

Dadansoddi ar gyfer Polisi



Analysis for Policy



Llywodraeth Cymru  
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# Formative evaluation of Curriculum for Wales: survey of learners and their parents/carers – technical annexes

Mae'r ddogfen yma hefyd ar gael yn Gymraeg.

This document is also available in Welsh.

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Title: Formative evaluation of Curriculum for Wales: survey of learners and their parents/carers – technical annexes

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Views expressed in this report are those of the researcher and not necessarily those of the Welsh Government

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## **Glossary**

### **ALN**

Additional Learning Needs

### **CFI**

Comparative fit index

### **CfW**

Curriculum for Wales

### **Disabled Learner**

This refers to any learner whose parents answered 'Yes' in response to the question in the survey that asked whether they believed their child had learning difficulties or disabilities that make it harder for their child to learn.

### **(e)FSM**

(Eligible for) free school meals

### **FA**

Factor analysis

### **IDP**

Individual Development Plan. A statutory document provided to learners determined to have additional learning needs (ALN).

### **MAT learners**

More able and talented learners

### **Parents**

Used to describe all respondents with parental responsibility (i.e. both parents and carers)

**PLASC**

Pupil-level Annual School Census

**Rec.**

Reception (age)

**RMSEA**

Root mean squared error of approximation

**SEM**

Structural equation modelling

**SRMR**

Standardised root mean square residual

**ToC**

Theory of change

**TLI**

Tucker-Lewis index

**Yr**

(School) Year

**Y3+/Y6+**

Learner survey respondents in Year 3/Year 6 and above

# Annex A: Survey questionnaire

## Introduction

We are gathering the views of parents, carers and their children about their experiences of education in Wales. This survey is part of an evaluation of the Curriculum for Wales. Arad Research is carrying out the survey on behalf of the Welsh Government.

The survey is aimed at parents and carers of children and young people from Reception to Year 9 (ages 4-14). Your views are important in informing the work of the Welsh Government.

### The survey is in 3 parts:

- **PART 1: For parents and carers to complete. This should take 5-10 minutes.**
- **PART 2: For a child between the ages of 4 and 14 to complete. This should take 5-10 minutes.**

Parents and carers are encouraged to support primary age children (Reception - Year 6) to complete the questions, while secondary age children (Year 7-9) can complete the questions independently if they wish.

If you have more than one child aged 4-14, please decide which child you would like to complete the survey before you begin. There are some optional questions at the end of this section which will help us understand different groups' views and experiences of Curriculum for Wales.

- **PART 3: For parents and carers to complete.** It asks for some information about you and should take less than 5 minutes. These questions are optional, but we would be very grateful if you could complete them to help us with our analysis.

At the end of the survey, you will be asked whether you wish to be entered into a prize draw to win a shopping voucher worth £100. To be entered in the draw, you will need to complete the survey and provide your name, email address and phone number.

All information will be kept securely and anonymised as part of publications. More information on how we will use your data is available here (for parents/carers), here (for learners) and an information sheet for learners is available here.

Further information or explanation of terms is provided on some questions, and can be seen by hovering over the following icon ⓘ

If you require any help to complete this survey, or would prefer to complete it over the phone, please email [cfwsurvey@research.arad.wales](mailto:cfwsurvey@research.arad.wales)

## PART 1 — About you

1. Do you have any children between the ages of 4 and 14? ⓘ

Yes

No

## About you

If you have more than one child aged 4-14, please decide which child you would like to complete the 'learner' section of this survey.

2. In what school year is the child who will be completing Part 2 of the questionnaire? ⓘ

Reception ⓘ

Year 1 ⓘ

Year 2 ⓘ

Year 3 ⓘ

Year 4 ⓘ

Year 5 ⓘ

Year 6 ⓘ

Year 7 ⓘ

Year 8 ⓘ

Year 9 ⓘ

None of the above

Please answer the questions below based on the child aged 4-14 who will be completing the second half of this questionnaire. Please note that your responses will not be shared with your child's school.

3. In which local authority is your child's school?

Blaenau Gwent County Borough Council

Bridgend County Borough Council

Caerphilly County Borough Council

Cardiff Council

Carmarthenshire County Council

Ceredigion County Council

Conwy County Borough Council  
Denbighshire County Council  
Flintshire County Council  
Gwynedd Council  
Isle of Anglesey County Council  
Merthyr Tydfil County Borough Council  
Monmouthshire County Council  
Neath Port Talbot Council  
Newport City Council  
Pembrokeshire County Council  
Powys County Council  
Rhondda Cynon Taf County Borough Council  
City and County of Swansea Council  
Torfaen County Borough Council  
Vale of Glamorgan Council  
Wrexham County Borough Council  
Outside Wales

4. Name of your child's school (type below)

QUESTIONS 4-25 included lists of schools and PRUs for each local authority.

**Additional Learning Needs (ALN)**

26. Do you consider that your child has learning difficulties or disabilities that make it harder for your child to learn? ⓘ

Yes

No

Not sure

## ALN — further detail

27. Does your child have an Individual Development Plan (IDP)?

Yes my child has an IDP

No, my child does not have an IDP

Not sure

## Awareness of curriculum change

Please answer the question below based on your overall awareness of the Curriculum for Wales as a parent or carer. This awareness may be based on more than one child or school.

28. How aware are you of the following? (Very aware, Somewhat aware, Not aware)

That schools now prepare their own curriculum as part of the Curriculum for Wales ⓘ

That the Curriculum for Wales is focused on the four purposes for learners ⓘ

## Awareness of curriculum change

Please answer the question below based on your overall awareness as a parent or carer.

29. I am aware of the Curriculum for Wales from... (tick all that apply)

information provided to me by my child(ren)'s school(s)

information I have seen online (e.g. Welsh Government website and Hwb, news website, school website)

information I have seen in the media (e.g. Radio/TV, newspaper, social media)

speaking with other parents

speaking with my child(ren)

Other (please specify):

## Knowledge about Curriculum for Wales

Please answer the question below based on your overall knowledge of the Curriculum for Wales as a parent or carer.

30. Thinking about your knowledge of the Curriculum for Wales, do you agree or disagree with the following statements? (Strongly disagree, Disagree, Neither agree or disagree, Agree, Strongly agree)

I know that the Curriculum for Wales is focused on providing a broad and balanced education

I know that the Curriculum for Wales is focused on knowledge and skills

I know that the Curriculum for Wales is focused on providing real-life experiences ⓘ

## Involvement in curriculum design

Please answer the question below based on your experiences with the school of the child who will be completing the second half of this questionnaire.

31. At your child's school how much opportunity have you had to: (Not at all, Very little, Some Quite a lot, A great deal, Not sure)

share your ideas about what your child learns at school

share your ideas about how your child learns at school

give feedback on the school's curriculum ⓘ

hear about how you can support your child's learning

contribute your experience or expertise to support the teaching and learning ⓘ

Please use the space below to expand on your answers if you wish:

## My contribution to the curriculum

Please answer the question below based on your experiences with the school of the child who will be completing the second half of this questionnaire.

32. Do you agree or disagree with the following:

My child's school involves me in discussions about the curriculum in a way that...(Strongly disagree, Disagree, Neither agree or disagree, Agree, Strongly agree, Not sure / not applicable)

makes me feel listened to

makes me feel confident in my child's education

makes me feel motivated to support my child's education

### **Progress towards the aims of the Curriculum for Wales**

Please answer the question below based on your experiences with the school of the child who will be completing the second half of this questionnaire.

33. Do you agree or disagree with the following:

I am confident that the curriculum, teaching and learning at my child's school is helping them to become... (Strongly disagree, Disagree, Neither agree or disagree, Agree, Strongly agree)

ambitious and capable

healthy and confident

enterprising and creative

ethical and informed

34. Do you agree or disagree with the following: (Strongly disagree, Disagree, Neither agree or disagree, Agree, Strongly agree)

My child's teachers understand my child's background, ability and individual needs

My child's teachers provide the right support to enable my child to make progress

My child's education is helping them reach their full potential

My child's education is meeting their needs ⓘ

My child's education supports their wellbeing

### **Confidence in the school curriculum**

Please answer the question below based on your experiences with the school of the child who will be completing the second half of this questionnaire.

35. Do you agree or disagree with the following:

I am confident that what my child is learning at school... (Strongly disagree, Disagree, Neither agree or disagree, Agree, Strongly agree, Not sure)

is helping them prepare for their next steps in their education

is helping them prepare for work and for life more generally

### **Satisfaction with school**

Please answer the question below based on your experiences with the school of the child who will be completing the second half of this questionnaire.

36. Do you agree or disagree with the following statements? (Strongly disagree, Disagree, Neither agree or disagree, Agree, Strongly agree, Not sure)

The school keeps me well informed

Teachers and staff at my child's school are trustworthy

Teachers and staff at my child's school are helpful

Teachers and staff listen to me if I have a concern

Teachers and school staff take good care of my child

My child has access to extra help at school if needed

I can reach my child's teacher(s) easily

I am satisfied with my child's school

### **Satisfaction with information about progress — Reception–Year 6**

Please answer the question below based on your experiences with the school of the child who will be completing the second half of this questionnaire.

37. How satisfied are you with the information you receive from your child's school about...(Very unsatisfied, Unsatisfied, Neither satisfied nor unsatisfied, Satisfied, Very satisfied)

your child's overall progress

your child's progress in literacy

your child's progress in numeracy

### **Satisfaction with information about progress — Years 7–9**

Please answer the question below based on your experiences with the school of the child who will be completing the second half of this questionnaire.

38. How satisfied are you with the information you receive from your child's school about...(Very unsatisfied, Unsatisfied, Neither satisfied not unsatisfied, Satisfied, Very satisfied)

your child's overall progress

your child's progress in English

your child's progress in Welsh

your child's progress in mathematics & numeracy

### **Information about my child's progress**

Please answer the question below based on your experiences with the school of the child who will be completing the second half of this questionnaire.

39. I am satisfied with...(Strongly disagree, Disagree, Neither agree or disagree, Agree, Strongly agree)

how I receive information about my child's progress ⓘ

how often I receive information about my child's progress

### **Views on the Curriculum for Wales**

40. Overall, how supportive are you of the Curriculum for Wales?

Not supportive at all

Somewhat unsupportive

Neither supportive nor unsupportive

Somewhat supportive

Very supportive

Please can you explain your response further?

## **Overall confidence in your child's education**

41. Overall, how confident do you feel about the standard of your child's education?

Not at all confident

Not very confident

Somewhat confident

Very confident

Completely confident

Please click 'Next page' below to submit your responses (as a parent/carer) for analysis and proceed to the optional questions for parents/carers followed by the questions for learners.

## **Optional Questions: Parents and Carers**

The following questions about your child's school's curriculum are optional. Please complete any of the questions you wish to or feel free to move on to Part 2 of the questionnaire for your child.

42. The one thing I'd like to know more of about the school's curriculum is...

43. The one part of the school's curriculum that will be of most benefit to my child is...

44. The thing that worries me most about the school's curriculum is...

## **PART 2 — Learners**

The second part of this survey is for your child to complete, with your support as a parent or carer where needed.

Parents and carers are encouraged to support primary age children (Reception to Year 6) to complete the questions.

Secondary school age children (Years 7-9) can complete the questions independently if they wish.

Parents and carers may wish to review the optional profile questions at the end of this section before your child completes them.

### Overall views on school — Reception–Year 2

45. What do you think about the following statements? ( 😞 No, 😐 Not sure, 😊 Yes)

I really enjoy going to school

I really enjoy what I'm learning at school

I get all the help I need at school

I think that school is fair for everyone

My teachers help me understand when I am getting better at learning

### Overall views on school — Year 3–6

46. Do you agree or disagree with the following statements? ( 😞 Really disagree, 😐 Disagree, 😐 Don't agree or disagree, 😊 Agree, 😊 Really agree)

I really enjoy going to school

I really enjoy what I'm learning at school

I feel I can be myself at school

I get all the help I need at school

I think that school is fair for everyone

My teachers help me understand when I have done well or moved forward in my learning

### Overall views on school — Year 7–9

47. Do you agree or disagree with the following statements?

( 😞 Really disagree, 😐 Disagree, 😐 Don't agree or disagree, 😊 Agree, 😊 Really agree)

I really enjoy going to school

I really enjoy what I'm learning at school

I feel I can be myself at school

I get all the help I need at school

I can see the connections between the different subjects I learn about at school

I think that school is fair for everyone

My teachers help me understand when I have done well or moved forward in my learning

### **Involvement in curriculum design — Reception–Year 2**

48. What do you think about the following statements? (☹ No, 😐 Not sure, 😊 Yes)

Teachers at school listen to me

I can tell teachers if I like what I am learning about or not

### **Involvement in curriculum design — Year 3 and above**

49. Do you agree or disagree with the following: (☹ Really disagree, 😐 Disagree, 😐 Don't agree or disagree, 😊 Agree, 😊 Really agree)

Teachers at school listen to me

Teachers ask me what I'd like to learn about

Teachers ask me how I'd like to learn (i)

I can tell teachers if I like what I am learning about or not

### **Progress towards the four purposes — Reception–Year 2**

50. My learning at school is helping me to... (☹ No, 😐 Not sure, 😊 Yes)

believe in myself and what I can do

be healthier

think of new ideas

be more creative

be the best I can be

understand and care about people and the world

### **Using Welsh — Reception–Year 2**

51. What do you think about the following statements? (☹ No, 😐 Not sure, 😊 Yes)

I feel confident using Welsh

I use Welsh outside the classroom

### Progress towards the four purposes — Year 3–6

52. Do you agree or disagree with the following?

My learning at school is helping me to... (☹️ Really disagree, ☹️ Disagree, 😐 Don't agree or disagree, 😊 Agree, 😄 Really agree)

become ambitious

believe in myself and what I can do

become healthy and confident

think of new ideas

find ways to solve problems

be more creative

understand and care about people and the world

be more aware of what is going on in the world

be the best I can be

### Progress towards the four purposes — Year 7–9

53. Do you agree or disagree with the following?

My learning at school is helping me to... (☹️ Really disagree, ☹️ Disagree, 😐 Don't agree or disagree, 😊 Agree, 😄 Really agree)

become ambitious and capable

become healthy and confident

become enterprising and creative ⓘ

become ethical and informed ⓘ

find ways to solve problems

reach my full potential

### Using Welsh — Year 3 and above

54. Do you agree or disagree with the following statements? (☹️ Really disagree, ☹️ Disagree, 😐 Don't agree or disagree, 😊 Agree, 😊 Really agree)

I feel confident using my Welsh language skills

I use my Welsh language skills outside the classroom

### School Satisfaction — Reception–Year 2

55. Thinking about teachers and other staff at your school, what do you think about the following statements? (i) (☹️ No, ☹️ Not sure, 😊 Yes)

Teachers and staff are always ready to help

Teachers and staff are easy to talk to

Teachers and staff really listen to children

Teachers and staff take good care of children

### School Satisfaction — Year 3 and above

56. Thinking about teachers and other staff at your school, do you agree or disagree with the following? (i) (☹️ Really disagree, ☹️ Disagree, ☹️ Don't agree or disagree, 😊 Agree, 😊 Really agree)

Teachers and staff are always ready to help

Teachers and staff are easy to talk to

Teachers and staff really listen to children

Teachers and staff take good care of children

### Wellbeing — Reception–Year 2

57. What do you think about the following statements? (☹️ No, ☹️ Not sure, 😊 Yes)

I think good things will happen in my life

I feel that I am good at some things

I think lots of people care about me

I think there are many things I can be proud of

I've been in a good mood

I've been getting on well with people

### **Wellbeing — Year 3 and above**

58. Do you agree or disagree with the following statements? (☹️ Really disagree, ☹️ Disagree, 😐 Don't agree or disagree, 😊 Agree, 😊 Really agree)

I think good things will happen in my life

I feel that I am good at some things

I think lots of people care about me

I think there are many things I can be proud of

I've been in a good mood

I've been getting on well with people

Click 'next page' to submit your responses for analysis as part of the evaluation and move on to the optional questions.

### **Optional Questions: About you — primary age children**

Note for parents and carers: This page asks for some optional information about you to help us with our analysis. The Welsh Government would like to be able to link your anonymised survey answers to other anonymised information about you which is available to the Welsh Government, the NHS or other public organisations. For example: your GP, hospital and education records.

We only need this information to allow the anonymous linkages to be created and your information will not be identifiable once in the anonymised database.

Linking anonymised data helps to give approved researchers, the Welsh Government, and other public organisations a wealth of extra information, so that they can have a clearer picture of issues in Wales and how to tackle them.

59. Please provide the following details about you (child who completed the questionnaire)

Your full name

Date of birth

60. Are you a...

Boy

Girl

I don't want to answer

Prefer to self-describe (please do so below):

### **Optional Questions: About you — secondary age children**

This page asks for some optional information about you to help us understand different groups' views and experiences of Curriculum for Wales.

To do this, the Welsh Government would like to be able to link your anonymous (not able to identify you by name) survey answers to other anonymous information about you which is available to the Welsh Government, the NHS or other public organisations. For example: your GP, hospital and education records.

Linking your anonymous survey answers will give approved researchers, the Welsh Government, and other public organisations a wealth of extra information, so that they can have a clearer picture of issues in Wales and how to tackle them.

61. Please provide the following details about you (child who completed the questionnaire)

Your full name

Date of birth

62. Are you a boy or a girl?

Boy

Girl

Neither would describe me

I do not want to answer

I identify myself as:

63. Were you described as male or female at birth?

Male

Female

I do not want to answer

### **PART 3: About the parent/carer who completed this survey**

The final section of the questionnaire is for parents/carers to complete.

The Welsh Government would like to be able to link your anonymised survey answers to other anonymised information about you which is available to the Welsh Government, the NHS or other public organisations. For example: your GP, hospital and education records.

Linking your survey answers will give approved researchers, the Welsh Government, and other public organisations a wealth of extra information, so that they can have a clearer picture of issues in Wales and how to tackle them.

64. Please provide the following details about the parent or carer who completed the questionnaire

Name of parent or carer

Date of birth

Postcode

65. Please note the language(s) spoken at home (tick all that apply)

English

Welsh

Other language(s) (please specify):

66. What is your sex?

Female

Male

67. Is the gender you identify with the same as your sex registered at birth? (This question is voluntary)

Yes

No

Enter your gender identity:

Ethnicity of parent or carer

68. What is your ethnic group?

White - Welsh, English, Scottish, Northern Irish or British

White - Irish

White - Gypsy or Irish Traveller

White - Roma

Any other White background (please write in below)

Mixed or Multiple ethnic groups - White and Black Caribbean

Mixed or Multiple ethnic groups - White and Black African

Mixed or Multiple ethnic groups - White and Asian

Any other Mixed or Multiple background (please write in below)

Asian, Asian Welsh or Asian British - Indian

Asian, Asian Welsh or Asian British - Pakistani

Asian, Asian Welsh or Asian British - Bangladeshi

Asian, Asian Welsh or Asian British - Chinese

Any other Asian background (please write in below)

Black, Black Welsh, Black British, Caribbean or African - Caribbean

Black, Black Welsh, Black British, Caribbean or African - African Background (please write below)

Any other Black, Black Welsh, Black British or Caribbean background (please write in below)

Other ethnic group - Arab

Any other ethnic group (please write in below)

Please write in below if required:

Ethnicity of child who completed the questionnaire

69. What is the ethnic group of the child who completed this questionnaire?

White - Welsh, English, Scottish, Northern Irish or British

White - Irish

White - Gypsy or Irish Traveller

White - Roma

Any other White background (please write in below)

Mixed or Multiple ethnic groups - White and Black Caribbean

Mixed or Multiple ethnic groups - White and Black African

Mixed or Multiple ethnic groups - White and Asian

Any other Mixed or Multiple background (please write in below)

Asian, Asian Welsh or Asian British - Indian

Asian, Asian Welsh or Asian British - Pakistani

Asian, Asian Welsh or Asian British - Bangladeshi

Asian, Asian Welsh or Asian British - Chinese

Any other Asian background (please write in below)

Black, Black Welsh, Black British, Caribbean or African - Caribbean

Black, Black Welsh, Black British, Caribbean or African - African background (please write in below)

Any other Black, Black Welsh, Black British or Caribbean background (please write in below)

Other ethnic group - Arab

Any other ethnic group (please write in below)

Please write in below if required:

### Free school meal eligibility

70. Is your child eligible to receive free school meals?

Yes

No

Not sure

### School Essentials Grant

71. Have you received funding through the School Essentials Grant during the last 12 months? ⓘ

Yes

No

Not sure

### **Further research**

We would like to be able to re-contact you for further research relating to the Curriculum for Wales evaluation. If you consent to us re-contacting you, please click 'Yes' and enter your details when prompted.

72. Are you happy to be contacted to participate in further research relating to the Curriculum for Wales evaluation?

Yes, I am happy to be recontacted about further research

No, I am not happy to be contacted about further research

### **Contact details for further research**

73. Please enter your contact details:

Name

Email address

## Annex B: Technical annex

This section sets out additional technical information relating to the survey.

### Survey distribution

Examples of the adverts used to promote the survey are shown below.

Figure 1. Examples of the social media advertisements used to promote the survey



Stakeholder organisations were emailed or contacted via social media and asked to promote the survey to their networks. These were: Parents Voices in Wales CIC, NYAS

Cymru, Time to Change Wales, Enabled2Parent, Women Connect First, EYST, Women's Equality Network Wales, Gingerbread (Single Parents), TGP Cymru, Iberian and Latin American Association in Wales, Muslim Engagement and Development, Race Alliance Wales, Family Lives.

Further detail on the sampling framework used for planning the survey distribution and monitoring responses is shown below.

**Table 1. Number of learners in target sample and population based on PLASC 2024**

<b>Strata categories</b>	<b>Strata sub-categories</b>	<b>Target sample of learners</b>	<b>Population of learners</b>
<b>Overall Sample</b>	<b>Total</b>	<b>1,000</b>	<b>343,185</b>
Sector	Primary	660	226,555
Sector	All-through (3-16/18) and Secondary	329	112,825
Sector	Special	11	3,805
Sector	<b>Total</b>	<b>1,000</b>	<b>343,185</b>
Language-medium (i)	All Welsh-medium and bilingual schools (ii)	231	79,420
Language-medium (i)	All English-medium schools (iii)	757	259,925
<b>Language-medium (i)</b>	<b>Total</b>	<b>988</b>	<b>339,345</b>
Year group	Reception - Year 2	281	96,585
Year group	Year 3-4	201	69,035
Year group	Year 5-6	204	70,010
Year group	Year 7	105	36,070
Year group	Year 8	106	36,270
Year group	Year 9	103	35,215
<b>Year group</b>	<b>Total</b>	<b>1,000</b>	<b>34,3185</b>

<b>Strata categories</b>	<b>Strata sub-categories</b>	<b>Target sample of learners</b>	<b>Population of learners</b>
eFSM (iv)	eFSM	216	73972
eFSM (iv)	Not eFSM	784	269,213
<b>eFSM (iv)</b>	<b>Total</b>	<b>1,000</b>	<b>34,3185</b>
Black, Asian and Minority Ethnic learners (v)	Black, Asian and Minority Ethnic learners	145	49,645
Black, Asian and Minority Ethnic learners (v)	Not from Black, Asian and Minority Ethnic communities	855	293,540
<b>Black, Asian and Minority Ethnic learners (v)</b>	<b>Total</b>	<b>1,000</b>	<b>343,185</b>
Region	Central south	317	108,955
Region	Mid and west	273	93,810
Region	North	212	72,925
Region	South east	197	67,495
<b>Region</b>	<b>Total</b>	<b>1,000</b>	<b>343,185</b>

Note: figures may not sum precisely due to rounding

- (i) Special schools and PRUs are not categorised by language medium
- (ii) Includes schools categorised as bilingual categories A, B and C / dual-stream / transitional. Based on categories used in 2023/24 PLASC.
- (iii) Includes schools categorised as English with significant Welsh

- (iv) Estimate of number of learners eFSM based on the percentage of all learners aged 5-15 eFSM (PLASC 2023/24) and the number of learners in Reception – Year 9 age groups
- (v) Estimate of number of Black, Asian and Minority Ethnic learners based on the percentage of all Black, Asian and Minority Ethnic learners aged 5-15 (PLASC 2023/24) and the number of learners in Reception – Year 9 age groups
- (vi) 1,276 learners were either single (1077) or dual (199) registered at PRUs in 2023/24 (Source: Educated Other Than at School (EOTAS) census). If we use this as our population then this represents 0.3% of all learners. See [Pupils educated other than at school: September 2024 to August 2025](#).

**Table 2. Number of parents in target sample and population**

<b>Strata categories</b>	<b>Strata sub-categories</b>	<b>Target sample of parents/carers</b>	<b>Population of parents/carers</b>
Welsh language (i)	Able to speak Welsh	267	Not known
Welsh language (i)	Not able to speak Welsh	1233	Not known
<b>Welsh language (i)</b>	<b>Total</b>	1500	Not known
Black, Asian and Minority Ethnic parents (ii)	Black, Asian and Minority Ethnic parents	78	Not known
Black, Asian and Minority Ethnic parents (ii)	Parents who were not Black, Asian and Minority Ethnic	1422	Not known
<b>Black, Asian and Minority Ethnic parents (ii)</b>	<b>Total</b>	1500	Not known

(i) Target sample based on percentage of people in Wales aged 3 or older able to speak Welsh

(ii) Target sample based on percentage of Black, Asian and minority ethnic people in Wales

## Further detail on quantitative survey analysis

Survey question with ordinal response options, i.e. those with an evident order to the response, were re-coded to numerical responses. For example, a question with 'low'/medium'/high' responses would be recoded as '1'/2'/3'.

Due to low school counts in special schools and PRUs and the lack of available census data on some categories of data for these settings, responses from these school types were weighted solely by sector. For all questions, respondents were only included in the weightings matrix if they had provided a meaningful response, as such the weighted summaries detailed in the report do not include a 'No response provided' option.

Depending on the response type of the survey question and the demographic variable of interest, the most appropriate test to determine noteworthy differences was selected from the following:

- Chi-squared test: used where both the outcome and predictor variables are categorical
- Mann-Whitney test: used where one variable is categorical with two levels and the other is ordinal
- Kruskal Wallis test – used where the outcome is an ordinal variable and the predictor categorical with more than two levels
- Spearman Rank test – used where both the outcome and predictor are ordinal

Following the inferential tests, post-hoc regression models were fitted for ordinal outcome variables, to determine the specific levels of the predictor variables for which there is a notable difference. A linear regression model was fitted with the re-coded ordinal variable treated as a continuous outcome and each of the demographic variables stated above as predictors. Where different variations of a question were presented to different year groups, the 'Learner year group' variable was not included as a predictor.

## Annex C: Factor Mapping

This annex sets out which questions were mapped against each factor included in the SEMs.

### Factor mapping – learner survey

Questions mapped to the **learner collaboration on curriculum design** factor included the following statements:

- “Teachers and staff really listen to children”
- “Teachers ask me what I'd like to learn about” (Years 3 and above)
- “Teachers ask me how I'd like to learn” (Years 3 and above)
- “I can tell teachers if I like what I am learning about or not”

These questions were designed to capture practices necessary for collaboration on curriculum design at the classroom level.

Question statements mapped to the **learner trust in school** factor drew on the work of Adams and Forsyth (2004) and included the following<sup>[Footnote 1]</sup>:

- “I really enjoy going to school”
- “I really enjoy what I'm learning at school”
- “I feel I can be myself at school” (Year 3 and above)
- “I get all the help I need at school”
- “I can see the connections between the different subjects I learn about at school” (Years 7-9)
- “I think that school is fair for everyone”
- “My teachers help me understand when I am getting better at learning”
- “Teachers and staff are always ready to help”
- “Teachers and staff are easy to talk to”
- “Teachers and staff really listen to children”
- “Teachers and staff take good care of children”

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[1] Adams, C.M. & Forsyth, P.B. (2004). The Effect of Proximate Sources of Efficacy Information on Collective Teacher Efficacy. A paper presented at AERA, April 15, San Diego, CA.

Questions mapped to the **learner wellbeing** factor drew on the Stirling Children's Wellbeing Scale (Liddle & Carter, 2010)<sup>[Footnote 2]</sup> drawing on selected items related to learners' positive emotional state (questions about being in a good mood and getting on well with people) and their positive outlook (questions about, for example their anticipation of good things happening in their life, and feeling that they were cared for by others, and have things to be proud of). The statements included were:

- "I think good things will happen in my life"
- "I feel that I am good at some things"
- "I think lots of people care about me"
- "I think there are many things I can be proud of"
- "I've been in a good mood"
- "I've been getting on well with people"

Questions mapped to the **learners' perceptions of progress toward four purposes** factor were those focused on respondents' perception of whether their learning at school was helping them make progress towards the four purposes expressed in the CfW (aspirations for learners to become ambitious and capable, healthy and confident; enterprising and creative; as well as ethical and informed). The statements presented to learners were expressed in ways appropriate to the learners in different year groups:<sup>[Footnote 3]</sup>

- Reception-Year 2 – "My learning at school is helping me to..."
  - "believe in myself and what I can do"
  - "be healthier"
  - "think of new ideas"
  - "be more creative"
  - "be the best I can be"
  - "understand and care about people and the world"
- Year 3-6 – "My learning at school is helping me to..."
  - "become ambitious"
  - "believe in myself and what I can do"

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[2] See Liddle, I., & Carter, G. (2010). Emotional and psychological wellbeing in children: The standardisation of the Stirling Children's Wellbeing Scale. *Stirling Council Educational Psychology Service*.

[3] The approach to dealing with variations in the questions presented to different age groups is presented in Chapter 2.

- “become healthy and confident”
- “think of new ideas”
- “find ways to solve problems”
- “be more creative”
- “understand and care about people and the world”
- “be more aware of what is going on in the world”
- “be the best I can be”
- Year 7-9 – “My learning at school is helping me to...”
  - “become ambitious and capable”
  - “become healthy and confident”
  - “become enterprising and creative”
  - “become ethical and informed”
  - “find ways to solve problems”
  - “reach my full potential”

### **Factor mapping – parent survey**

Questions mapped to the **opportunity for parents’ collaboration on curriculum design** factor drew on prior work (Sinnema & Aitken, 2013; Sinnema, 2011) related to parent involvement in school’s implementation of national curricula. The questions encompassed not only parents’ perceptions about opportunities they have to share ideas about what children learn, but also how they learn. The questions focused on parents both as providers and recipients of feedback and ideas about the curriculum their children and young people experience. Parents were asked how much opportunity they had at their child’s school to:

- “share your ideas about what your child learns at school”
- “share your ideas about how your child learns at school”
- “give feedback on the school's curriculum”
- “hear about how you can support your child's learning”
- “contribute your experience or expertise to support the teaching and learning”

Questions mapped to the **parent agency** factor drew on conceptualisations of agency set out by Torres Castro and Pineda-Baez, (2023), Vähäsantanen 2015). and on Bandura’s seminal work (2006). The questions asked about parent agency in the context of their involvement in curriculum related discussions. Parents were asked to what extent they

agreed that their child's school involved them in discussions about the curriculum in a way that:

- “makes me feel listened to”
- “makes me feel confident in my child's education”
- “makes me feel motivated to support my child’s education”

There were a substantial number of questions mapped to the overarching concept of **parents’ perceptions of progress toward curriculum aspirations**. As a result, three separate sub-factors were considered in the analysis to measure parents’ perceptions of different aspects of progress towards the four purposes.

The first sub-factor, **parents’ perceptions of progress towards four purposes**, comprised questions focused on parents’ perception of curriculum purposes at the broadest level being met. It directly targeted parents’ perceptions of progress toward four purposes exactly as expressed in the CfW: four items asked parents to indicate their level of confidence that the curriculum, teaching and learning at the child’s school is helping them to become “ambitious and capable”, “healthy and confident”, “enterprising and creative” and “ethical and informed”.

The second sub-factor, **parents’ perceptions of progress (generally) being supported**, also encompassed five items relating to their child’s teachers and education more broadly. These items asked the extent to which parents agreed with the following:

- “My child’s teachers...”
  - “understand my child’s background, ability and individual needs”
  - “provide the right support to enable my child to make progress”
- “My child's education...”
  - “is helping them reach their full potential”
  - “is meeting their needs”
  - “supports their wellbeing”

The third sub-factor, **parents’ perceptions of progress that prepares learners for the future**, encompassed two questions about how their child’s education was helping prepare them for their next steps in work and life. This asked parents the extent to which they were confident that what their child was learning at school was:

- “helping them prepare for their next steps in their education”
- “helping them prepare for work and for life more generally”

Questions mapped to the **parent trust in school** factor drew on “The Parent Trust in School Scale” by Forsyth, Adams and Barnes.<sup>[Footnote 4]</sup> That scale is a 15 item measure that assesses parent perceptions of the benevolence, honesty, openness, reliability, and competence of school personnel. Parents were asked to what extent they agreed with the following:

- “The school keeps me well informed”
- “Teachers and staff at my child's school are trustworthy”
- “Teachers and staff at my child’s school are helpful”
- “Teachers and staff listen to me if I have a concern”
- “Teachers and school staff take good care of my child”
- “My child has access to extra help at school if needed”
- “I can reach my child’s teacher(s) easily”
- “I am satisfied with my child's school”

Questions mapped to the **parents’ satisfaction with information** factor asked about parents’ level of satisfaction with the information they receive from their child’s school about:

- “your child’s overall progress”
- “your child’s progress in literacy” (Reception-Year 6 parents)
- “your child’s progress in numeracy” (Reception-Year 6 parents)
- “your child's progress in English” (Year 7-9 parents)
- “your child's progress in Welsh” (Year 7-9 parents)
- “your child's progress in Mathematics and numeracy (Year 7-9 parents)”

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[4] See Forsyth, P. B., Adams, C. M., & Hoy, W. K. (2011). *Collective trust: why schools can't improve without it*. Teachers College Press.

## **Annex D: Technical information on FA and SEM and additional analysis**

This annex includes further technical information on the FA and SEM carried out (see Chapter 20). This analysis explored relationships between grouped sets of questions (factors) in the survey to examine the strength of relationships between these. The methodology for this involved complex statistical techniques, namely Factor Analysis (FA) and Structural Equation Modelling (SEM). Details of the methodology are set out in Chapter 2.

### **What is SEM?**

#### **An illustrative example**

In FA and SEM, the key concept is that many different statements might be related to the same “factor”, and so how people respond to them will be quite similar. For example, if a factor in a survey on health was “enjoyment of exercise” then there may be three questions asking:

- how much do you enjoy running?
- how much do you enjoy cycling?
- how much do you enjoy swimming?

These three questions could reasonably be expected to relate to an “enjoyment of exercise” factor – it is fairly sensible to assume that people who enjoy one form of exercise are, across a whole group, generally more likely to enjoy another. There will be many people who much prefer one form of exercise to another, but FA and SEM are about establishing the trends present across whole populations.

Carrying out a FA therefore amounts to using statistics to check that the questions which are expected to correlate together do so anticipated <sup>[Footnote 5]</sup>. Correlations can be examined on responses to any given pair of questions, and the correlation coefficients that emerge show, on a -1 to +1 scale, how closely responses on two questions from the same people confirm. A correlation of +1 would indicate that all respondents gave the exact same response to both questions, -1 that all respondents completely disagreed on both questions (i.e. “a great deal” for one, “not at all” for the other), and 0 that there is no relationship between responses to the two questions.

In FA, these inter-question correlations can then be used to generate a ‘factor score’ for each respondent, based on how well each question correlates with the others comprising the factor. How well each question correlates with the others is summarised as a ‘loading’

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[5] This is the case for confirmatory FA – exploratory approaches are also possible where the relationships are not imposed on the data but are allowed to emerge as the analysis is conducted. However, as a ToC was already published in this case, confirmatory analysis was more appropriate.

value, which is the correlation between responses on the statement, and the overall factor score.

In the above example, the three questions' scores would contribute to an overall "enjoyment of exercise" score per respondent, and we might, for example, see loading values as follows:

- How much do you enjoy running? (Loading onto factor = 0.731)
- How much do you enjoy cycling? (Loading onto factor = 0.724)
- How much do you enjoy swimming? (Loading onto factor = 0.597)

These values are all moderate to strong correlations, sitting above +0.5. This shows that all three questions correlate quite well with the (presumed) underlying factor "enjoyment of exercise". However, enjoyment of swimming does not have quite as high of a loading value, indicating that it does not correlate with the other two questions comprising the factor quite as well. This could reflect that people who enjoy swimming might not like other land-based forms of exercise, and vice versa – as one of many possible explanations.

There will usually be many different factors measured with a survey. Returning to the health example above, researchers could also be trying to measure the factors "enjoyment of healthy foods" and "parents' attitude to exercise", each of which has several survey questions designed to explore attitudes towards those underlying concepts<sup>[Footnote 6]</sup>. When this is the case, there will often be a hypothesised relationship between these factors. Using the health example, it could be the case that researchers believe that "parents' attitude to exercise" (a prediction factor) will impact on both "enjoyment of healthy foods" and "enjoyment of exercise" (an outcome factor), and also that "enjoyment of healthy foods" (as an intermediate factor, or mediator) might itself impact on "enjoyment of exercise".

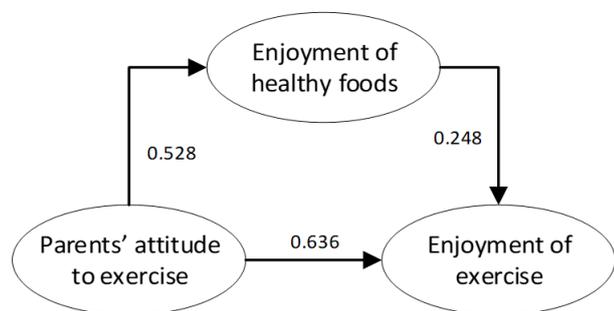
Structural equation modelling (SEM) is an extension of FA which allows such relationships to be investigated. Each individual relationship between factors of interest is investigated using a regression, which outputs a 'path coefficient' that can be interpreted in a manner similar to correlation. In our example, one relationship would be if "parents' attitude to exercise" (a prediction factor) predicts "enjoyment of exercise" (an outcome factor); the path coefficient for this might be 0.636. This would indicate a relatively strong correlation between these two factors – people whose parents' have a positive attitude to exercise are likely to also enjoy exercise more.

This process is repeated for every modelled relationship and is generally described using a diagram for ease of interpretation. Ovals denote factors, arrows the direction of relationships investigated, and the numbers above each arrow the path coefficient.

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[6] Asking several questions about each factor is good practice, as it prevents skewed results – in our example above, if some people strongly disliked swimming but enjoyed running and cycling, only asking them about swimming would give us a very skewed idea about how much they liked exercise.

**Figure 2. Hypothetical example of a structural equation model diagram**



In the hypothetical example above, there is a moderate correlation between “parents’ attitude to exercise” and “enjoyment of healthy foods”, but only a weak correlation between “enjoyment of healthy foods” (as an intermediate factor, or mediator) and “enjoyment of exercise”. Therefore, the interpretation of this model would be that your parents’ attitude to exercise does relate to how likely you are to enjoy both healthy foods and exercise, but more strongly to the latter. Further to this, people who enjoy healthy food are not necessarily that likely to also enjoy exercise – your parents having a positive attitude towards exercise shows a much stronger relationship to exercise enjoyment.

In this example, if the researchers had anticipated the healthy food to exercise enjoyment relationship to emerge, then they may need to reflect on why it was so weak in practice. Perhaps they didn’t ask questions that targeted the intended factor well enough, and were misinterpreted by respondents, or perhaps the relationship simply isn’t present to the degree they expected. Nonetheless, the key point is that further insight about complex processes can be gleaned from SEM analysis.

SEM does not establish causality – that one factor leads to another – merely that the scores respondents achieve on two factors correlate. But nonetheless, it can provide useful insights that aid further rounds of survey design, as well as helping to better understand the ToC and target policy, where necessary.

In this survey’s case, SEM can be used to establish if the ToC of curriculum reform implementation is working as anticipated. Where this is not the case, there are a few potential causes, including but not limited to the following:

- The survey questions do not target the desired factor as anticipated, and may need revision
- The sample of respondents achieved do not experience the same ToC as the population as a whole, and more responses may be needed
- The ToC as initially set out does not fully reflect the reality of curriculum reform implementation. The ToC can then be updated to better describe the way things work in practice, and policy updated accordingly if needed

- The aim as set out in the ToC has not manifested in practice. In this case, the survey or other data can then be used to unpick why this is the case, and suggest where further support, comms or other resource could be beneficial

Crucially, SEM will not provide a clear justification for one or the other of these causes being the case where deviations from the ToC emerge. It also does not establish causality – that one factor leads to another – merely that the scores respondents achieve on two factors correlate. But nonetheless, it can provide useful insights that aid further rounds of survey design, as well as helping to better understand the ToC and target policy, where necessary.

In this research with parents and learners, these analysis techniques were used to investigate the ToC in practice based on responses to this survey. A separate analysis was run for parents and for learners. In all cases, an initial FA was used to confirm that statements loaded onto factors as anticipated before SEM were run. For parents there were several slightly different hypothesized models<sup>[Footnote 7]</sup> posited by the ToC. In this case the model that fitted the data best was retained and reported on in this report.

### Detailed findings: Learner SEM

Four regressions were modelled as part of the SEM, as represented by arrows in the path diagram in Figure 21 in Chapter 22. Each arrow reflects an individual regression; for instance, the topmost arrow reflects attempting to explore relationships between (or predict) the level of **learners' perception of progress towards the four purposes** based on the level of **learner collaboration on curriculum design**. The values above each arrow reflect the standardised coefficient for that regression. Red coloured values reflect any regressions that were not statistically significant.

Note that initially, an additional relationship between **learner collaboration on curriculum design** and **learners' perceptions of progress towards the four purposes** was modelled as part of this SEM. However, that relationship proved not statistically significant and negatively impacted the significance of other relationships in the model. As such, it was removed from the final model presented below.

Findings show that **learner trust in school** and **learner wellbeing** are related to the level of **learner collaboration on curriculum design**. The magnitude of the relationship is larger for **learner trust in school** than **learner wellbeing** however, with a coefficient of 0.959 as opposed to 0.586, demonstrating that **learner trust in school** is more closely correlated with **learner collaboration on curriculum design**. Intuitively there would be many other factors that impact on learner wellbeing, so this is not a surprising finding and given this, a coefficient of over 0.5 could suggest a strong rationale for collaborating with learners on the design of school curricula.

Findings show that **learners' perception of progress towards the four purposes** is related to both **learner trust in school** and **wellbeing**. A stronger relationship is again

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[7] With different factors present in the SEM, and/or different relationships modelled between them.

apparent for **learner trust in school** than **learner wellbeing**, and notably **learner wellbeing**'s coefficient is smaller at 0.202, whilst **learner trust in school**'s coefficient is higher at 0.661. This shows that the degree to which learners trust their school is most closely related to **learners' perception of progress towards the four purposes**, and whilst learner wellbeing is correlated with this progress too, it is only weakly so. These relationships being weaker than the ones from **learner collaboration on curriculum design** are again, unsurprising, as impact on the four purposes additionally requires implementation of the new curriculum, whilst impact on trust and wellbeing are more direct. Further, it may also be the case that the implementation has simply not bedded in yet, so we would hope to see a stronger relationship in here in subsequent phases of the survey.

As discussed above, a relationship between **learners' perception of progress towards the four purposes** and **learner collaboration on curriculum design** was modelled initially, but proved not statistically significant. As such the key interpretation here is that the relationship between **learner collaboration on curriculum design** and **learners' perception of progress towards the four purposes** is mediated by **learner wellbeing** and **learner trust in school** (albeit to varying degrees), as there are statistically significant (or marginally significant) relationships that describe this relationship.

### Detailed findings: Parent SEM

Twelve regressions were modelled as part of the SEM, as represented by arrows in the path diagram in Figure 22 in Chapter 22. Each arrow usually reflects an individual regression; for instance, the bottommost arrow reflects attempting to explore the relationship between the level of **parent trust in school** and the level of **opportunity for parents' collaboration on curriculum design**. The values above each arrow reflect the standardised coefficient for that regression. Red coloured values reflect any regressions that were not statistically significant.

Due to the complexity of representing this model visually in its entirety, which would lead to arrows overlapping, the three factors underlying the overarching concept of **parents' perceptions of progress towards curriculum aspirations** are presented as a single node (oval) in the figure below. Therefore, each arrow pointing to this node represents three separate regressions, each exploring the relationship with one of the associated factors: **progress towards the four purposes**, **progress (generally) supported**, and **progress that prepares learners for the future**. As a result, there are instead three values above these arrows, denoting the standardised coefficients for the regression exploring the relationship with the relevant factor.

Findings show that the level of **parent trust in school** strongly and positively correlates with the level of **promotion of parent agency** by schools, with a coefficient of 0.982. The promotion of parent agency by schools is also positively related to the three factors underlying **parents' perceptions of progress towards curriculum aspirations**, with two of the three at over 0.720 and the third, **progress supported**, less strongly at 0.498. This shows that higher **promotion of parent agency** by schools is related to higher levels of

each of these other factors, but that it is most closely related to the level of **parent trust in school** observed. This makes sense, as a perception of agency is likely to engender or at least co-occur with feelings of trust.

In turn, the level of **parent trust in school** is positively related to the level of the three factors underlying **parents' perceptions of progress towards curriculum aspirations**, but less strongly than the relationships discussed above. In this case **parents' contribution to progress** is most strongly related at 0.486, whilst the other two factors see lower coefficients of around 0.260. Combined with the findings outlined above, this suggests that a combination of the **promotion of parent agency by schools** and **parent trust in school** factors are equally related to **progress supported**, whilst both **progress towards the four purposes** and **progress – preparation for future** are more strongly related to the **promotion of parent agency**.

Considering the questions underlying **parent trust in school** and **progress supported**, it is apparent that they are more closely aligned than the other two **parents' perceptions of progress towards curriculum aspirations** factors, which might explain this finding. For example, **parent trust in school** asks whether parents feel their child's school listens, cares, and provides help to the child if needed, whilst **progress supported** asks quite similar questions about whether the school understands the child, provides them the right support, and supports their wellbeing. Given this, it is understandable that this is the one of the three factors **parent trust in school** is most strongly related to – arguably it is interesting that the relationship is only as strong as **promotion of parent agency**, given the close alignment of the questions outlined above.

The level of **opportunity for parents' collaboration on curriculum design** is related to both their **parent trust in school**, **promotion of parent agency**, and two of the three factors comprising **parents' perceptions of progress towards curriculum aspirations**. However, only **promotion of parent agency** is strongly related (with a coefficient of over 0.8 vs under 0.2 in all other cases), and it is also the only positive relationship. In other words, a higher level of **opportunity for parents' collaboration on curriculum design** correlates with *higher* levels of **promotion of parent agency by schools**, but *lower* **parent trust in school** and levels of **parents' perceptions of progress towards curriculum aspirations**. However, it is notable that whilst three of these negative relationships did reach statistical significance, they were markedly less significant than the other positive relationships in the model (with P values of 0.002, 0.013, and 0.022, vs all other significant relationships'  $P < 0.001$ ). The negative relationships here suggest that the frequency of opportunities to contribute are alone not sufficient to engender parent's trust; the nature of those opportunities may also be important in terms of their impact on parents feeling listened to, confident and motivated to engage in their child's education.

As such, it is plausible that the stronger relationships (higher, and in this case positive, coefficients) in the model explain the bulk of the variation in survey responses, whilst the negative coefficients reflect only more fringe or tangential relationships between factors. The lower significance values and smaller coefficient sizes of the negative coefficients support this theory; even in the current model they only reflect weak relationships between the factors all below 0.2 in magnitude. Alternatively, the more 'face value' interpretation of this finding is that without promotion of parent agency, opportunities for collaboration have a

negative impact on trust and perceptions of progress. Perhaps this is logical – collaborating but not feeling like that then had any impact is perhaps likely to undermine trust more than having not had opportunity to collaborate in the first place. Either way, these relationships are weak and not the key finding from the model.

### **Further detail on the parent SEM methodology and alternative models tested**

As noted above, there were four possible parent SEM models theorised which might describe whether **parents' perceptions of progress towards curriculum aspirations** is related to a combination of the following:

- opportunity for parents' collaboration on curriculum design
- promotion of parent agency
- parent trust in school
- parents' satisfaction with information

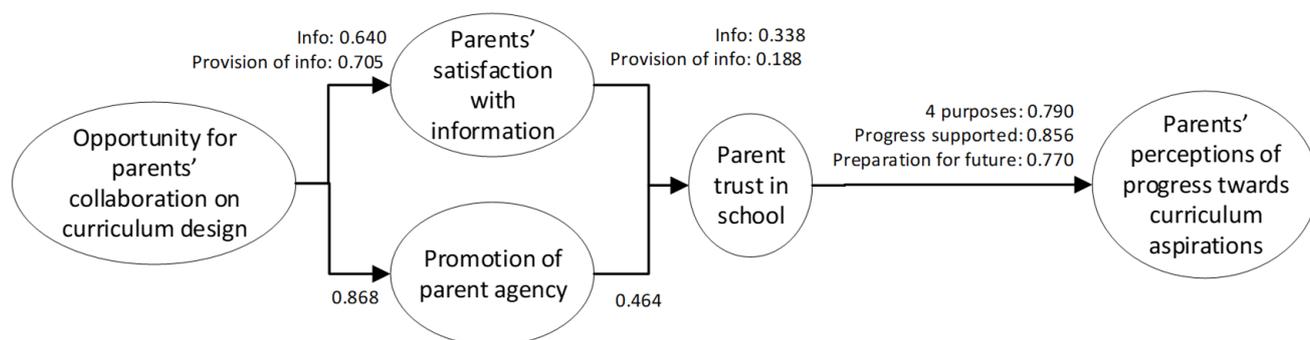
In order to select the best, each model was run and the fit statistics assessed in order to determine which fit the data best. The 'best' of each fit statistic is presented in bold text in the table below to make clear which model fit best in each case. Model 1 (presented in Chapter 22) was the best fitting model on all criteria bar RMSEA, where only model 4 was marginally better, and as such it was selected as the model to be discussed in depth in the body of the report.

**Table 3. Summary statistics from all fitted parent SEM models**

Model	1	2	3	4
N model parameters	96	120	123	105
N observations	1084	1084	1084	1084
N missing patterns	117	149	149	115
Degrees of freedom	309	582	579	422
Robust CFI	<b>0.938</b>	0.837	0.839	0.869
Robust TLI	<b>0.929</b>	0.823	0.824	0.856
RMSEA	0.053	0.057	0.056	<b>0.051</b>
SRMR	<b>0.060</b>	0.119	0.108	0.074
N questions not loading significantly at P<0.001 level	0	0	0	0
N regressions fitted	12	9	12	8
N regressions not significant at P<0.001 level	1	0	0	1

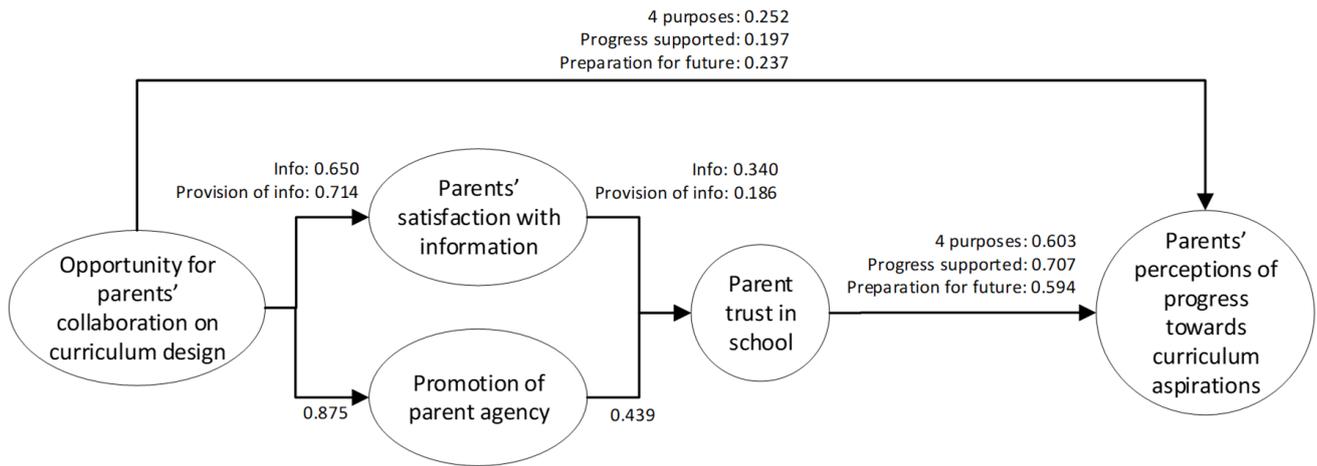
Notably, model 1 was also the least complex, with the fewest model parameters, which might be a factor in its better fit. Whilst we do not discuss in full the details of the other three models, we do present their path diagrams with associated coefficients below for reference.

**Figure 3. Parent structural equation model 2 & standardised coefficients**



N = 1084

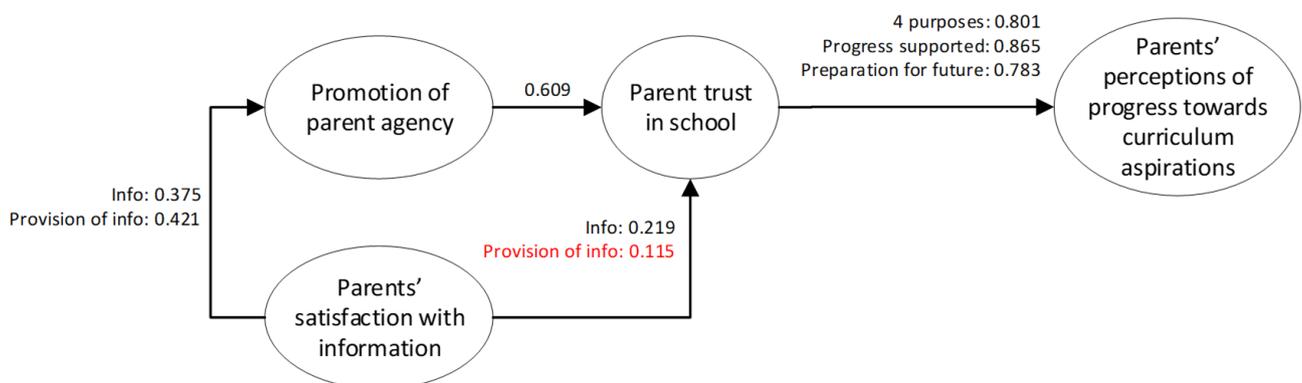
**Figure 4. Parent structural equation model 3 & standardised coefficients**



N = 1084

Notably, models 2 and 3 are very similar, with the only difference being an additional direct relationship from “opportunity for collaboration on curriculum design” to “parents’ perceptions of progress towards the four purposes”. Despite the increased complexity, model 3 fits very similarly to model 2. Broadly, the difference in coefficients shown in the figures below is that because of the additional modelled relationship in model 3, **parent trust in school’s** direct relationship with **parents’ perceptions of progress towards curriculum aspirations** is reduced in strength.

**Figure 5. Parent structural equation model 4 & standardised coefficients**



Red coefficients = not statistically significant at the  $p < 0.05$  level

N = 1084

Given that all three of these models add **parents’ satisfaction with information** into the model, and in all three cases it had relatively low coefficients predicting other factors, it

could be argued that this is one of the less impactful factors on the relationships the SEMs are attempting to model. Perhaps this is unsurprising; the direct relationships from **opportunity for parents' collaboration on curriculum design** to **promotion of parent agency**, then **parent trust in school** in model 1 are extremely strong, so it might be the case that **parents' satisfaction with information** is already well captured by this chain of relationships.

Alternatively, another key difference model 1 has compared to these three models is that **promotion of parent agency** has a direct link to **parents' perceptions of progress towards curriculum aspirations**, rather than only an indirect one. This is quite a strong relationship in model 1, so it not being present is also a potential factor as to why these models

## **Annex E: Supplementary tables for chosen SEM models**

See separate document to access the following tables:

**Table 4. Model estimates from selected parent SEM model (model 1)**

**Table 10. Covariance matrix from selected parent SEM model (model 1): part 1**

**Table 11. Covariance matrix from selected parent SEM model (model 1): part 2**

**Table 12. Model estimates from learner SEM model**

**Table 13. Covariance matrix from learner SEM model**