-0.082 (0.107)	-0.068 (0.047)	-0.064 (0.102)	-0.093* (0.047)	-0.071 (0.101)	-0.104* (0.050)	-0.069 (0.107)
	5 - LOWER SUPERVISORY AND TECHNICAL OCCUPATIONS	-0.326*** (0.070)	-0.170 (0.112)	-0.229** (0.072)	-0.156 (0.117)	-0.105 (0.068)	-0.074 (0.112)	-0.130+ (0.068)	-0.086 (0.111)	-0.184** (0.072)	-0.128 (0.117)
	6 + 7 - SEMI-ROUTINE & ROUTINE OCCUPATIONS	-0.239*** (0.044)	-0.339*** (0.075)	-0.135** (0.046)	-0.319*** (0.083)	-0.029 (0.045)	-0.187* (0.080)	-0.052 (0.044)	-0.196* (0.080)	-0.098* (0.046)	-0.300*** (0.084)
	N/A - NOT WORKING	-0.376*** (0.039)	-0.528** (0.197)	-0.263*** (0.043)	-0.510* (0.202)	-0.090* (0.042)	-0.320+ (0.193)	-0.119** (0.042)	-0.329+ (0.193)	-0.212*** (0.043)	-0.484* (0.202)
	MOTHER'S EDUCATION	NVQ 5			0.000 (.)	0.000 (.)	0.000 (.)	0.000 (.)	0.000 (.)	0.000 (.)	0.000 (.)
NVQ 4				-0.067 (0.050)	-0.101 (0.071)	-0.050 (0.047)	-0.071 (0.067)	-0.053 (0.048)	-0.070 (0.067)	-0.059 (0.050)	-0.099 (0.071)
NVQ 3				-0.193*** (0.057)	-0.074 (0.086)	-0.114* (0.055)	-0.079 (0.082)	-0.129* (0.055)	-0.085 (0.082)	-0.165** (0.057)	-0.061 (0.086)
NVQ 2				-0.230*** (0.054)	-0.073 (0.095)	-0.133** (0.052)	0.011 (0.090)	-0.151** (0.051)	0.005 (0.090)	-0.197*** (0.054)	-0.060 (0.095)
NVQ 1				-0.291*** (0.072)	-0.075 (0.121)	-0.142* (0.069)	-0.033 (0.115)	-0.163* (0.069)	-0.042 (0.115)	-0.252*** (0.072)	-0.054 (0.121)
OTHER				-0.278** (0.093)	0.113 (0.381)	-0.149+ (0.089)	0.093 (0.362)	-0.191* (0.089)	0.094 (0.362)	-0.212* (0.093)	0.113 (0.381)
NO QUALIFICATIONS				-0.312*** (0.071)	-0.140 (0.142)	-0.166* (0.069)	-0.027 (0.135)	-0.219** (0.068)	-0.042 (0.135)	-0.227** (0.072)	-0.106 (0.142)
(std) SDQ Subscale: Emotional Symptoms						0.052*** (0.015)	0.126*** (0.028)	0.050*** (0.015)	0.125*** (0.028)		
(std) SDQ Subscale: Conduct Issues						0.042** (0.014)	0.019 (0.027)	0.041** (0.014)	0.019 (0.027)		
(std) SDQ Subscale: Hyperactivity & Inattention						-0.249*** (0.016)	-0.255*** (0.029)	-0.257*** (0.016)	-0.258*** (0.029)		
(std) SDQ Subscale: Peer Problems						-0.031* (0.015)	-0.074* (0.029)	-0.034* (0.015)	-0.074* (0.029)		
(std) SDQ Subscale: Prosocial Behaviour						-0.066*** (0.017)	-0.096** (0.029)	-0.065*** (0.017)	-0.096** (0.029)		
(std) T-score BAS II Picture Similarities						0.019 (0.014)	0.002 (0.025)			0.047** (0.014)	0.018 (0.026)
(std) T-score BAS II Naming Vocabulary						0.059*** (0.014)	0.031 (0.026)			0.080*** (0.015)	0.054* (0.027)
CONSTANT		0.125*** (0.020)	0.079* (0.032)	0.236*** (0.044)	0.147* (0.059)	0.116** (0.043)	0.080 (0.057)	0.142*** (0.043)	0.086 (0.056)	0.192*** (0.045)	0.133* (0.059)
N° of Observations		5463	1596	5463	1596	5463	1596	5463	1596	5463	1596
R^2		0.022	0.017	0.030	0.018	0.126	0.122	0.122	0.121	0.039	0.022

STATISTICAL SIGNIFICANCE	
+	p<0.10
*	p<0.0
**	p<0.01
***	p<0.001

# SES GRADIENT IN TEACHER-STUDENT RELATIONSHIP



Discussion

# SUMMARY AND FIRST CONCLUSIONS

How do students' attitudes and their perceptions by teachers compare across England & Scotland (and between the two different attitude studied)?

- ▶ TEACHER'S PERCEPTIONS for **enjoying** school are more positive in England compared to Scotland
- ▶ STUDENTS' ATTITUDES for **enjoying** school are, in both countries, less positive than their teacher's perceptions.
- ▶ TEACHER'S PERCEPTIONS for **trying** their best at school are less positive in England compared to Scotland.
- ▶ STUDENTS' ATTITUDES for **trying** their best at school are (in England) much more positive than their teacher's perceptions

# SUMMARY AND FIRST CONCLUSIONS

Is there an SES gradient to the students' attitudes and their perceptions by teachers?

STUDENTS' ATTITUDES appear to **NEVER** (or almost never) have an SES-gradient

TEACHER'S PERCEPTIONS of said attitudes have **a very clear SES-gradient**



students from high SES families are perceived as enjoying school and trying their best at school much more often than students from low SES families

# SUMMARY AND FIRST CONCLUSIONS

Are teacher's perceptions accurate or inaccurate, i.e., are they negatively or positively biased?

the **proportion of variance** of teachers' perceptions explained by students' attitudes was indeed quite small (slightly larger in England and in both countries larger for the ENJOY attitude than for the TRIES attitude)

Is there a SES gradient in (biased) teacher perceptions?

**STRONG SES-gradient** in biased teacher perceptions in both countries and in both attitudes.

- ❑ No large differences between England and Scotland (pattern of statistical significance is however clearer for England)
- ❑ Clearer SES-gradient when SES is operationalised as income quintiles



# SUMMARY AND FIRST CONCLUSIONS

Is there a SES gradient in (biased) teacher perceptions when controlling for prior cognitive abilities & socio-emotional difficulties?

**YES!**

- ▶ There is still a clear effect for the two bottom SES categories (Semi-routine & Routine occupations and Not working).
- ▶ For England only, a significant effect for some of the other categories (e.g., Own account workers and small employers) is still visible.
- ▶ Overall, in terms of magnitude, it seems that there are more similarities across the two attitudes within each country, than among similar attitudes across the two countries.



**THANK YOU!**

**Any question or thought?**

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**Project website: <https://bipeproject.blogs.bristol.ac.uk>**

# SES GRADIENT IN TEACHER-STUDENT RELATIONSHIP



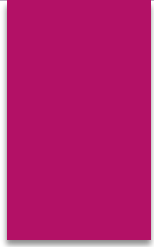
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# SES GRADIENT IN TEACHER-STUDENT RELATIONSHIP



Appendix



BIPE Project

# BIPE Project

## Background and motivation

- ▶ ESRC funded 2-year project 'social and ethnic biases in primary school'
- ▶ Observational study using large-scale secondary data sets (England – MCS, Scotland, GUS, Ireland - GUI, Germany – NEPS)
- ▶ Study of **mediators/confounders** of teacher bias such as student behaviour, student attitudes, parental involvement
- ▶ Country comparison to explore '**macro-level factors**' such as teacher training and education systems

## Research objectives

1. Analyse 4 large-scale survey data sets to understand to what extent and why teacher assessments of primary students' school performance and attitudes are biased by students' social class and ethnic background;
2. Conduct a multi-country study to explore country-differences in biases and the role of "macro-level factors" such as teacher training and education policy;
3. Use the findings to promote fair teacher assessments and positive student-teacher relationships through teacher workshops (research impact).

# BIPE Project

## Methodology

Measurement of **discrepancies (=bias)** between 'subjective' teacher judgements and 'objective' test scores but also students' own reports; for example:

- ▶ Teacher and student reports of students' attitudes to school
- ▶ Teacher assessments of student school performance and abilities and students scores on standardized ability tests
- ▶ Teacher and parent reports of parents' interest and involvement in education





NVQ-equivalent coding

# NVQ-equivalent coding

	MCS	GUS
<b>NVQ LEVEL 5</b>	Higher degree and postgraduate qualifications	Postgraduate degree
	Post-graduate Diplomas and Certificates	
<b>NVQ LEVEL 4</b>	Professional qualifications at degree level - e.g., graduate member of professional institute, chartered accountant or surveyor	Professional qualification (employment related)
	First degree (including B.Ed.)	Univ/CNAA first degree/diploma
	Diplomas in higher education and other higher education qualifications	
	Teaching qualifications for schools or further education (below degree level)	Teacher training qualification
	Nursing or other medical qualifications (below degree level)	Nursing qualification
	NVQ or SVQ level 4 or 5	SVQ/NVQ Level 4 SVQ/NVQ Level 5
		SCOTVEC/BTEC/BEC/TEC Higher National Certif (HNC) or Diploma (HND)
	HND, HNC, Higher Level BTEC/RSA Higher Diploma	OCR/RSA- Higher Diploma
		City & Guilds – Level 4 / Full technological / Part IV
		Scottish Higher/Higher Still Grades, Scottish SCE/SLC/SUPE at Higher Grade, Scottish Higher School Certificate, Certificate of Sixth Year Studies, A-level, S-level, A2-level, AS-level, International Baccalaureate, Vocational A-level (AVCE), Northern Ireland Senior Certificate
<b>NVQ LEVEL 3</b>	A/AS/S Levels/SCE Higher, Scottish Certificate Sixth Year Studies, Leaving Certificate or equivalent	
	NVQ or SVQ Level 3/GNVQ Advanced or GSVQ Level 3	SVQ/NVQ Level 3/GSVQ/GNVQ Advanced Level
	OND, ONCM BTEC National, SCOTVEC National Certificate	SCOTVEC/BTEC/BEC/TEC (General/Ordinary) National Certif or Diploma (ONC/OND)
		Foundation/advanced modern apprenticeship
	City & Guilds advanced craft, Part III/RSA Advanced Diploma	OCR/RSA Advanced Diploma City & Guilds – Level 3/Advanced/Final/Part III

# NVQ-equivalent coding

	MCS	GUS
<b>NVQ LEVEL 2</b>	O Level or GCSE grade A-C, SCE Standard, Ordinary grades 1-3 or Junior Certificate grade A-C	Scottish Standard Grades 1-3, Scottish SCE Ordinary Bands A-C or pass, Scottish School Leavers Certificate Lower Grade, SUPE Ordinary, GCSE Grades A-C, CSE Grade 1, O-Level Grades A-C or 1-6, School Certificate/Matriculation, Northern Ireland Junior Certificate
	NVQ or SVQ Level 2/GNVQ Intermediate or GSVQ Level 2	SVQ/NVQ Level 2/GSVQ/GNVQ Intermediate Level
	BTEC, SCOTVEC first or general diploma	SCOTVEC/BTEC First/General Diploma
	City & Guilds Craft or Part II/RSA Diploma	OCR/RSA (First) Diploma
	Other (older) trade apprenticeships	City&Guilds – Level 2/Craft/Intermediate/Ordinary/Part II
<b>NVQ LEVEL 1</b>	CSE below grade 1 / GCSE or O Level below grade C, SCE Standard, Ordinary grades below grade 3 or Junior Certificate below grade C	Scottish Standard Grades 4-7, Scottish (SCE) Ordinary Bands D-E ScotVec/SQA National Certificate Module, GCSE Grades D-G
	NVQ or SVQ Level 1/GNVQ Foundation Level or GSVQ Level 1	Short course GCSE, Vocational GCSE, CSE Grades 2-5, O-level Grades D-E or 7-9, Scottish School Leaving Certificate (no grade)
	BTEC, SCOTVEC first or general certificate/SCOTVEC modules	SVQ/NVQ Level 1/GSVQ/GNVQ Foundation Level SCOTVEC/BTEC First Certificate
	City & Guilds part 1/RSA Stage I, II, III/Junior certificate	City&Guilds -Level 1/Part I OCR/RSA – (Vocational) Certificate
<b>OTHER/ VERSEAS</b>	Other qualifications (including overseas)	<ul style="list-style-type: none"> <li>- Other clerical commercial qualification</li> <li>- IT certificate/qualification</li> <li>- Other-employment related qualification</li> </ul>
<b>NONE OF THESE</b>	None	None



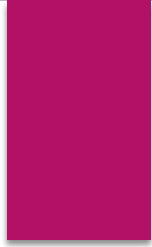

DECOMPOSED DESCRIPTIVES – Cognitive assessments & SDQ  
subscales by SES measures

# ATTITUDE = enjoys

		SDQ SUBSCALES										COGNITIVE ASSESSMENTS			
		Emotional symptoms		Conduct issues		Hyperactivity & inattention		Peer relationship problems		Prosocial behaviours		BAS II Picture Similarities		BAS II Naming Vocabulary	
		E	S	E	S	E	S	E	S	E	S	E	S	E	S
<b>TOTAL</b>		0 (1)	0 (1)	0 (1)	0 (1)	0 (1)	0 (1)	0 (1)	0 (1)	0 (1)	0 (1)	0 (1)	0 (1)	0 (1)	0 (1)
<b>INCOME QUINTILE</b>	<i>Lowest quintile</i>	0.26 (1.1)	0.22 (1.1)	0.49 (1.23)	0.32 (1.19)	0.36 (1.07)	0.23 (1.11)	0.36 (1.04)	0.34 (1.17)	-0.24 (1.2)	-0.09 (1.1)	-0.29 (1.05)	-0.13 (0.96)	-0.72 (1)	-0.42 (1.01)
	<i>Second quintile</i>	0.17 (1.06)	0.11 (1.06)	0.2 (1.12)	0.06 (1.04)	0.15 (1.02)	0.16 (1.07)	0.15 (1.07)	0.22 (1.2)	-0.03 (1.01)	-0.02 (1.06)	-0.09 (1)	-0.15 (0.99)	-0.27 (0.92)	-0.1 (1.03)
	<i>Third quintile</i>	0.05 (1.02)	-0.03 (1)	0.02 (0.96)	-0.03 (0.96)	0.07 (1.03)	-0.01 (0.98)	0.05 (1.04)	-0.05 (0.9)	0 (0.99)	0 (0.94)	-0.03 (1)	-0.04 (0.99)	-0.02 (0.93)	0.07 (0.99)
	<i>Fourth quintile</i>	-0.09 (0.95)	-0.13 (0.87)	-0.16 (0.85)	-0.11 (0.88)	-0.12 (0.94)	-0.15 (0.94)	-0.16 (0.91)	-0.25 (0.75)	0.07 (0.93)	0.01 (0.98)	0.09 (0.97)	0.03 (0.99)	0.23 (0.89)	0.13 (0.97)
	<i>Highest quintile</i>	-0.23 (0.85)	-0.12 (0.94)	-0.29 (0.75)	-0.19 (0.87)	-0.26 (0.88)	-0.18 (0.86)	-0.21 (0.89)	-0.18 (0.84)	0.09 (0.91)	0.08 (0.93)	0.18 (0.94)	0.25 (1.02)	0.41 (0.92)	0.24 (0.89)
<b>SOCIAL CLASS (NS-SEC 07)</b>	<i>1 + 2 - Higher + Lower managerial administrative and professional occupations</i>	-0.14 (0.91)	-0.07 (0.95)	-0.19 (0.84)	-0.09 (0.93)	-0.18 (0.93)	-0.11 (0.94)	-0.15 (0.93)	-0.11 (0.91)	0.08 (0.93)	0.02 (0.99)	0.13 (0.97)	0.06 (0.99)	0.28 (0.92)	0.15 (0.96)
	<i>3 - Intermediate occupations</i>	-0.09 (0.91)	0.07 (1.05)	-0.1 (0.89)	0.06 (1.05)	-0.06 (0.94)	0.17 (1.04)	-0.11 (0.91)	0.06 (1.02)	0.01 (0.95)	0.02 (0.93)	0.06 (0.95)	0.06 (1.01)	0.09 (0.89)	-0.06 (0.98)
	<i>4 - Small employers and own account workers</i>	0 (0.95)	-0.07 (0.93)	0.01 (0.97)	-0.11 (0.83)	0.05 (1.02)	-0.06 (0.95)	0.02 (0.96)	0.02 (0.88)	0.03 (0.96)	0.09 (0.98)	-0.06 (1.02)	0.02 (0.96)	-0.26 (1.08)	-0.22 (0.99)
	<i>5 - Lower supervisory and technical occupations</i>	0.08 (1.06)	0.12 (1.08)	0.09 (1.1)	0.21 (1.08)	0.22 (0.97)	0.14 (0.91)	0.13 (0.97)	0.08 (1.15)	0.03 (0.96)	-0.01 (0.84)	-0.23 (1.03)	-0.4 (0.99)	-0.28 (0.99)	-0.39 (1.05)
	<i>6 + 7 - Semi-routine + Routine occupations</i>	0.19 (1.06)	0.14 (1.08)	0.18 (1.11)	0.29 (1.17)	0.2 (1.02)	0.26 (1.13)	0.17 (1.05)	0.34 (1.22)	-0.07 (1.05)	-0.15 (1.14)	-0.14 (0.97)	-0.13 (1)	-0.29 (0.93)	-0.32 (1.01)
	<i>N/A - Not working</i>	0.33 (1.17)	0.75 (1.31)	0.48 (1.22)	0.55 (1.38)	0.35 (1.08)	0.62 (1.43)	0.37 (1.13)	0.61 (1.22)	-0.21 (1.18)	-0.03 (1.19)	-0.24 (1.05)	-0.41 (1.05)	-0.47 (1.03)	-0.42 (1.23)
<b>MOTHER'S EDUCATION</b>	<i>NVQ-equivalent Level 5 (highest)</i>	-0.19 (0.9)	-0.1 (0.94)	-0.3 (0.7)	-0.16 (0.86)	-0.25 (0.91)	-0.11 (0.98)	-0.15 (0.95)	-0.14 (0.86)	0.08 (0.92)	0 (0.93)	0.27 (0.94)	0.16 (1.02)	0.33 (0.94)	0.16 (0.96)
	<i>NVQ-equivalent Level 4</i>	-0.12 (0.94)	0.04 (1.05)	-0.14 (0.91)	-0.01 (0.97)	-0.19 (0.94)	-0.02 (0.99)	-0.13 (0.95)	-0.02 (1.01)	0.05 (0.95)	-0.04 (1.06)	0.11 (0.95)	0.05 (0.99)	0.26 (0.94)	0.14 (0.95)
	<i>NVQ-equivalent Level 3</i>	0.05 (1.03)	-0.08 (0.9)	0.01 (0.93)	-0.09 (0.93)	0.04 (1)	-0.09 (0.92)	-0.01 (1.04)	-0.11 (0.82)	-0.01 (1)	0.14 (0.89)	0 (1.04)	-0.07 (0.99)	-0.02 (0.98)	-0.1 (1.04)
	<i>NVQ-equivalent Level 2</i>	0.09 (1.03)	0.09 (1.04)	0.08 (1.05)	0.22 (1.24)	0.14 (1)	0.19 (1.03)	0.06 (1.02)	0.17 (1.11)	0 (1.01)	-0.08 (1.07)	-0.11 (0.96)	-0.01 (0.98)	-0.09 (0.92)	-0.19 (1.05)
	<i>NVQ-equivalent Level 1 (lowest)</i>	0.1 (1.02)	0 (0.89)	0.33 (1.18)	0.05 (1.02)	0.3 (1.07)	0.06 (1.02)	0.19 (1.04)	0.2 (1.23)	-0.13 (1.12)	0.14 (0.85)	-0.12 (1.14)	-0.22 (0.96)	-0.25 (1)	-0.29 (0.98)
	<i>Overseas or other qualifications</i>	0.3 (1.05)	0.22 (1.22)	0.25 (1.12)	-0.5 (0.84)	0.21 (1.01)	-0.03 (1.07)	0.24 (1.02)	0.5 (1.36)	-0.17 (1.08)	0.41 (0.69)	-0.06 (1.01)	0.08 (0.98)	-0.66 (1)	0.15 (1.12)
	<i>None of these</i>	0.2 (1.07)	0.15 (1.17)	0.34 (1.2)	0.4 (1.11)	0.27 (1.05)	0.3 (1.2)	0.35 (0.99)	0.38 (1.16)	-0.14 (1.12)	-0.2 (1.13)	-0.37 (1.03)	-0.44 (1.04)	-0.8 (1)	-0.55 (0.95)

# ATTITUDE = tries

		SDQ SUBSCALES										COGNITIVE ASSESSMENTS			
		Emotional symptoms		Conduct issues		Hyperactivity & inattention		Peer relationship problems		Prosocial behaviours		BAS II Picture Similarities		BAS II Naming Vocabulary	
		E	S	E	S	E	S	E	S	E	S	E	S	E	S
<b>TOTAL</b>		0 (1)	0 (1)	0 (1)	0 (1)	0 (1)	0 (1)	0 (1)	0 (1)	0 (1)	0 (1)	0 (1)	0 (1)	0 (1)	0 (1)
<b>INCOME QUINTILE</b>	<i>Lowest quintile</i>	0.27 (1.1)	0.21 (1.09)	0.48 (1.22)	0.32 (1.19)	0.36 (1.07)	0.23 (1.11)	0.36 (1.04)	0.33 (1.17)	-0.23 (1.2)	-0.1 (1.12)	-0.29 (1.05)	-0.14 (0.97)	-0.72 (1)	-0.42 (1)
	<i>Second quintile</i>	0.17 (1.06)	0.13 (1.07)	0.2 (1.13)	0.07 (1.05)	0.14 (1.02)	0.17 (1.07)	0.16 (1.07)	0.23 (1.21)	-0.03 (1.01)	-0.01 (1.01)	-0.09 (1)	-0.14 (0.98)	-0.27 (0.92)	-0.11 (1.03)
	<i>Third quintile</i>	0.05 (1.02)	-0.03 (1)	0.03 (0.97)	-0.02 (0.96)	0.08 (1.03)	-0.01 (0.98)	0.06 (1.05)	-0.06 (0.9)	-0.02 (1)	0 (0.95)	-0.03 (1)	-0.04 (0.99)	-0.02 (0.93)	0.07 (0.99)
	<i>Fourth quintile</i>	-0.1 (0.94)	-0.13 (0.88)	-0.17 (0.84)	-0.11 (0.9)	-0.12 (0.94)	-0.15 (0.94)	-0.16 (0.9)	-0.24 (0.76)	0.08 (0.93)	0.01 (0.99)	0.09 (0.97)	0.05 (0.99)	0.23 (0.89)	0.14 (0.97)
	<i>Highest quintile</i>	-0.23 (0.86)	-0.13 (0.94)	-0.29 (0.76)	-0.2 (0.85)	-0.26 (0.88)	-0.19 (0.85)	-0.21 (0.89)	-0.19 (0.82)	0.09 (0.91)	0.09 (0.94)	0.18 (0.94)	0.24 (1.02)	0.41 (0.92)	0.24 (0.9)
<b>SOCIAL CLASS (NS-SEC 07)</b>	<i>1 + 2 - Higher + Lower managerial administrative and professional occupations</i>	-0.14 (0.91)	-0.07 (0.95)	-0.19 (0.84)	-0.1 (0.93)	-0.18 (0.93)	-0.12 (0.93)	-0.16 (0.93)	-0.12 (0.9)	0.08 (0.93)	0.03 (0.98)	0.13 (0.97)	0.06 (0.99)	0.28 (0.92)	0.15 (0.96)
	<i>3 - Intermediate occupations</i>	-0.09 (0.91)	0.07 (1.05)	-0.11 (0.89)	0.06 (1.05)	-0.06 (0.94)	0.18 (1.05)	-0.11 (0.91)	0.05 (1.02)	0.02 (0.95)	0.01 (0.94)	0.06 (0.95)	0.06 (1.01)	0.09 (0.89)	-0.06 (0.98)
	<i>4 - Small employers and own account workers</i>	0 (0.95)	-0.08 (0.93)	0.02 (0.98)	-0.12 (0.83)	0.05 (1.02)	-0.06 (0.95)	0.02 (0.96)	0.01 (0.87)	0.02 (0.96)	0.08 (0.99)	-0.06 (1.02)	0.02 (0.96)	-0.27 (1.08)	-0.22 (0.99)
	<i>5 - Lower supervisory and technical occupations</i>	0.1 (1.07)	0.17 (1.09)	0.11 (1.11)	0.19 (1.06)	0.25 (1)	0.14 (0.91)	0.16 (1.02)	0.14 (1.22)	-0.02 (1.06)	-0.01 (0.84)	-0.25 (1.03)	-0.39 (0.97)	-0.3 (0.99)	-0.39 (1.03)
	<i>6 + 7 - Semi-routine + Routine occupations</i>	0.19 (1.06)	0.14 (1.08)	0.18 (1.11)	0.3 (1.18)	0.2 (1.01)	0.27 (1.13)	0.17 (1.05)	0.34 (1.21)	-0.07 (1.05)	-0.16 (1.16)	-0.14 (0.97)	-0.14 (1)	-0.28 (0.93)	-0.33 (1)
	<i>N/A - Not working</i>	0.33 (1.17)	0.76 (1.28)	0.47 (1.21)	0.55 (1.36)	0.35 (1.08)	0.62 (1.41)	0.37 (1.13)	0.68 (1.25)	-0.2 (1.17)	-0.09 (1.2)	-0.24 (1.05)	-0.41 (1.03)	-0.46 (1.03)	-0.39 (1.21)
<b>MOTHER'S EDUCATION</b>	<i>NVQ-equivalent Level 5 (highest)</i>	-0.2 (0.9)	-0.11 (0.93)	-0.3 (0.7)	-0.18 (0.83)	-0.25 (0.91)	-0.13 (0.96)	-0.15 (0.95)	-0.15 (0.85)	0.08 (0.91)	0.01 (0.93)	0.27 (0.95)	0.15 (1.02)	0.33 (0.94)	0.16 (0.97)
	<i>NVQ-equivalent Level 4</i>	-0.12 (0.94)	0.03 (1.04)	-0.14 (0.9)	-0.01 (0.97)	-0.19 (0.94)	-0.02 (1)	-0.13 (0.94)	-0.02 (1.02)	0.05 (0.94)	-0.04 (1.04)	0.12 (0.95)	0.05 (0.99)	0.26 (0.94)	0.14 (0.95)
	<i>NVQ-equivalent Level 3</i>	0.06 (1.03)	-0.06 (0.92)	0.01 (0.94)	-0.08 (0.95)	0.04 (1.01)	-0.08 (0.92)	-0.01 (1.04)	-0.11 (0.82)	-0.02 (1.01)	0.13 (0.91)	0 (1.04)	-0.07 (0.99)	-0.02 (0.98)	-0.11 (1.04)
	<i>NVQ-equivalent Level 2</i>	0.09 (1.04)	0.09 (1.04)	0.09 (1.06)	0.23 (1.23)	0.14 (1.01)	0.2 (1.04)	0.05 (1.01)	0.17 (1.1)	0.01 (1.01)	-0.08 (1.08)	-0.11 (0.96)	-0.01 (0.98)	-0.09 (0.92)	-0.19 (1.04)
	<i>NVQ-equivalent Level 1 (lowest)</i>	0.1 (1.02)	0.03 (0.9)	0.34 (1.19)	0.05 (1.01)	0.31 (1.06)	0.07 (1.01)	0.19 (1.03)	0.23 (1.24)	-0.14 (1.14)	0.13 (0.86)	-0.13 (1.13)	-0.23 (0.96)	-0.25 (1)	-0.29 (0.97)
	<i>Overseas or other qualifications</i>	0.3 (1.04)	0.21 (1.22)	0.24 (1.08)	-0.51 (0.84)	0.23 (1.03)	-0.03 (1.08)	0.27 (1.04)	0.49 (1.35)	-0.18 (1.08)	0.41 (0.7)	-0.08 (1.04)	0.09 (0.98)	-0.65 (1.01)	0.16 (1.12)
	<i>None of these</i>	0.2 (1.07)	0.14 (1.16)	0.34 (1.21)	0.39 (1.1)	0.27 (1.05)	0.31 (1.19)	0.35 (0.99)	0.37 (1.14)	-0.13 (1.11)	-0.21 (1.14)	-0.37 (1.03)	-0.42 (1.03)	-0.79 (1.01)	-0.56 (0.94)



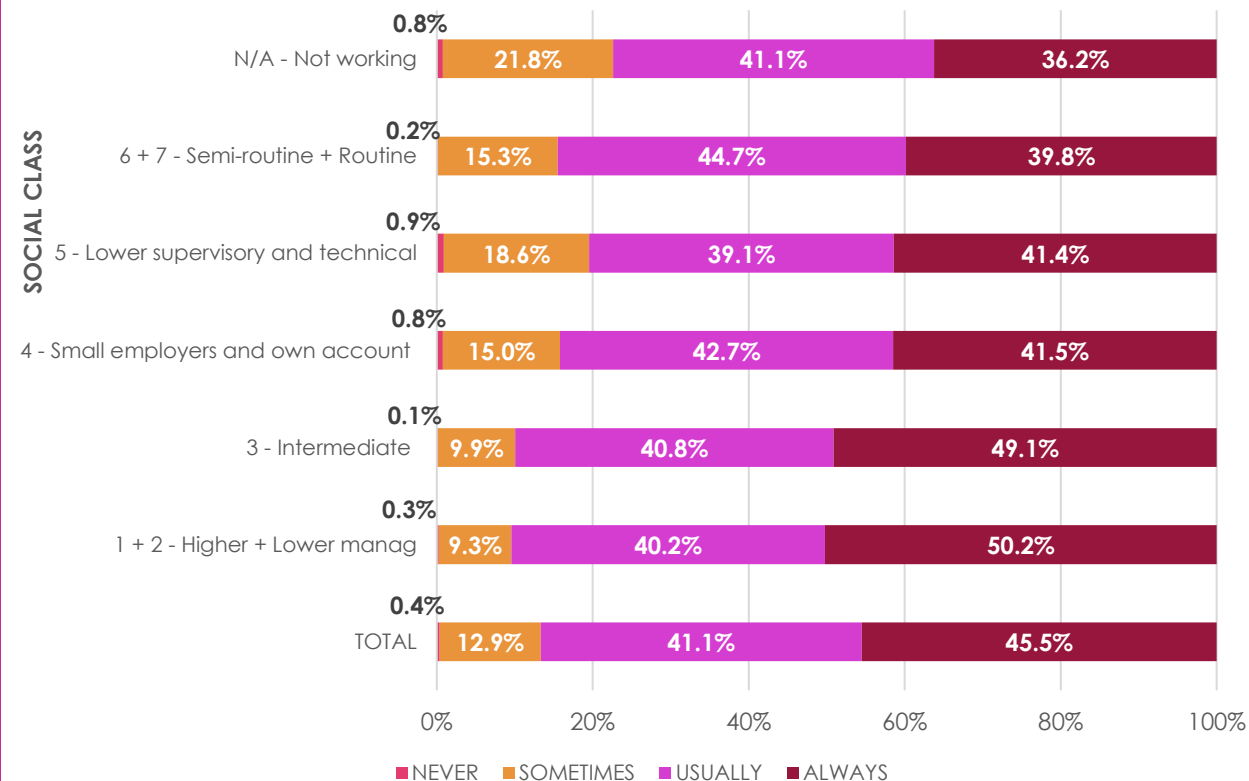
DECOMPOSED DESCRIPTIVES – SES-gradient to T & S, social class (tries)

# DECOMPOSED DESCRIPTIVES - Ib

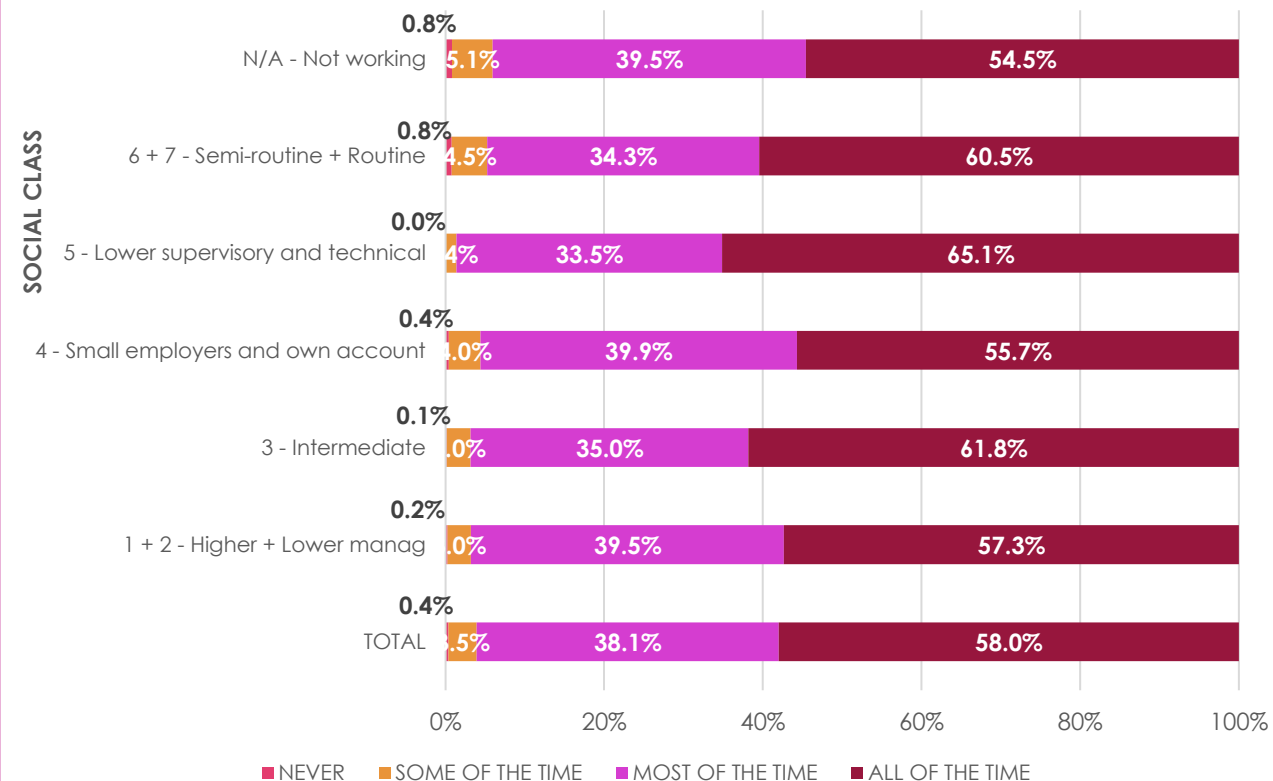
Is there an SES gradient (social class) to the students' attitude 'enjoys' and its perception by teachers?

## ENGLAND

TEACHER'S PERCEPTION: How often does the child try their best at school?

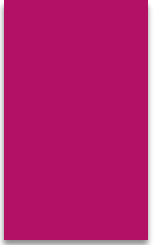


STUDENT'S PERCEPTION: How often do you try your best at school?

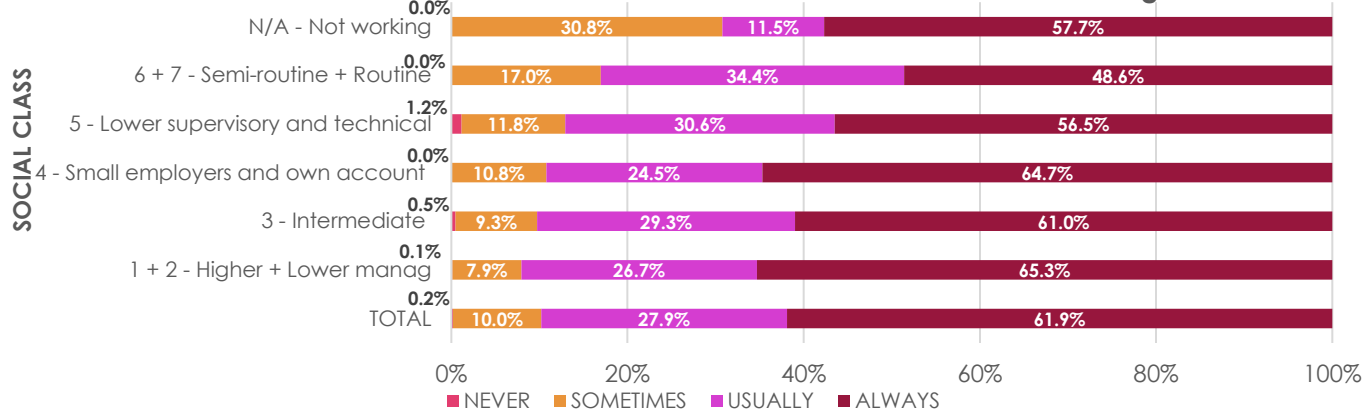




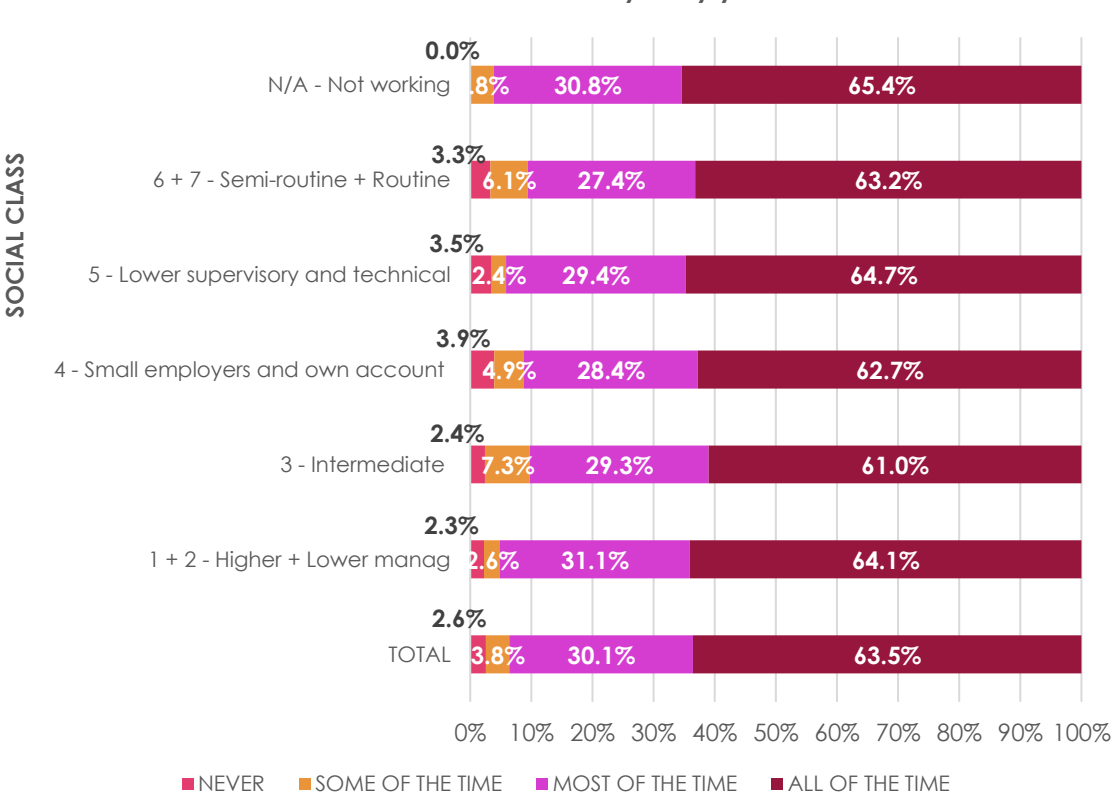
# SCOTLAND



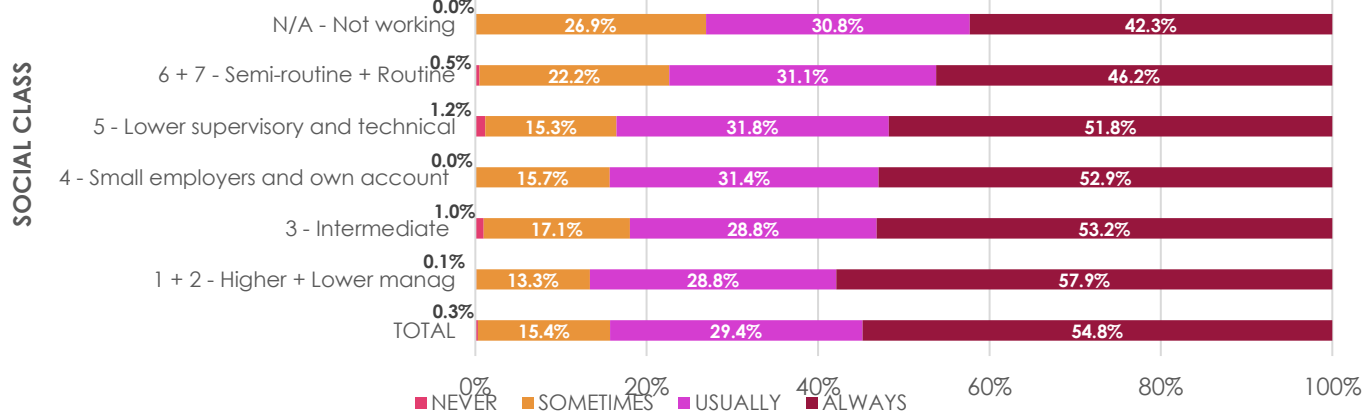
**TEACHER's PERCEPTION: How often does this child tries their best at reading?**



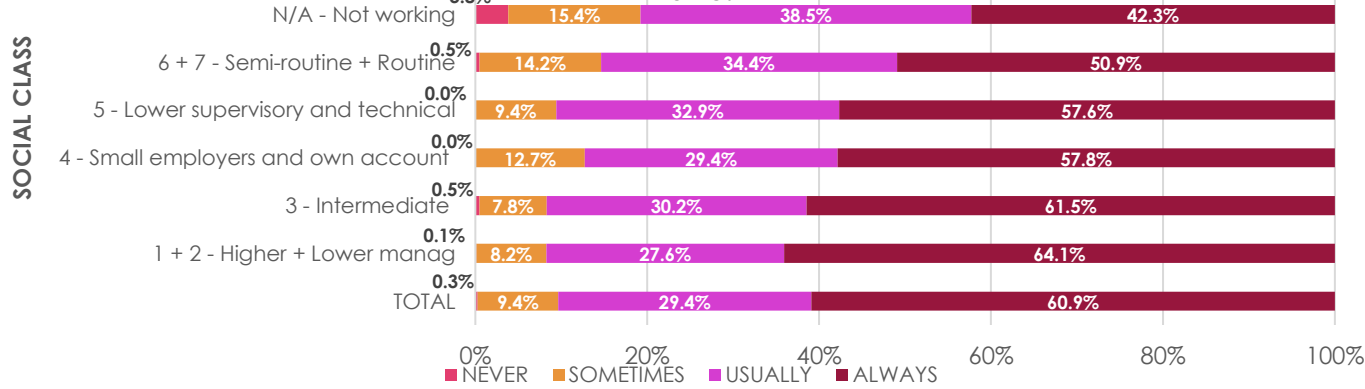
**STUDENT's PERCEPTION: How often do you try your best at school?**



**TEACHER's PERCEPTION: How often does this child tries their best at writing?**



**TEACHER's PERCEPTION: How often does this child tries their best at numeracy & maths?**





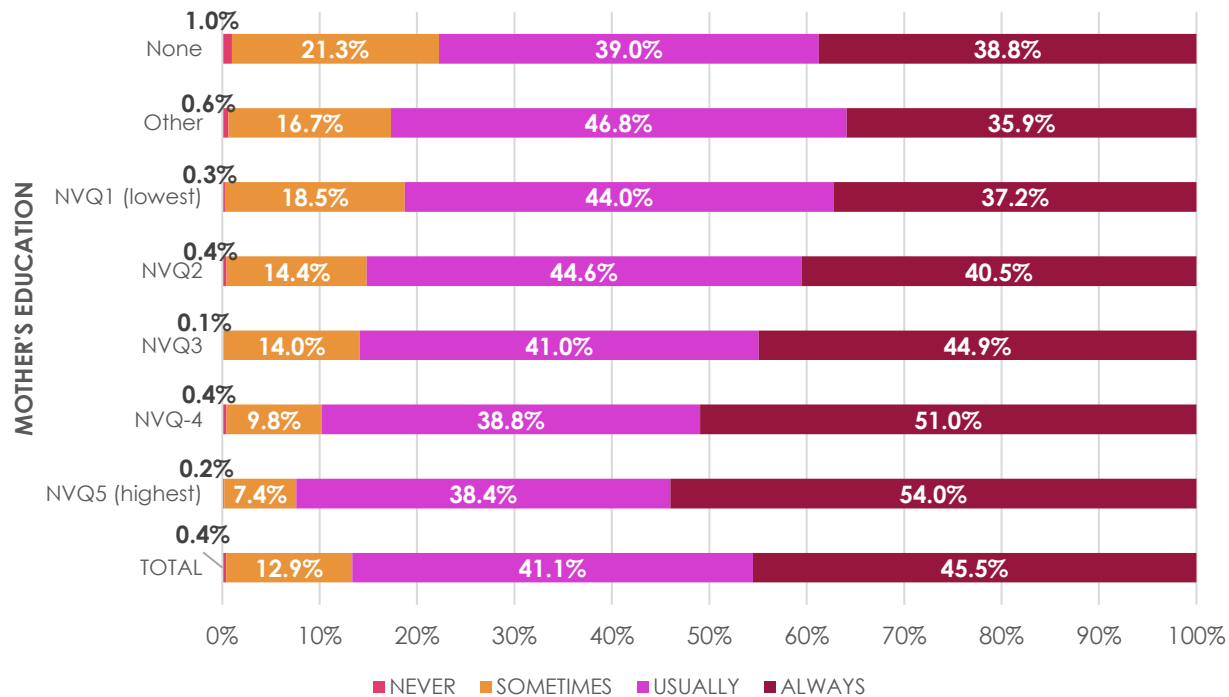
DECOMPOSED DESCRIPTIVES – SES-gradient to T & S, mother's  
education (tries)

# DECOMPOSED DESCRIPTIVES - Ic

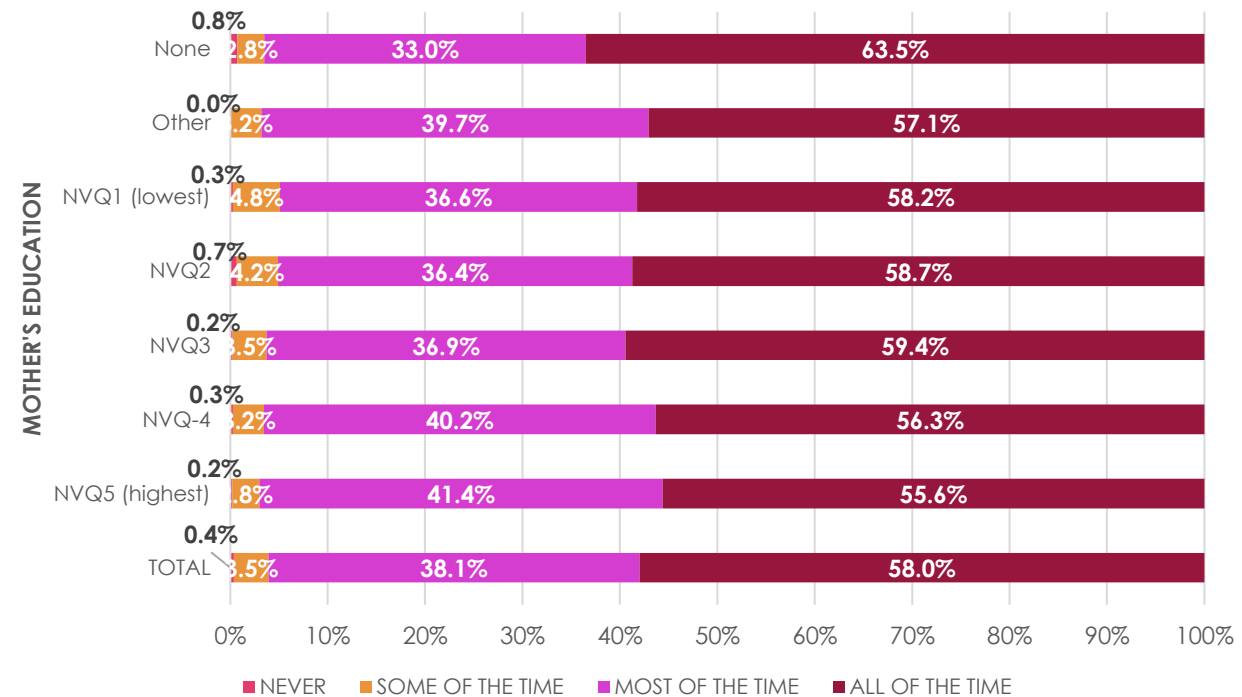
Is there an SES gradient (maternal education) to the students' attitude 'enjoys' and its perception by teachers?

## ENGLAND

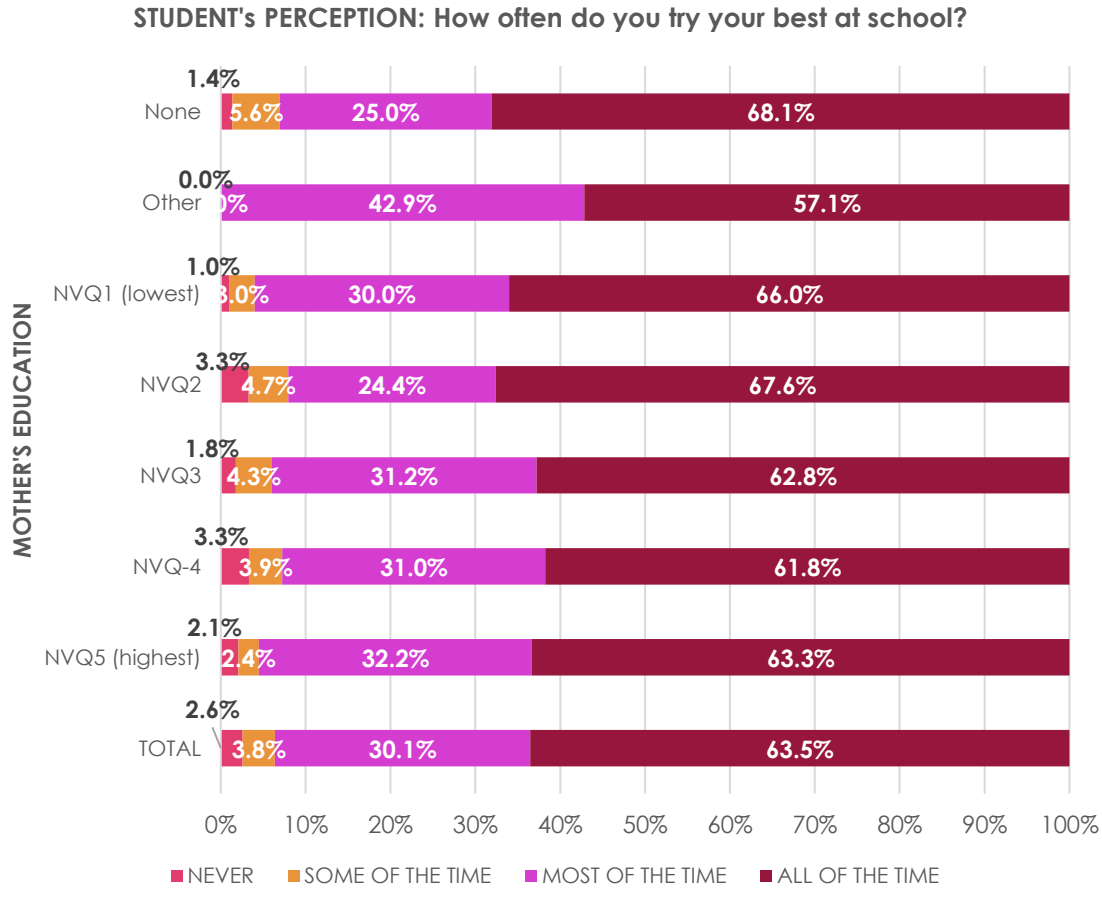
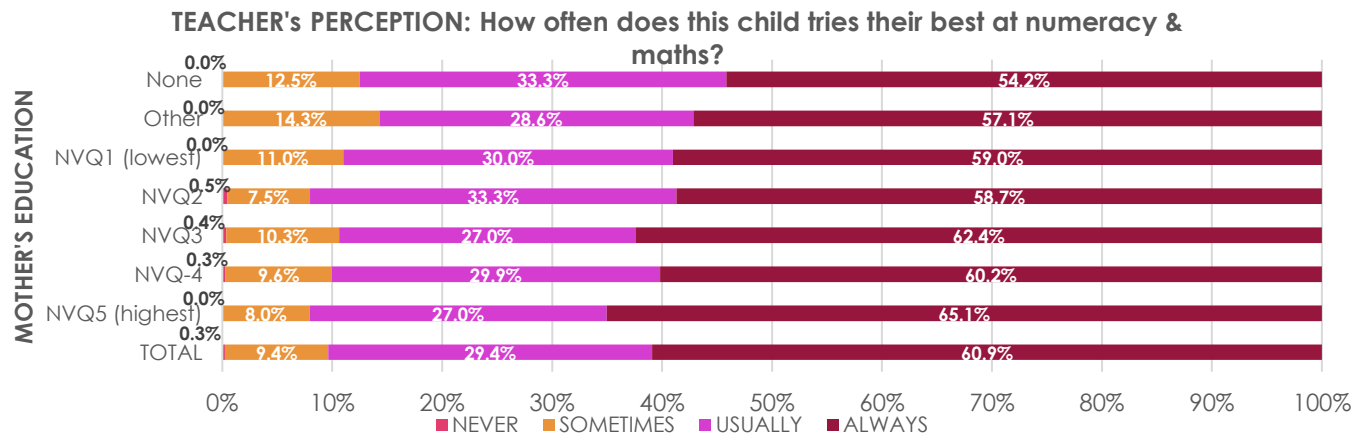
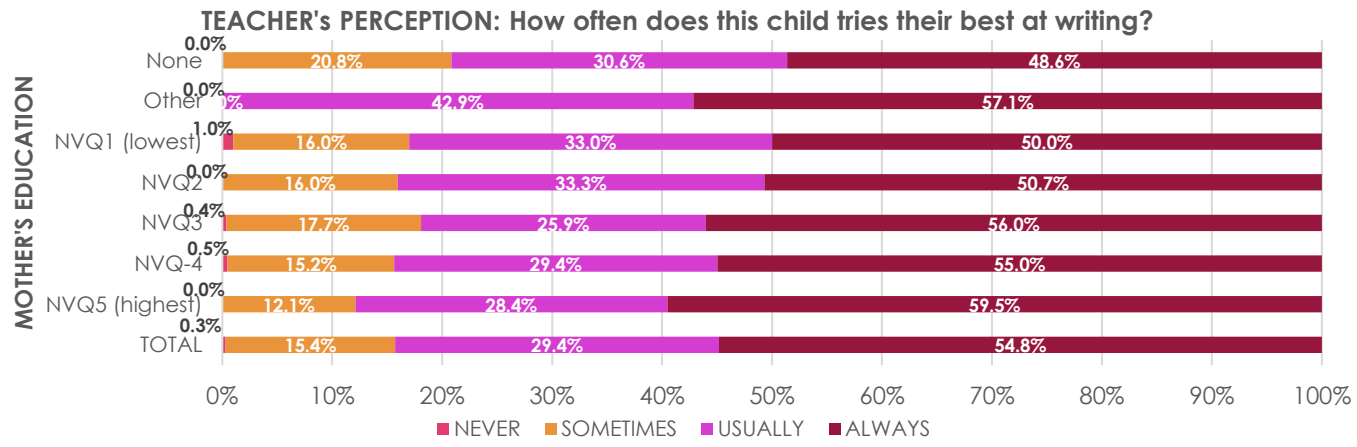
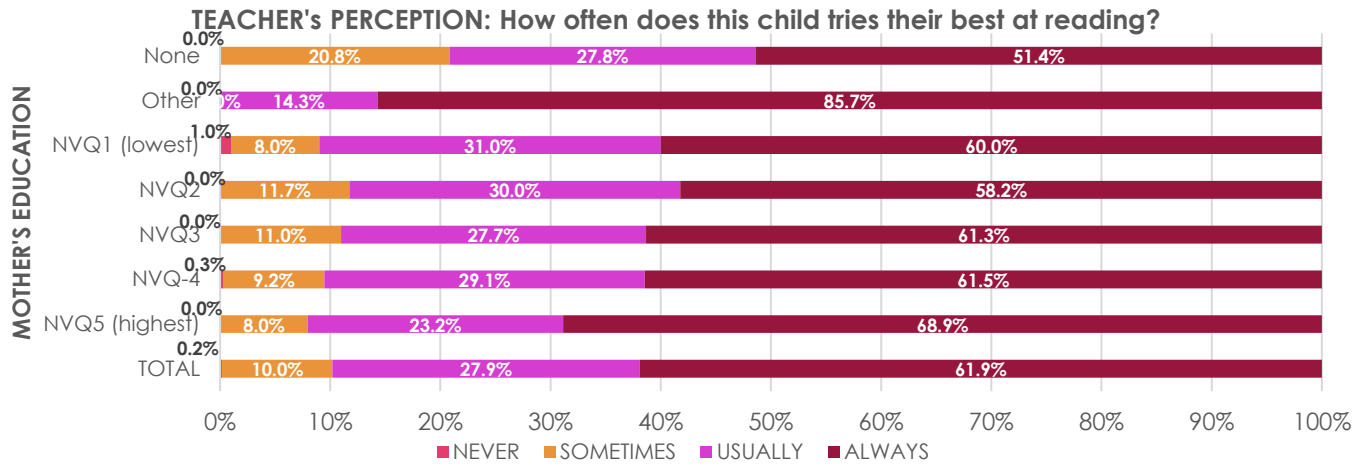
TEACHER'S PERCEPTION: How often does the child try their best at school?



STUDENT'S PERCEPTION: How often do you try your best at school?



# SCOTLAND





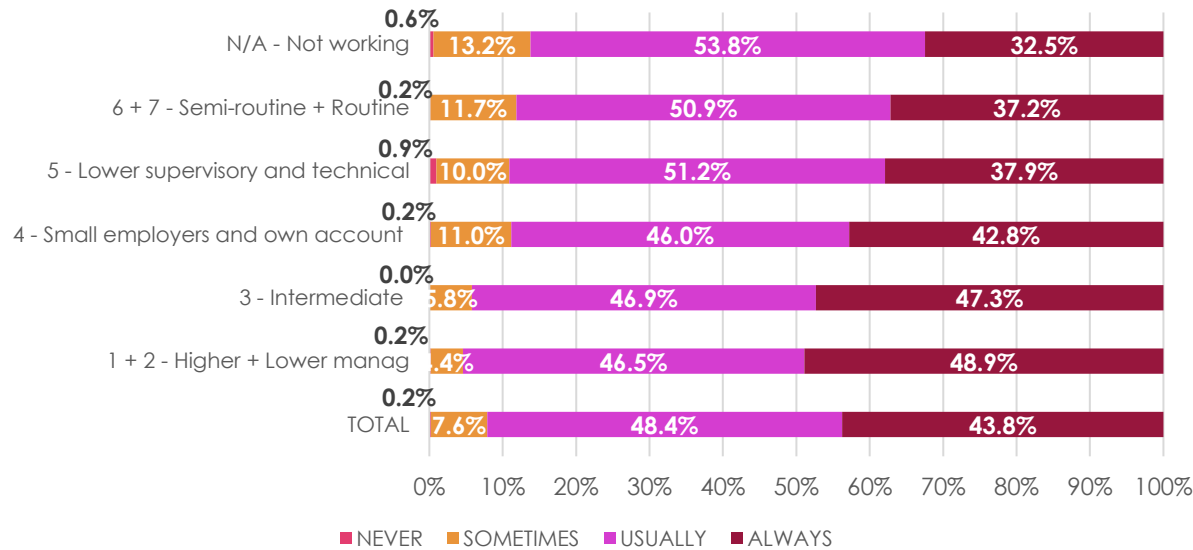
DECOMPOSED DESCRIPTIVES – SES-gradient to T & S, social class (enjoys)

# DECOMPOSED DESCRIPTIVES - IIb

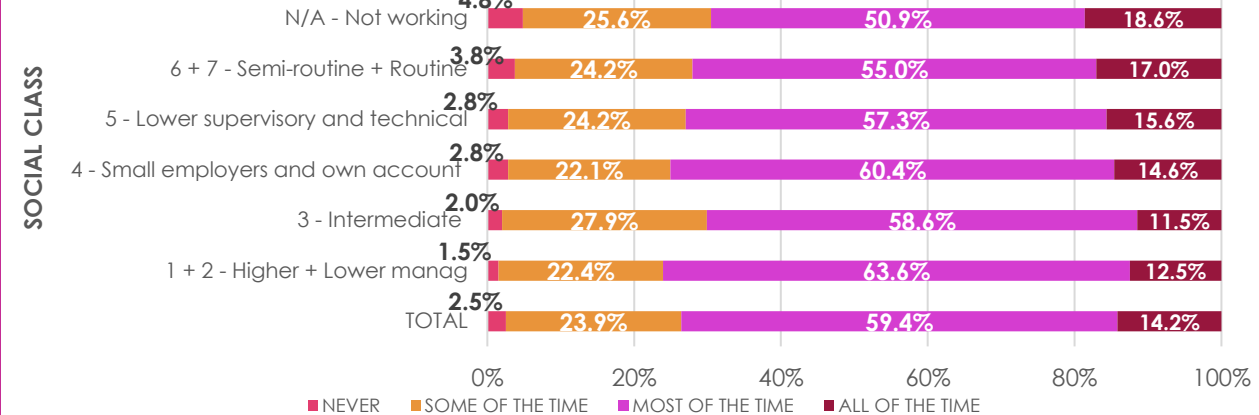
Is there an SES gradient (social class) to the students' attitude 'enjoys' and its perception by teachers?

## ENGLAND

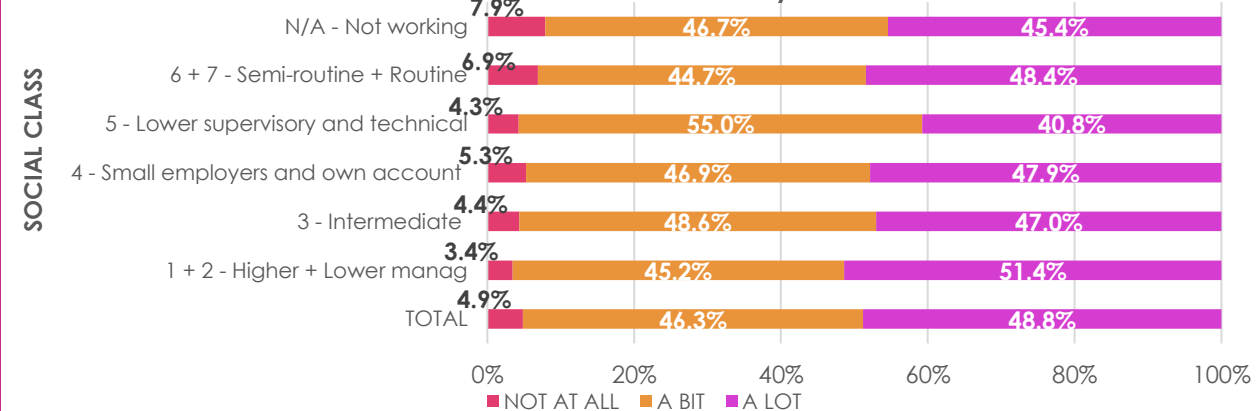
TEACHER'S PERCEPTION: How often does the child seem to enjoys school?



STUDENT'S PERCEPTION: How often do you find school interesting?



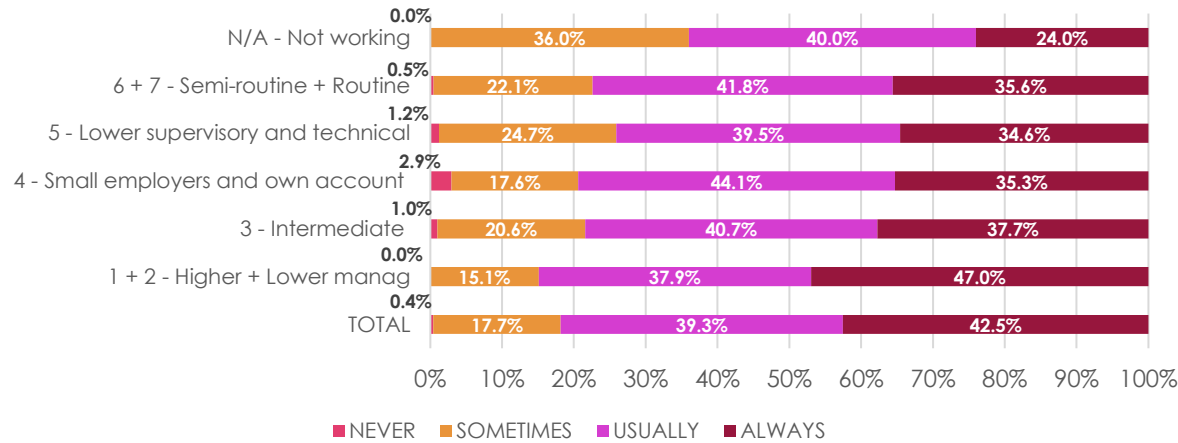
STUDENT'S PERCEPTION: How often do you like school?



# SCOTLAND teacher's perceptions

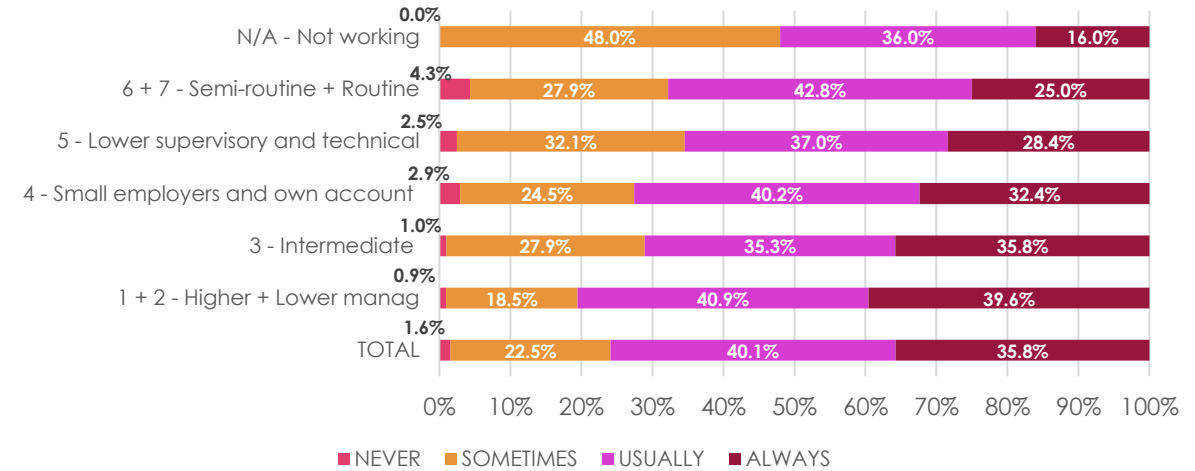
TEACHER's PERCEPTION: How often does this child seem to enjoy listening & talking?

SOCIAL CLASS



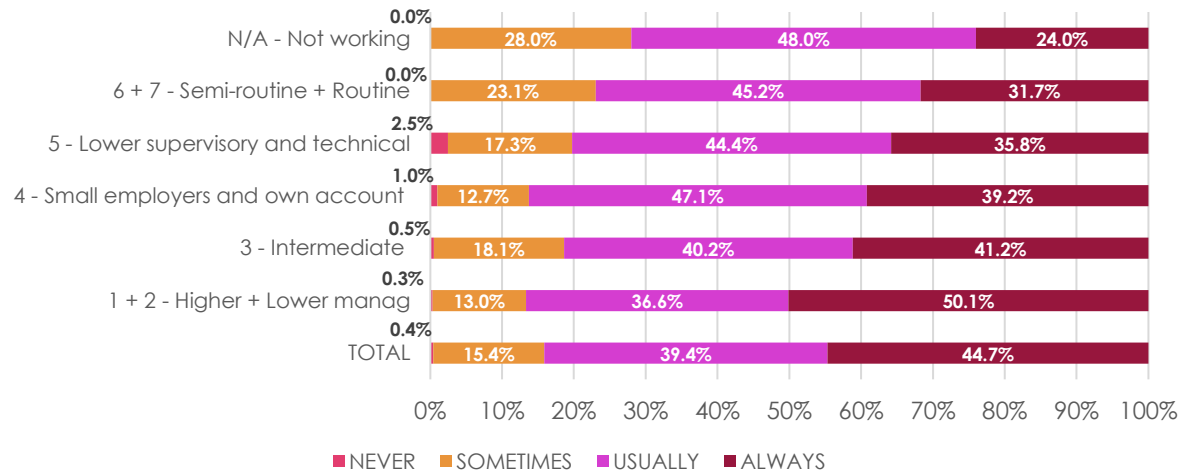
TEACHER's PERCEPTION: How often does this child seem to enjoy writing?

SOCIAL CLASS



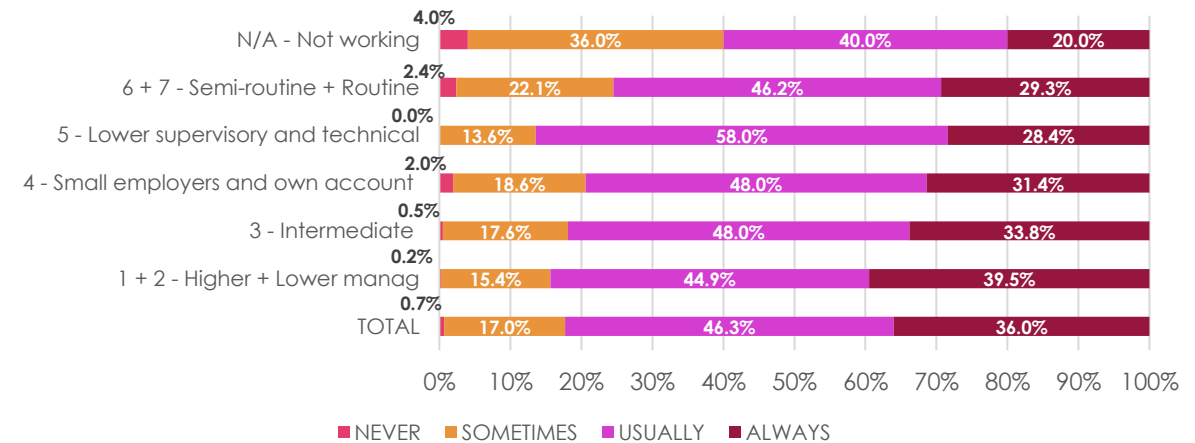
TEACHER's PERCEPTION: How often does this child seem to enjoy reading?

SOCIAL CLASS



TEACHER's PERCEPTION: How often does this child seem to enjoy numeracy & maths?

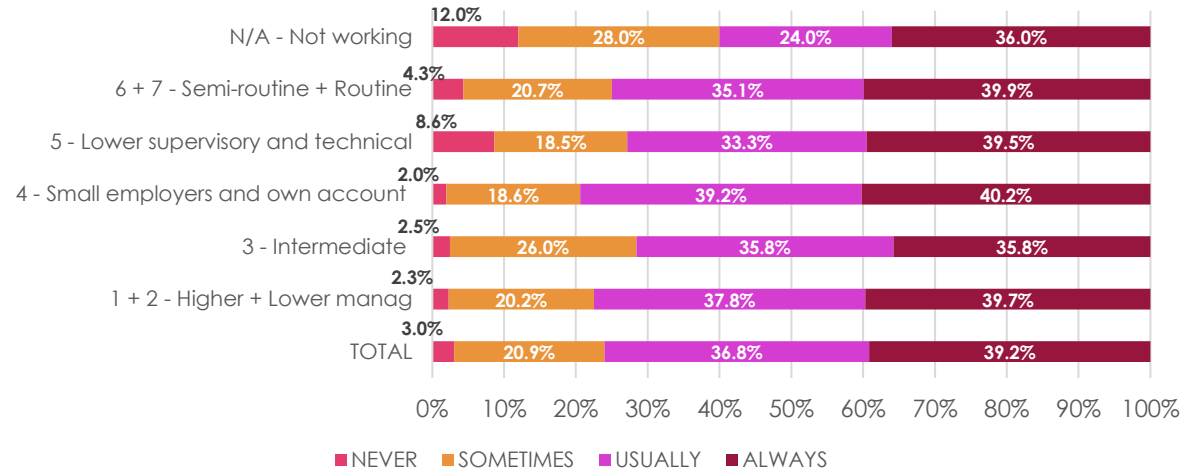
SOCIAL CLASS



# SCOTLAND student's measures

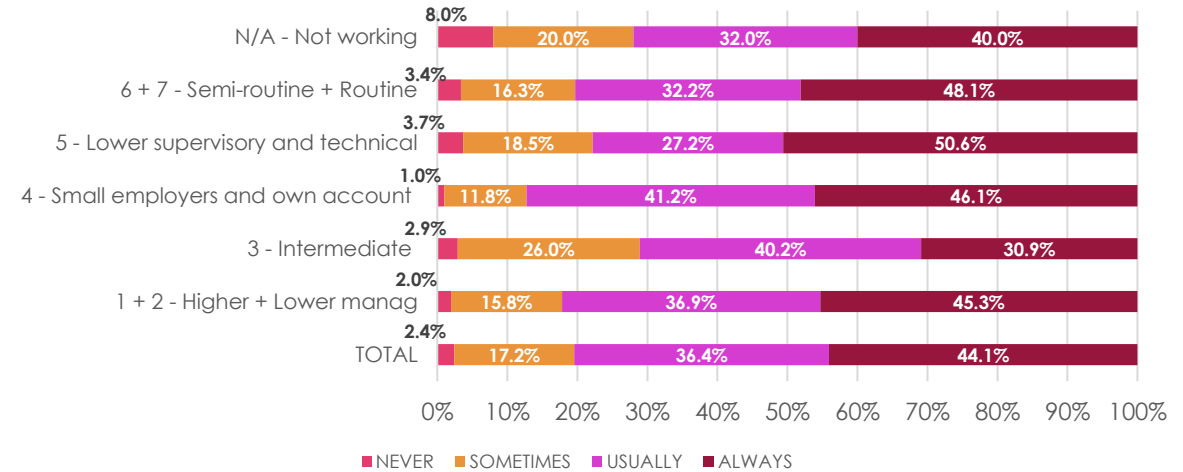
### STUDENT's PERCEPTION: I enjoy learning at school

SOCIAL CLASS



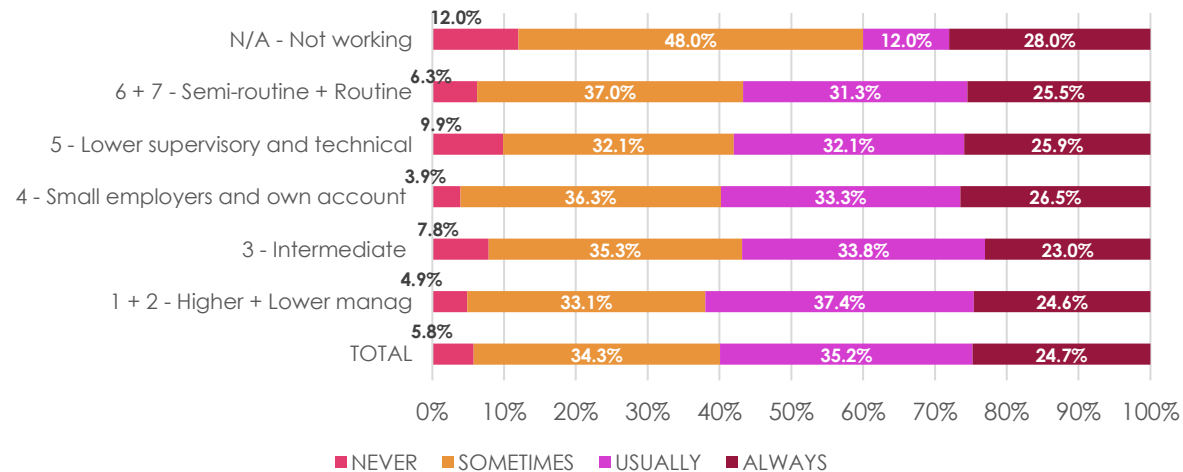
### STUDENT's PERCEPTION: I feel happy at school

SOCIAL CLASS



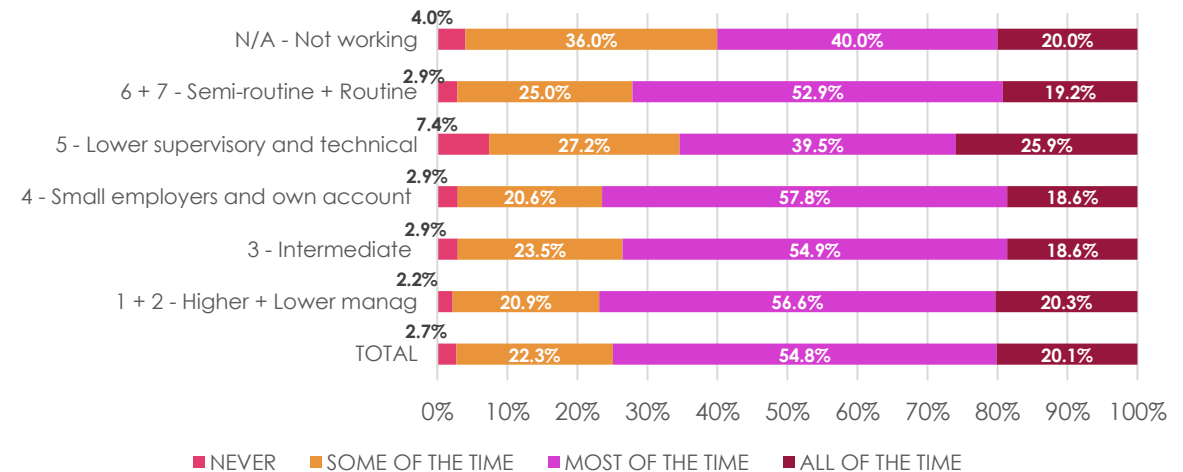
### STUDENT's PERCEPTION: I look forward to going to school

SOCIAL CLASS



### STUDENT's PERCEPTION: How often do you find school interesting?

SOCIAL CLASS







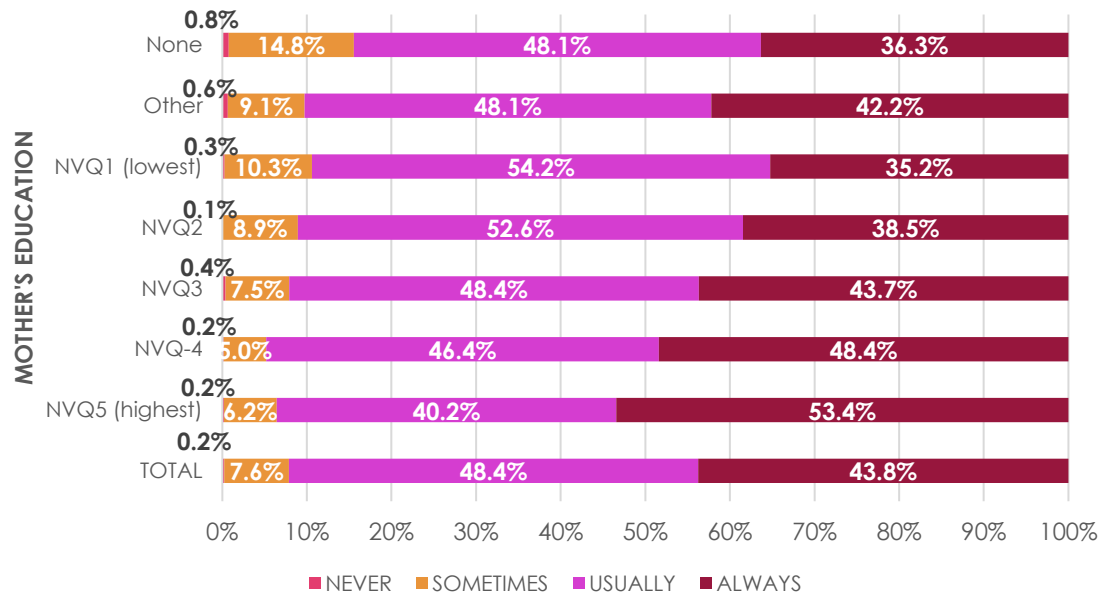
DECOMPOSED DESCRIPTIVES – SES-gradient to T & S, mother's education (enjoys)

# DECOMPOSED DESCRIPTIVES - IIc

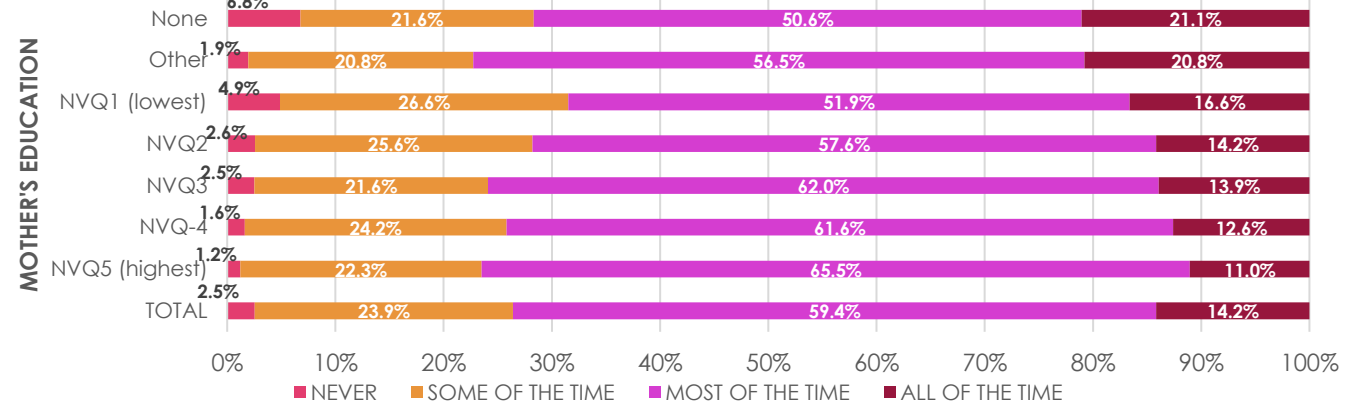
Is there an SES gradient (mother's education) to the students' attitude 'enjoys' and its perception by teachers?

## ENGLAND

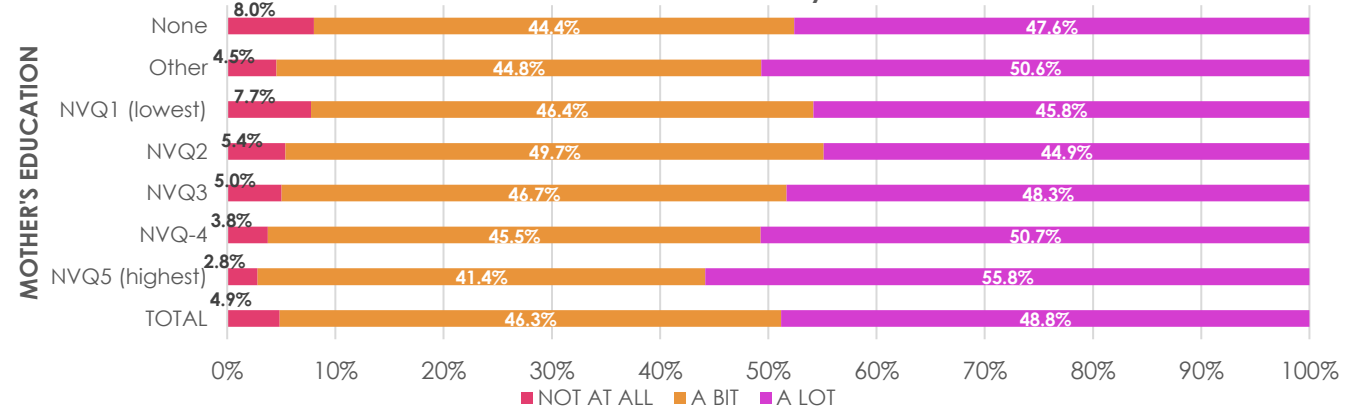
TEACHER'S PERCEPTION: How often does the child seem to enjoys school?



STUDENT'S PERCEPTION: How often do you find school interesting?

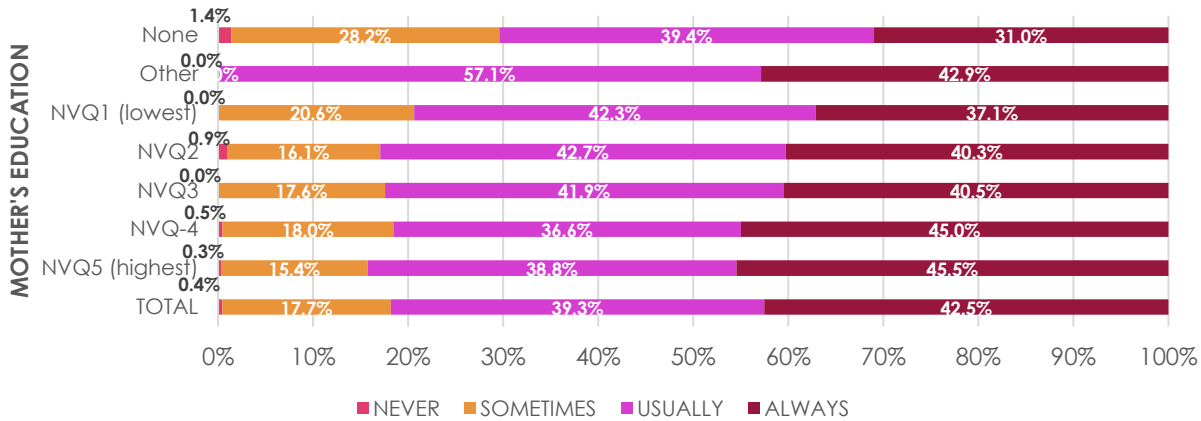


STUDENT'S PERCEPTION: How often do you like school?

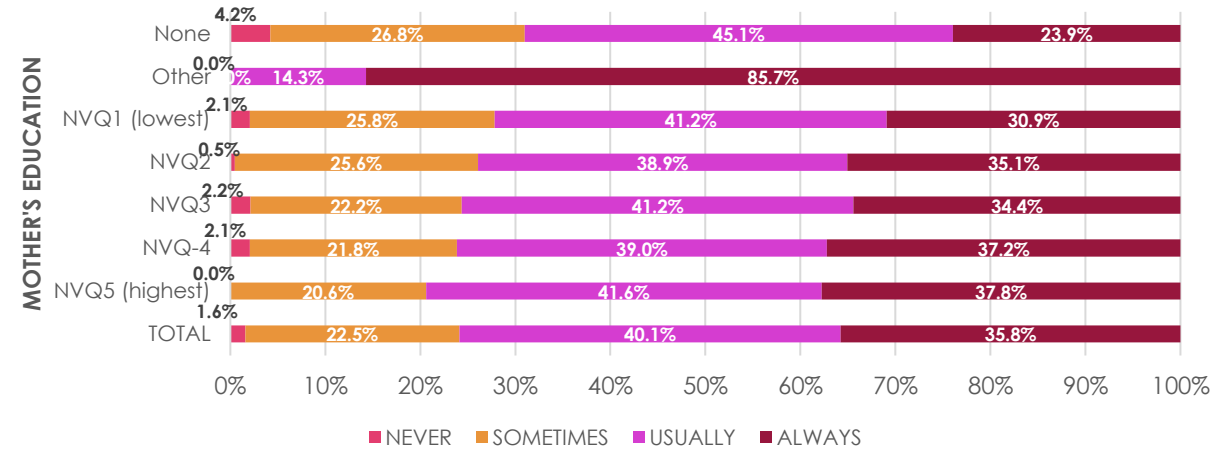


# SCOTLAND teacher's perceptions

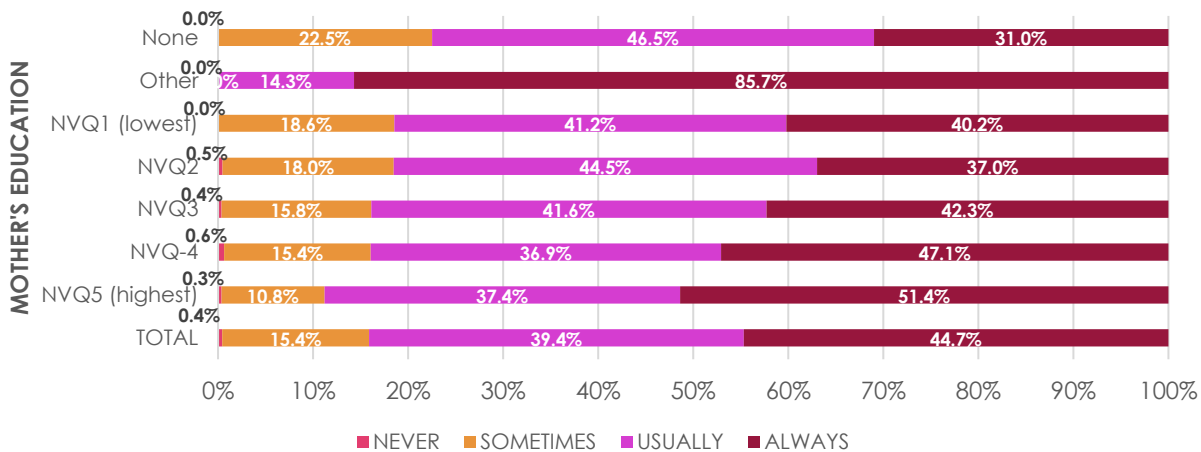
TEACHER's PERCEPTION: How often does this child seem to enjoy listening & talking?



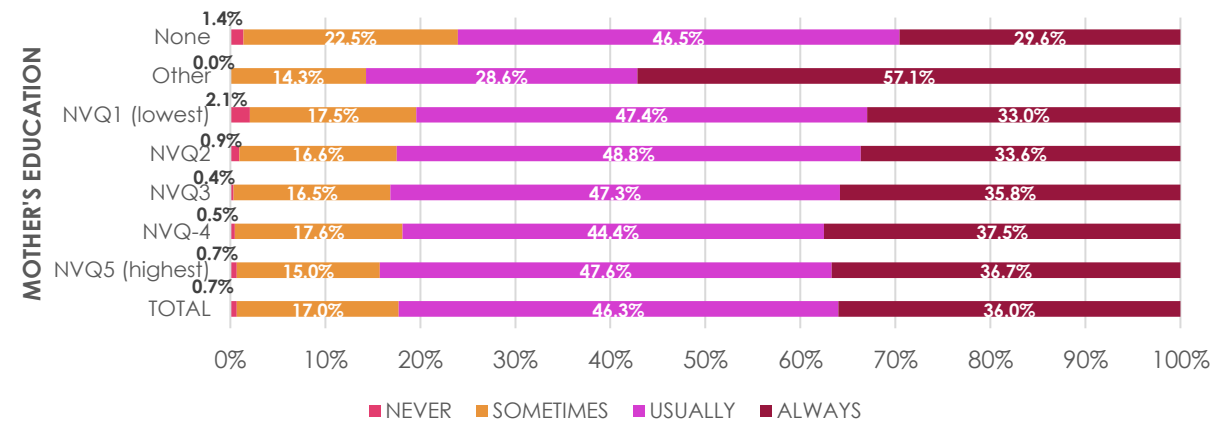
TEACHER's PERCEPTION: How often does this child seem to enjoy writing?



TEACHER's PERCEPTION: How often does this child seem to enjoy reading?

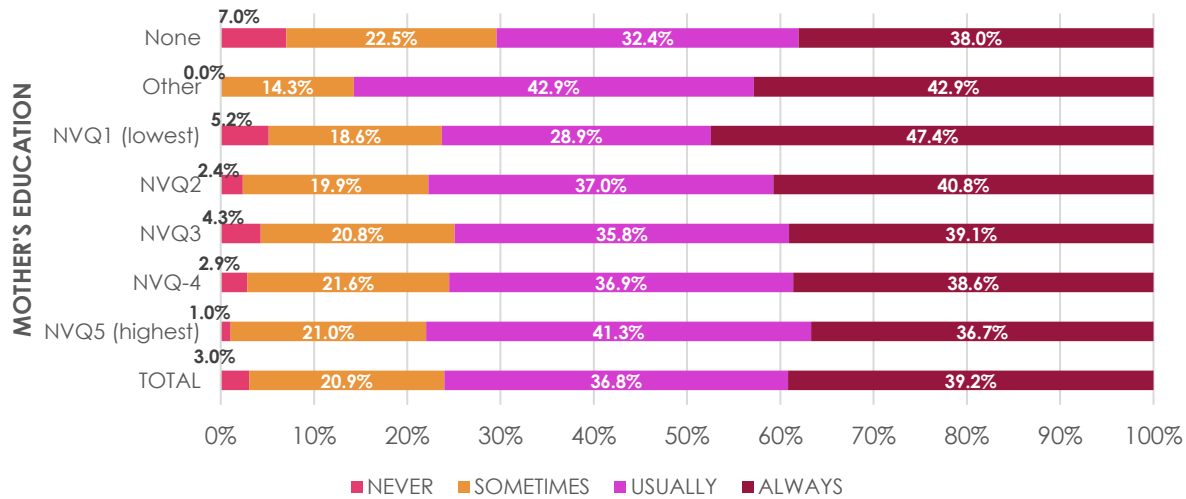


TEACHER's PERCEPTION: How often does this child seem to enjoy numeracy & maths?

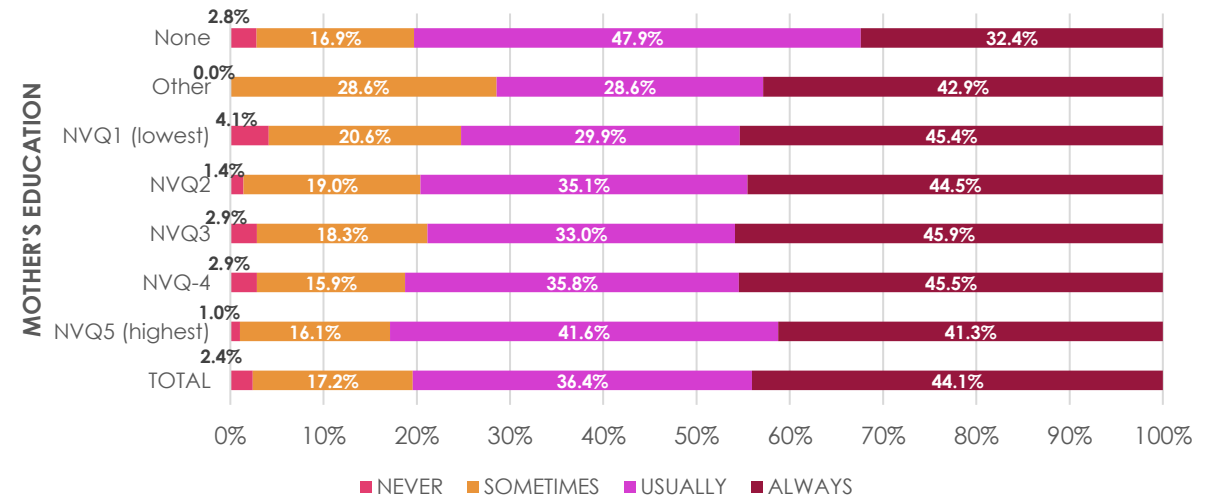


# SCOTLAND student's measures

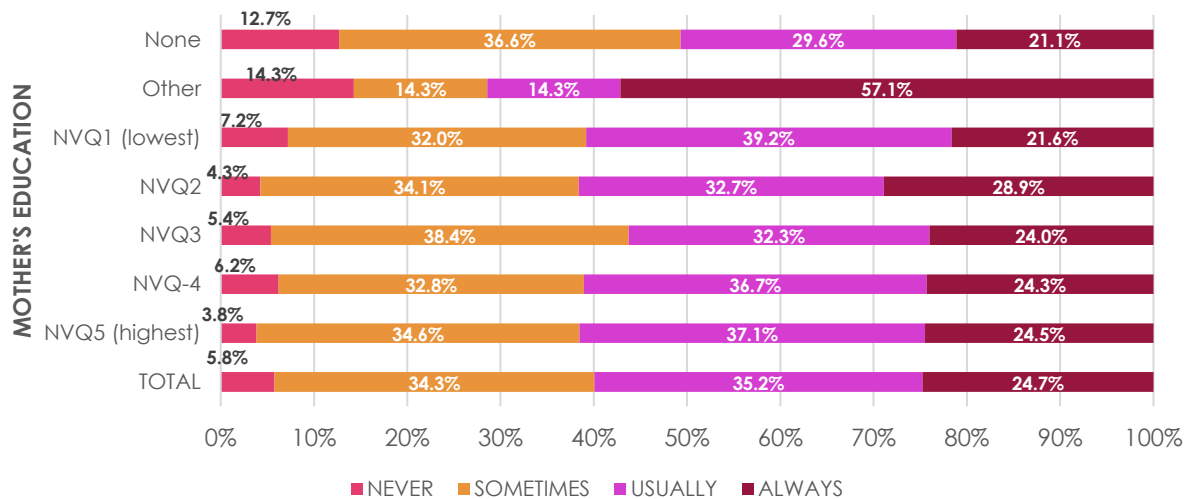
### STUDENT'S PERCEPTION: I enjoy learning at school



### STUDENT'S PERCEPTION: I feel happy at school



### STUDENT'S PERCEPTION: I look forward to going to school



### STUDENT'S PERCEPTION: How often do you find school interesting?

