JTB education from data to information to improvement

# Demonstration School

## Spring tracking, 2014 for English in 2014

using FFT Type B Estimates taken from FFTLive on 5th Sep 2013

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# 1 Introduction

This analysis is intended to help with the self-evaluation of subjects. There are some points to bear in mind.

- National comparisons are from provisional data provided by the Joint Council for Qualifications. The source is `http://tinyurl.com/2013-JCQ-GCSE` for the 2013 statistics. The ones shown are for all UK entries in the nearest relevant subject.
- For evaluation, residuals should be referenced to the baseline expected for similar students in similar schools. This is what RaiseOnline does. The equivalent Fischer Family Trust level is FFT-B estimates. These are therefore used to calculate residuals. For comparison, some key indicators from the FFT-D estimates are shown in the summary of raw exam results.
- The estimates chosen are from KS2 and are therefore an indication of progress from the end of KS2 to the end of KS4. In this year group, 10 students (out of 179) did not have FFT estimates because their KS2 test scores were unavailable to the Fischer Family Trust, so no residuals are available for these students.
- The three tables of results shows the actual indicators for the whole cohort, and also indicators for just those students who are matched in the FFT database.
- You should compare attainment against national averages as this is a key consideration for Ofsted, but also compare attainment against FFT estimates as this can be used to check whether progress is good or not. If outcomes are in line with FFT-D estimates, this suggests good progress while being in line with FFT-B estimates is expected progress.
- All residuals are on the QCA scale of 6 points = 1 GCSE grade. A residual of +12 or -12 (i.e. $\pm$ 2 grades) would be considered very large.
- The Subject Leader should consider how this analysis might add to your evaluations, particularly with respect to vulnerable groups within KS4.
- The main purpose of this document is to prompt the Subject Leader to ask questions to inform self-evaluation and therefore improvement.

## 2 Group Statistics for A*-C

The statistics for the whole group of students are shown in the first three columns. The next three columns show statistics only for those students matched in the FFT database. The national comparisons are from JCQ, 2013. The three columns headed A, B and D are the FFT estimates for the matched students. Evaluate the A*-C statistic against FFT-B estimates for expected progress and against FFT-D for better than expected progress. The sixth column is coloured according to whether it is below FFT-B, above FFT-D or between the two estimates. The final column shows how many additional students would have to get a C or better to match the FFT-D estimate.

| A*-C | Total | | | Matched | | | Natnl% 2012 | FFT Estimates | | | Extra for -D |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Group | Students | Achieved | % | Students | Achieved | % | | A | B | D | |
| All students | 178 | 145 | 81.5% | 168 | 137 | **81.5%** | 63.6% | 74.6% | 73.7% | 77.2% | - |
| Boys | 93 | 66 | 71.0% | 90 | 64 | **71.1%** | 56.3% | 67.0% | 65.7% | 69.5% | - |
| Girls | 85 | 79 | 92.9% | 78 | 73 | **93.6%** | 71.2% | 83.4% | 83.1% | 86.1% | - |
| FSM | 13 | 7 | 53.8% | 12 | 6 | **50.0%** | - | 65.4% | 64.6% | 68.8% | 3 |
| Not FSM | 165 | 138 | 83.6% | 156 | 131 | **84.0%** | - | 75.3% | 74.4% | 77.8% | - |
| Ethnicity WBRI | 153 | 122 | 79.7% | 147 | 116 | **78.9%** | - | 74.1% | 73.2% | 76.7% | - |
| Not WBRI | 25 | 23 | 92.0% | 21 | 21 | **100.0%** | - | 78.4% | 77.4% | 81.0% | - |
| No SEN | 152 | 132 | 86.8% | 143 | 125 | **87.4%** | - | 79.7% | 79.0% | 82.3% | - |
| School Action | 12 | 7 | 58.3% | 12 | 7 | **58.3%** | - | 50.2% | 48.6% | 53.7% | - |
| SA+ & Statement | 14 | 6 | 42.9% | 13 | 5 | **38.5%** | - | 41.0% | 39.5% | 43.2% | 1 |
| English Add Lang | 8 | 6 | 75.0% | 4 | 4 | **100.0%** | - | 62.5% | 61.2% | 65.5% | - |
| Not EAL | 170 | 139 | 81.8% | 164 | 133 | **81.1%** | - | 74.9% | 74.0% | 77.5% | - |
| Lower KS2 Score | 49 | 24 | 49.0% | 49 | 24 | **49.0%** | - | 43.6% | 42.0% | 47.2% | - |
| Middle KS2 Score | 61 | 56 | 91.8% | 61 | 56 | **91.8%** | - | 79.5% | 78.7% | 82.8% | - |
| Upper KS2 Score | 58 | 57 | 98.3% | 58 | 57 | **98.3%** | - | 95.7% | 95.3% | 96.6% | - |
| Looked After | 3 | 1 | 33.3% | 2 | 1 | **50.0%** | - | 38.0% | 36.0% | 41.5% | - |
| Not Looked After | 175 | 144 | 82.3% | 166 | 136 | **81.9%** | - | 75.1% | 74.2% | 77.6% | - |
| Pupil Premium | 33 | 23 | 69.7% | 30 | 21 | **70.0%** | - | 69.8% | 68.9% | 73.1% | 1 |
| Not Pupil Prem | 145 | 122 | 84.1% | 138 | 116 | **84.1%** | - | 75.7% | 74.8% | 78.1% | - |
| FSM + LAC | 15 | 8 | 53.3% | 13 | 7 | **53.8%** | - | 64.1% | 63.2% | 67.5% | 2 |
| Not FSM or LAC | 163 | 137 | 84.0% | 155 | 130 | **83.9%** | - | 75.5% | 74.6% | 78.0% | - |

**Legend**

| Below FFT-B | Above FFT-B but below FFT-D | Above FFT-D |
|---|---|---|

## 3 Group Statistics for A*-A

The statistics for the whole group of students are shown in the first three columns. The next three columns show statistics only for those students matched in the FFT database. The national comparisons are from JCQ, 2013. The three columns headed A, B and D are the FFT estimates for the matched students. Evaluate the A*-A statistic against FFT-B estimates for expected progress and against FFT-D for better than expected progress. The sixth column is coloured according to whether it is below FFT-B, above FFT-D or between the two estimates. The final column shows how many additional students would have to get an A or better to match the FFT-D estimate.

| A*-A | Total | | | Matched | | | Natnl% 2012 | FFT Estimates | | | Extra for -D |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Group | Students | Achieved | % | Students | Achieved | % | | A | B | D | |
| All students | 178 | 36 | 20.2% | 168 | 33 | **19.6%** | 14.2% | 18.7% | 16.5% | 19.9% | 1 |
| Boys | 93 | 13 | 14.0% | 90 | 12 | **13.3%** | 9.5% | 13.6% | 11.7% | 14.4% | 1 |
| Girls | 85 | 23 | 27.1% | 78 | 21 | **26.9%** | 19.0% | 24.5% | 22.0% | 26.3% | - |
| FSM | 13 | 0 | - % | 12 | 0 | **0.0%** | - | 13.3% | 12.2% | 14.7% | 2 |
| Not FSM | 165 | 36 | 21.8% | 156 | 33 | **21.2%** | - | 19.1% | 16.8% | 20.3% | - |
| Ethnicity WBRI | 153 | 29 | 19.0% | 147 | 27 | **18.4%** | - | 18.6% | 16.4% | 19.8% | 3 |
| Not WBRI | 25 | 7 | 28.0% | 21 | 6 | **28.6%** | - | 19.3% | 16.9% | 20.7% | - |
| No SEN | 152 | 33 | 21.7% | 143 | 31 | **21.7%** | - | 20.7% | 18.2% | 22.1% | 1 |
| School Action | 12 | 0 | - % | 12 | 0 | **0.0%** | - | 3.7% | 3.2% | 4.0% | 1 |
| SA+ & Statement | 14 | 3 | 21.4% | 13 | 2 | **15.4%** | - | 10.3% | 9.5% | 10.5% | - |
| English Add Lang | 8 | 1 | 12.5% | 4 | 1 | **25.0%** | - | 8.0% | 7.0% | 9.0% | - |
| Not EAL | 170 | 35 | 20.6% | 164 | 32 | **19.5%** | - | 18.9% | 16.7% | 20.2% | 2 |
| Lower KS2 Score | 49 | 1 | 2.0% | 49 | 1 | **2.0%** | - | 2.0% | 1.8% | 2.3% | 1 |
| Middle KS2 Score | 61 | 5 | 8.2% | 61 | 5 | **8.2%** | - | 11.3% | 9.8% | 13.0% | 3 |
| Upper KS2 Score | 58 | 27 | 46.6% | 58 | 27 | **46.6%** | - | 40.5% | 35.9% | 42.1% | - |
| Looked After | 3 | 0 | - % | 2 | 0 | **0.0%** | - | 1.0% | 1.0% | 1.0% | 1 |
| Not Looked After | 175 | 36 | 20.6% | 166 | 33 | **19.9%** | - | 18.9% | 16.6% | 20.1% | 1 |
| Pupil Premium | 33 | 1 | 3.0% | 30 | 1 | **3.3%** | - | 14.6% | 13.1% | 15.8% | 4 |
| Not Pupil Prem | 145 | 35 | 24.1% | 138 | 32 | **23.2%** | - | 19.6% | 17.2% | 20.8% | - |
| FSM + LAC | 15 | 0 | - % | 13 | 0 | **0.0%** | - | 12.4% | 11.3% | 13.6% | 2 |
| Not FSM or LAC | 163 | 36 | 22.1% | 155 | 33 | **21.3%** | - | 19.2% | 16.9% | 20.4% | - |

**Legend**

| Below FFT-B | Above FFT-B but below FFT-D | Above FFT-D |
|---|---|---|

# 4 Group Statistics for Average Point Score

The statistics for the whole group of students are shown in the first two columns. The next two columns show statistics only for those students matched in the FFT database. The national comparisons are from JCQ, 2013. The final three columns are the FFT estimates for the matched students. Evaluate the average points statistic against FFT-B estimates for expected progress and against FFT-D for better than expected progress. The fourth column is coloured according to whether it is below FFT-B, above FFT-D or between the two estimates.

| Average Points | Total cohort | | Matched students | | National 2012 | FFT Estimates | | |
|---|---|---|---|---|---|---|---|---|
| Group | Students | Points | Students | Points | | A | B | D |
| All students | 178 | 43.1 | 168 | **43.1** | 39.5 | 41.5 | 41.1 | 41.9 |
| Boys | 93 | 41.1 | 90 | **41.1** | 37.8 | 39.8 | 39.4 | 40.3 |
| Girls | 85 | 45.2 | 78 | **45.5** | 41.2 | 43.3 | 43.0 | 43.8 |
| FSM | 13 | 38.2 | 12 | **38.0** | - | 39.8 | 39.5 | 40.4 |
| Not FSM | 165 | 43.5 | 156 | **43.5** | - | 41.6 | 41.2 | 42.0 |
| Ethnicity WBRI | 153 | 42.8 | 147 | **42.8** | - | 41.4 | 41.0 | 41.8 |
| Not WBRI | 25 | 44.6 | 21 | **45.4** | - | 42.1 | 41.7 | 42.6 |
| No SEN | 152 | 43.9 | 143 | **44.1** | - | 42.4 | 42.0 | 42.9 |
| School Action | 12 | 37.5 | 12 | **37.5** | - | 36.5 | 36.2 | 37.0 |
| SA+ & Statement | 14 | 38.3 | 13 | **37.2** | - | 35.6 | 35.2 | 36.0 |
| English Add Lang | 8 | 40.8 | 4 | **44.5** | - | 38.6 | 38.3 | 39.2 |
| Not EAL | 170 | 43.2 | 164 | **43.1** | - | 41.5 | 41.1 | 42.0 |
| Lower KS2 Score | 49 | 37.2 | 49 | **37.2** | - | 35.3 | 35.1 | 35.9 |
| Middle KS2 Score | 61 | 42.4 | 61 | **42.4** | - | 41.4 | 41.1 | 41.9 |
| Upper KS2 Score | 58 | 48.9 | 58 | **48.9** | - | 46.7 | 46.1 | 47.0 |
| Looked After | 3 | 36.0 | 2 | **37.0** | - | 34.6 | 34.3 | 35.3 |
| Not Looked After | 175 | 43.2 | 166 | **43.2** | - | 41.5 | 41.1 | 42.0 |
| Pupil Premium | 33 | 39.3 | 30 | **39.4** | - | 40.5 | 40.1 | 41.0 |
| Not Pupil Prem | 145 | 43.9 | 138 | **43.9** | - | 41.7 | 41.3 | 42.1 |
| FSM + LAC | 15 | 38.0 | 13 | **38.2** | - | 39.5 | 39.2 | 40.1 |
| Not FSM or LAC | 163 | 43.5 | 155 | **43.5** | - | 41.6 | 41.2 | 42.1 |

**Legend**

| Below FFT-B | Above FFT-B but below FFT-D | Above FFT-D |
|---|---|---|

# 5 Levels of progress analysis from KS2 levels

This table replicates the one found in RaiseOnline. The national comparative figures are from RaiseOnline 2013.

| KS2 English Attainment | Number of pupils | Key Stage 4 English grade | | | | | | | | | | | Pupil Numbers | | | Pupil % | | National 2013 | | Extra for National | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | Null | U | G | F | E | D | C | B | A | A* | Total | 3LP | 4LP | 3LP | 4LP | 3LP | 4LP | 3LP | 4LP |
| Other | | 0 | 0 | 0 | 0 | 0 | 2 | 5 | 2 | 3 | 0 | 5 | 5 | 3 | **100%** | **60%** | 46% | 20% | - | - |
| W | | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | -% | -% | 3% | 3% | - | - |
| 1 | | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | -% | -% | 37% | 22% | - | - |
| 2 | | 0 | 0 | 0 | 0 | 3 | 0 | 0 | 0 | 0 | 0 | 3 | 3 | 0 | **100%** | **0%** | 48% | 21% | - | 1 |
| 3 | | 1 | 0 | 0 | 0 | 3 | 15 | 4 | 1 | 0 | 0 | 24 | 20 | 5 | **83%** | **21%** | 55% | 21% | - | 1 |
| 4 | | 0 | 0 | 0 | 0 | 2 | 7 | 45 | 22 | 4 | 1 | 81 | 72 | 27 | **89%** | **33%** | 71% | 27% | - | - |
| 5 | | 0 | 0 | 0 | 0 | 0 | 1 | 5 | 25 | 19 | 9 | 59 | 53 | 28 | **90%** | **47%** | 79% | 43% | - | - |
| | **Summary** | | | | | | | | | | | 172 | 153 | 63 | 89% | 37% | 69% | 30% | 0 | 2 |
| | **Total Cohort** | | | | | | | | | | | 179 | | | | | | | | |

# 6 Levels of progress analysis from KS2 sublevels

This table replicates the one found in RaiseOnline. The national comparative figures are from RaiseOnline 2013.

| KS2 English Attainment | | Key Stage 4 English grade | | | | | | | | | | | Pupils | | | Pupil % | | National 2013 | | Extra for National | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| level | sub level | Null | U | G | F | E | D | C | B | A | A* | Total | 3LP | 4LP | 3LP | 4LP | 3LP | 4LP | 3LP | 4LP |
| Other | | 0 | 0 | 0 | 0 | 0 | 2 | 5 | 2 | 3 | 0 | 5 | 5 | 3 | **100%** | **60%** | 46% | 20% | - | - |
| W | | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | -% | -% | 3% | 3% | - | - |
| 1 | | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | -% | -% | 37% | 22% | - | - |
| 2 | | 0 | 0 | 0 | 0 | 3 | 0 | 0 | 0 | 0 | 0 | 3 | 3 | 0 | **100%** | **0%** | 48% | 21% | - | 1 |
| 3 | 3C | 0 | 0 | 0 | 0 | 0 | 2 | 0 | 0 | 0 | 0 | 2 | 2 | 0 | **100%** | **0%** | 35% | 9% | - | 1 |
| | 3B | 0 | 0 | 0 | 0 | 1 | 7 | 1 | 0 | 0 | 0 | 9 | 8 | 1 | **89%** | **11%** | 52% | 17% | - | 1 |
| | 3A | 1 | 0 | 0 | 0 | 2 | 6 | 3 | 1 | 0 | 0 | 13 | 10 | 4 | **77%** | **31%** | 67% | 28% | - | - |
| 4 | 4C | 0 | 0 | 0 | 0 | 0 | 4 | 11 | 3 | 0 | 0 | 18 | 14 | 3 | **78%** | **17%** | 48% | 8% | - | - |
| | 4B | 0 | 0 | 0 | 0 | 2 | 2 | 21 | 4 | 2 | 0 | 31 | 27 | 6 | **87%** | **19%** | 71% | 22% | - | 1 |
| | 4A | 0 | 0 | 0 | 0 | 0 | 1 | 13 | 15 | 2 | 1 | 32 | 31 | 18 | **97%** | **56%** | 87% | 46% | - | - |
| 5 | 5C | 0 | 0 | 0 | 0 | 0 | 1 | 5 | 24 | 11 | 3 | 44 | 38 | 14 | **86%** | **32%** | 74% | 33% | - | 1 |
| | 5B | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 7 | 5 | 13 | 13 | 12 | **100%** | **92%** | 92% | 66% | - | - |
| | 5A | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 1 | 2 | 2 | 2 | **100%** | **100%** | 97% | 89% | - | - |
| **Summary** | | | | | | | | | | | | 172 | 153 | 63 | 89% | 37% | 69% | 30% | 0 | 5 |
| **Total Cohort** | | | | | | | | | | | | 179 | | | | | | | | |

# 7 Expected Progress from KS2 (3+ levels) by groups

The statistics for the whole group of students are shown in the first three columns. The next three show statistics only for those students matched in the FFT database. The next three columns are the FFT estimates for the matched students. The final column shows how many additional students in that group need to make expected progress to hit the FFT-D estimates. The sixth column is coloured according to whether it is below FFT-B, above FFT-D or between the two estimates. The numbers may not match the transition matrices if not all students appear in the FFT database.

| 3+ Levels | Total | | | Matched | | | FFT Estimates | | | Extra for -D |
|---|---|---|---|---|---|---|---|---|---|---|
| Group | Students | Achieved | % | Students | Achieved | % | A | B | D | |
| All Students | 178 | 153 | 86.0% | 168 | 150 | **89.3%** | 72.9% | 71.4% | 76.2% | - |
| Boys | 93 | 76 | 81.7% | 90 | 75 | **83.3%** | 67.5% | 65.5% | 70.6% | - |
| Girls | 85 | 77 | 90.6% | 78 | 75 | **96.2%** | 79.2% | 78.2% | 82.7% | - |
| FSM | 13 | 11 | 84.6% | 12 | 11 | **91.7%** | 76.7% | 76.1% | 80.5% | - |
| Not FSM | 165 | 142 | 86.1% | 156 | 139 | **89.1%** | 72.6% | 71.0% | 75.9% | - |
| Ethnicity WBRI | 153 | 131 | 85.6% | 147 | 129 | **87.8%** | 72.9% | 71.4% | 76.2% | - |
| Not WBRI | 25 | 22 | 88.0% | 21 | 21 | **100.0%** | 73.0% | 71.3% | 76.0% | - |
| No SEN | 152 | 133 | 87.5% | 143 | 131 | **91.6%** | 74.9% | 73.4% | 78.2% | - |
| School Action | 12 | 9 | 75.0% | 12 | 9 | **75.0%** | 58.2% | 56.2% | 61.9% | - |
| SA+ & Statement | 14 | 11 | 78.6% | 13 | 10 | **76.9%** | 64.6% | 62.8% | 67.5% | - |
| English Add Lang | 8 | 4 | 50.0% | 4 | 4 | **100.0%** | 63.0% | 61.5% | 67.0% | - |
| Not EAL | 170 | 149 | 87.6% | 164 | 146 | **89.0%** | 73.2% | 71.6% | 76.4% | - |
| Lower KS2 Score | 49 | 41 | 83.7% | 49 | 41 | **83.7%** | 61.3% | 59.8% | 65.2% | - |
| Middle KS2 Score | 61 | 53 | 86.9% | 61 | 53 | **86.9%** | 70.8% | 69.4% | 74.8% | - |
| Upper KS2 Score | 58 | 56 | 96.6% | 58 | 56 | **96.6%** | 85.1% | 83.2% | 87.1% | - |
| Looked After | 3 | 2 | 66.7% | 2 | 2 | **100.0%** | 56.0% | 54.5% | 60.5% | - |
| Not Looked After | 175 | 151 | 86.3% | 166 | 148 | **89.2%** | 73.1% | 71.6% | 76.4% | - |
| Pupil Premium | 33 | 25 | 75.8% | 30 | 25 | **83.3%** | 72.4% | 71.3% | 76.2% | - |
| Not Pupil Prem | 145 | 128 | 88.3% | 138 | 125 | **90.6%** | 73.1% | 71.4% | 76.2% | - |
| FSM + LAC | 15 | 12 | 80.0% | 13 | 12 | **92.3%** | 74.5% | 73.8% | 78.3% | - |
| Not FSM or LAC | 163 | 141 | 86.5% | 155 | 138 | **89.0%** | 72.8% | 71.2% | 76.0% | - |

**Legend**

| Below FFT-B | Above FFT-B but below FFT-D | Above FFT-D |
|---|---|---|

# 8 More than Expected Progress from KS2 (4+ levels) by groups

The statistics for the whole group of students are shown in the first three columns. The next three show statistics only for those students matched in the FFT database. The next three columns are the FFT estimates for the matched students. The final column shows how many additional students in that group need to make expected progress to hit the FFT-D estimates. The sixth column is coloured according to whether it is below FFT-B, above FFT-D or between the two estimates. The numbers may not match the transition matrices if not all students appear in the FFT database.

| 4+ Levels | Total | | | Matched | | | FFT Estimates | | | Extra for -D |
|---|---|---|---|---|---|---|---|---|---|---|
| Group | Students | Achieved | % | Students | Achieved | % | A | B | D | |
| All Students | 178 | 63 | 35.4% | 168 | 60 | **35.7%** | 35.9% | 32.8% | 38.6% | 5 |
| Boys | 93 | 23 | 24.7% | 90 | 22 | **24.4%** | 30.7% | 27.6% | 32.8% | 8 |
| Girls | 85 | 40 | 47.1% | 78 | 38 | **48.7%** | 41.9% | 38.9% | 45.3% | - |
| FSM | 13 | 1 | 7.7% | 12 | 1 | **8.3%** | 41.7% | 39.8% | 45.1% | 5 |
| Not FSM | 165 | 62 | 37.6% | 156 | 59 | **37.8%** | 35.5% | 32.3% | 38.1% | 1 |
| Ethnicity WBRI | 153 | 53 | 34.6% | 147 | 51 | **34.7%** | 35.8% | 32.7% | 38.5% | 6 |
| Not WBRI | 25 | 10 | 40.0% | 21 | 9 | **42.9%** | 36.9% | 33.8% | 39.6% | - |
| No SEN | 152 | 57 | 37.5% | 143 | 55 | **38.5%** | 37.6% | 34.5% | 40.5% | 3 |
| School Action | 12 | 1 | 8.3% | 12 | 1 | **8.3%** | 21.9% | 19.9% | 24.2% | 2 |
| SA+ & Statement | 14 | 5 | 35.7% | 13 | 4 | **30.8%** | 29.8% | 26.8% | 31.5% | 1 |
| English Add Lang | 8 | 2 | 25.0% | 4 | 2 | **50.0%** | 24.8% | 22.0% | 27.0% | - |
| Not EAL | 170 | 61 | 35.9% | 164 | 58 | **35.4%** | 36.2% | 33.1% | 38.9% | 6 |
| Lower KS2 Score | 49 | 10 | 20.4% | 49 | 10 | **20.4%** | 24.2% | 22.2% | 26.8% | 4 |
| Middle KS2 Score | 61 | 15 | 24.6% | 61 | 15 | **24.6%** | 30.0% | 27.6% | 33.5% | 6 |
| Upper KS2 Score | 58 | 35 | 60.3% | 58 | 35 | **60.3%** | 51.9% | 47.4% | 53.9% | - |
| Looked After | 3 | 0 | - % | 2 | 0 | **0.0%** | 19.0% | 17.0% | 21.0% | 1 |
| Not Looked After | 175 | 63 | 36.0% | 166 | 60 | **36.1%** | 36.1% | 33.0% | 38.8% | 5 |
| Pupil Premium | 33 | 3 | 9.1% | 30 | 3 | **10.0%** | 35.4% | 32.9% | 38.4% | 9 |
| Not Pupil Prem | 145 | 60 | 41.4% | 138 | 57 | **41.3%** | 36.0% | 32.8% | 38.7% | - |
| FSM + LAC | 15 | 1 | 6.7% | 13 | 1 | **7.7%** | 39.2% | 37.3% | 42.5% | 5 |
| Not FSM or LAC | 163 | 62 | 38.0% | 155 | 59 | **38.1%** | 35.6% | 32.5% | 38.3% | 1 |

**Legend**

| Below FFT-B | Above FFT-B but below FFT-D | Above FFT-D |
|---|---|---|

# 9 Key indicators by teaching group

This table summarises the key estimates and actuals. Residuals are against FFT Type B estimates. **Only students who have a FFT record are included here.** The 'Sig?' column shows whether the residual is statistically significant i.e. unlikely to be by random chance. The size of the residual, the size of the group and the spread of the residuals affect this.

| | | | Percentage of students | | | | | |
|---|---|---|---|---|---|---|---|---|
| | | | gaining A*-C | | | gaining A*-A | | |
| Group | Entry | Matched | FFT-B | FFT-D | Result | FFT-B | FFT-D | Result |
| English | 178 | 168 | 73.7 | 77.2 | **81.5** | 16.5 | 19.9 | **19.6** |
| 10x/En1 | 30 | 30 | 80.3 | 83.8 | **100.0** | 15.2 | 18.9 | **13.3** |
| 10x/En2 | 23 | 21 | 58.5 | 63.6 | **85.7** | 4.3 | 5.6 | **0.0** |
| 10x/En3 | 13 | 12 | 47.9 | 53.0 | **0.0** | 2.8 | 3.7 | **0.0** |
| 10x/En4 | 11 | 11 | 25.3 | 29.5 | **0.0** | 1.0 | 1.0 | **0.0** |
| 10y/En1 | 31 | 29 | 93.0 | 94.8 | **100.0** | 35.6 | 41.4 | **72.4** |
| 10y/En2 | 28 | 26 | 92.6 | 94.3 | **100.0** | 29.5 | 35.4 | **30.8** |
| 10y/En3 | 27 | 25 | 76.0 | 79.9 | **100.0** | 11.0 | 14.0 | **0.0** |
| 10y/En4 | 15 | 14 | 63.9 | 68.4 | **64.3** | 7.1 | 9.3 | **0.0** |

| | | | Average points | | | Residual | |
|---|---|---|---|---|---|---|---|
| Group | Entry | Matched | FFT-B | FFT-D | Result | Residual | Sig? |
| English | 178 | 168 | 41.1 | 41.9 | **43.1** | 2.0 | Yes |
| 10x/En1 | 30 | 30 | 41.9 | 42.7 | **45.6** | 3.7 | Yes |
| 10x/En2 | 23 | 21 | 37.7 | 38.6 | **39.4** | 1.7 | Yes |
| 10x/En3 | 13 | 12 | 36.2 | 37.1 | **32.0** | -4.2 | Yes |
| 10x/En4 | 11 | 11 | 32.2 | 33.0 | **31.8** | -0.3 | - |
| 10y/En1 | 31 | 29 | 45.8 | 46.7 | **52.2** | 6.4 | Yes |
| 10y/En2 | 28 | 26 | 45.0 | 45.9 | **46.9** | 1.9 | Yes |
| 10y/En3 | 27 | 25 | 40.9 | 41.7 | **41.4** | 0.6 | - |
| 10y/En4 | 15 | 14 | 38.7 | 39.6 | **38.7** | -0.0 | - |

**Legend**

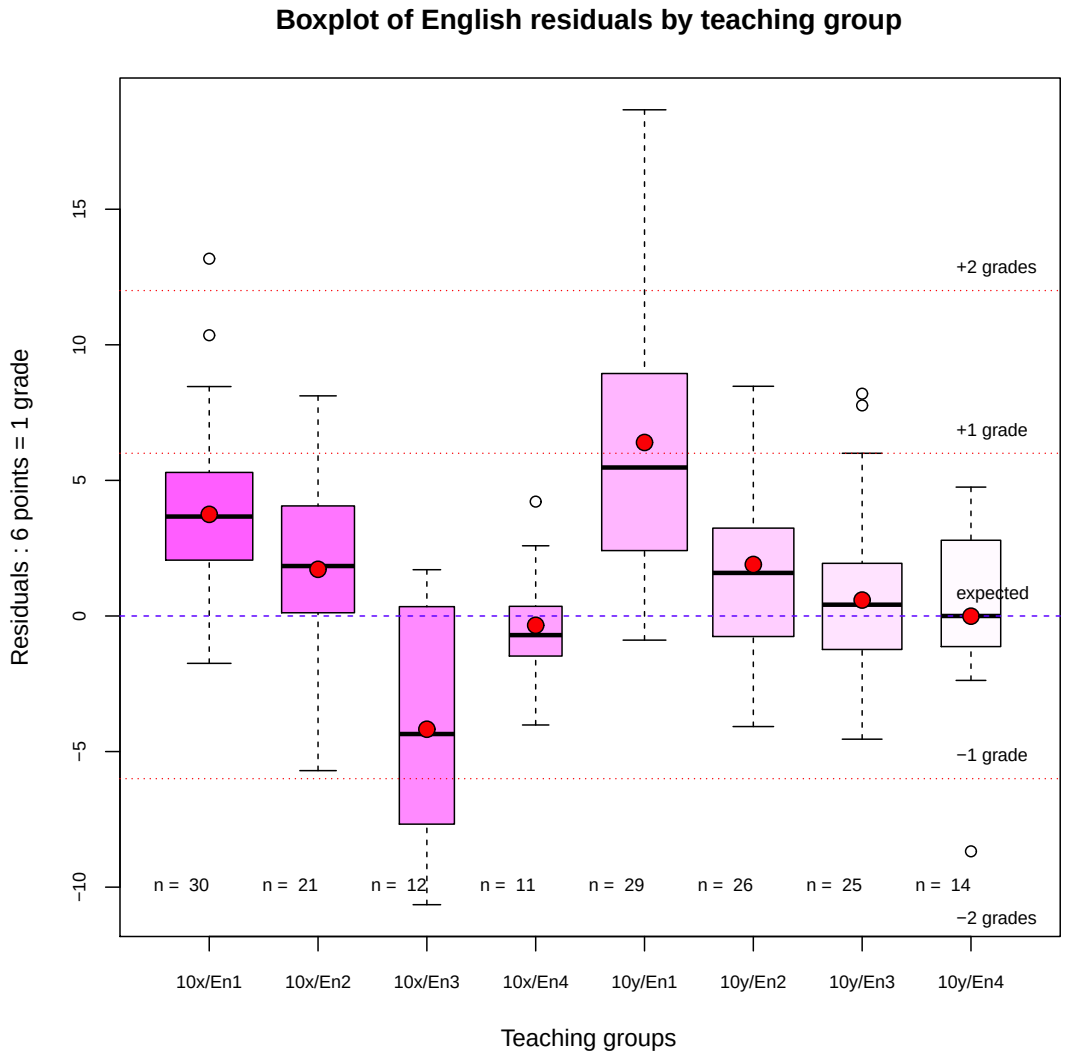
| Below FFT-B | Above FFT-B but below FFT-D | Above FFT-D |
|---|---|---|

# 10 Residuals by teaching group vs FFT Type B

Here the FFT residuals are shown by teaching group. Beware that it is usually the case that in setted subjects, top sets are likely to get positive residuals and bottom sets are likely to get more negative residuals. This is because schools generally have a better sense of students' likely progress irrespective of prior attainment, and so students likely to progress less well are moved to lower sets and vice versa. This effect is long known.

Things to look for:

- Is progress different in the different groups? How much is the difference in "grades"?
- Does any group have an unusual number of outliers (extreme residuals outside the whiskers)?
- Does any group have a significantly higher spread than the others i.e. had students with a wide range of progress?



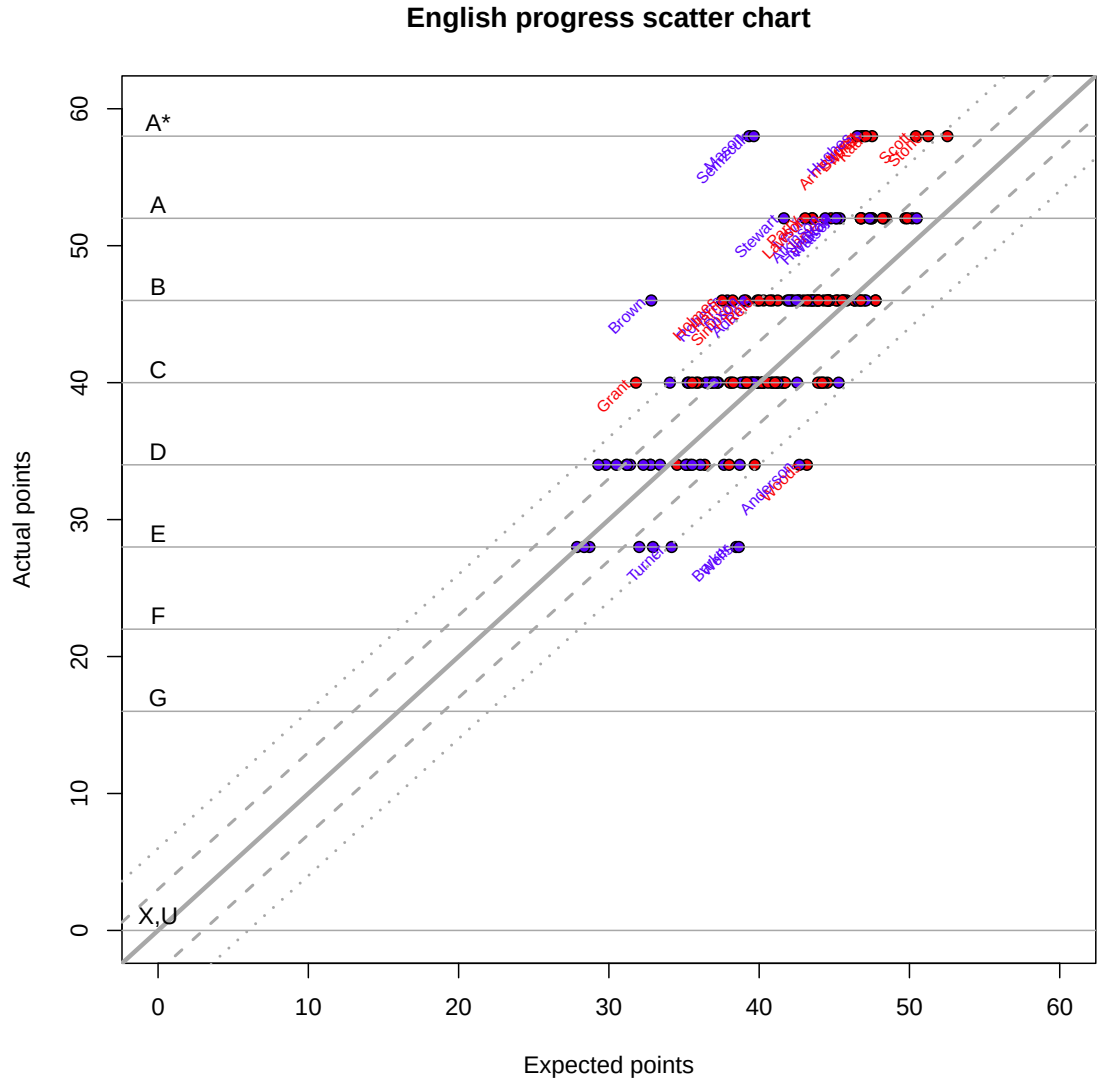

The difference between groups is highly unlikely to be by chance (p = 9.3e−14).

# 11 Scatter plot showing progress vs FFT Type B

Each student is marked with a red dot for a girl or a blue dot for a boy.
The thick grey line at the centre represents expected progress in line with similar schools and students according to FFT estimates.
The dashed grey lines represent progress of half a grade better or worse than expected.
The dotted grey lines represent progress of a full grade better or worse than expected.
Any student with a residual or more than +6 or less than -6 has a surname attached. It might help you to see how your scatter plot compares with other subjects rather than looking at it in isolation.

Things to look for:

- Are there any extreme residuals?
- Is there a gender pattern?
- Is the pattern different moving from left to right i.e. from weaker to more able students?

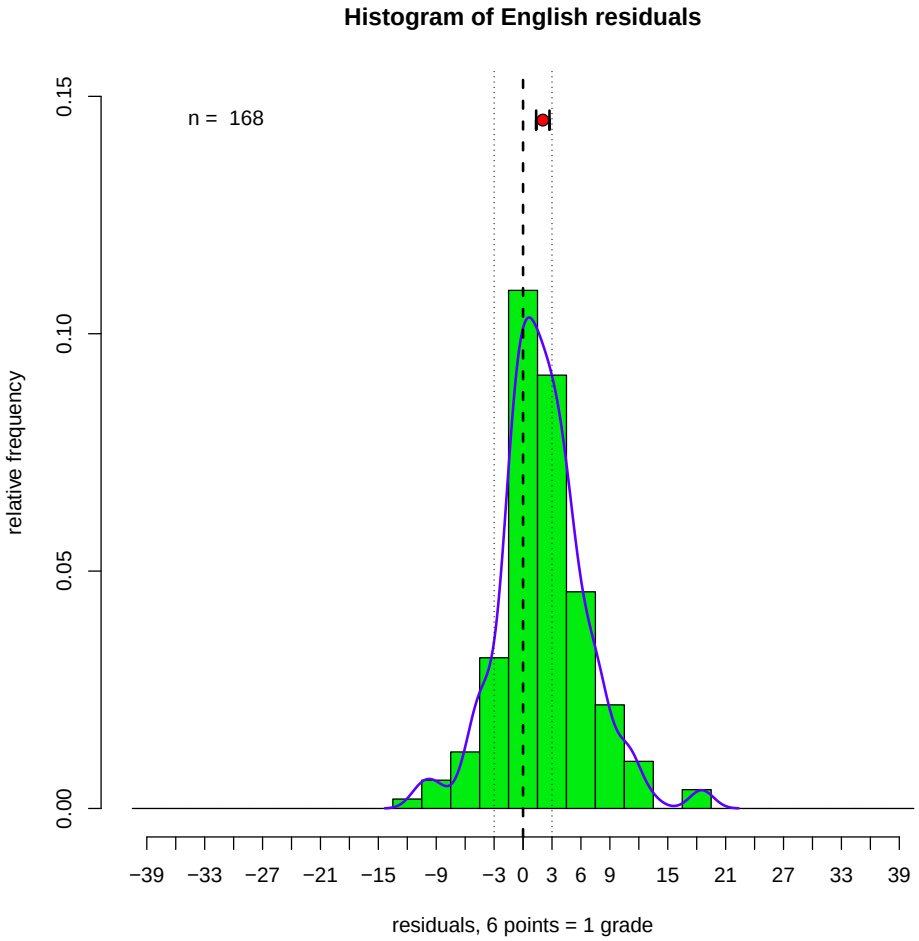


## 12 Spread of residuals vs FFT Type B

Below is a histogram of the FFT residuals. They have been grouped into 'bins' each 3 GCSE points wide. The blue line smooths the pattern. It should be a fairly narrow high peak in the centre, and the further to the right the better. The central vertical dashed line is for a residual of zero, i.e. expected progress. The red blob at the top represents the value of the mean residual. There are bars extending each side of the mean which give the 95% confidence limit of the mean. If these bars span the zero residual line, then the whole cohort has made expected progress (with 95% confidence). If these bars do not include the zero line, then progress has been worse or better than expected. The size of the bars is smaller if the subject has a narrower spread of residuals or if there are many students taking the subject. The two dotted vertical lines are at residuals of ± 3 points (i.e. half a grade about zero residual).

Things to look for:

- Does the confidence interval of the mean include zero i.e has there been expected progress? Better than expected? Worse than expected?
- Are there many extreme residuals showing very poor or very good progress?
- Is the spread of residuals wide suggesting poor control over progress, or is it narrow, suggesting good control?

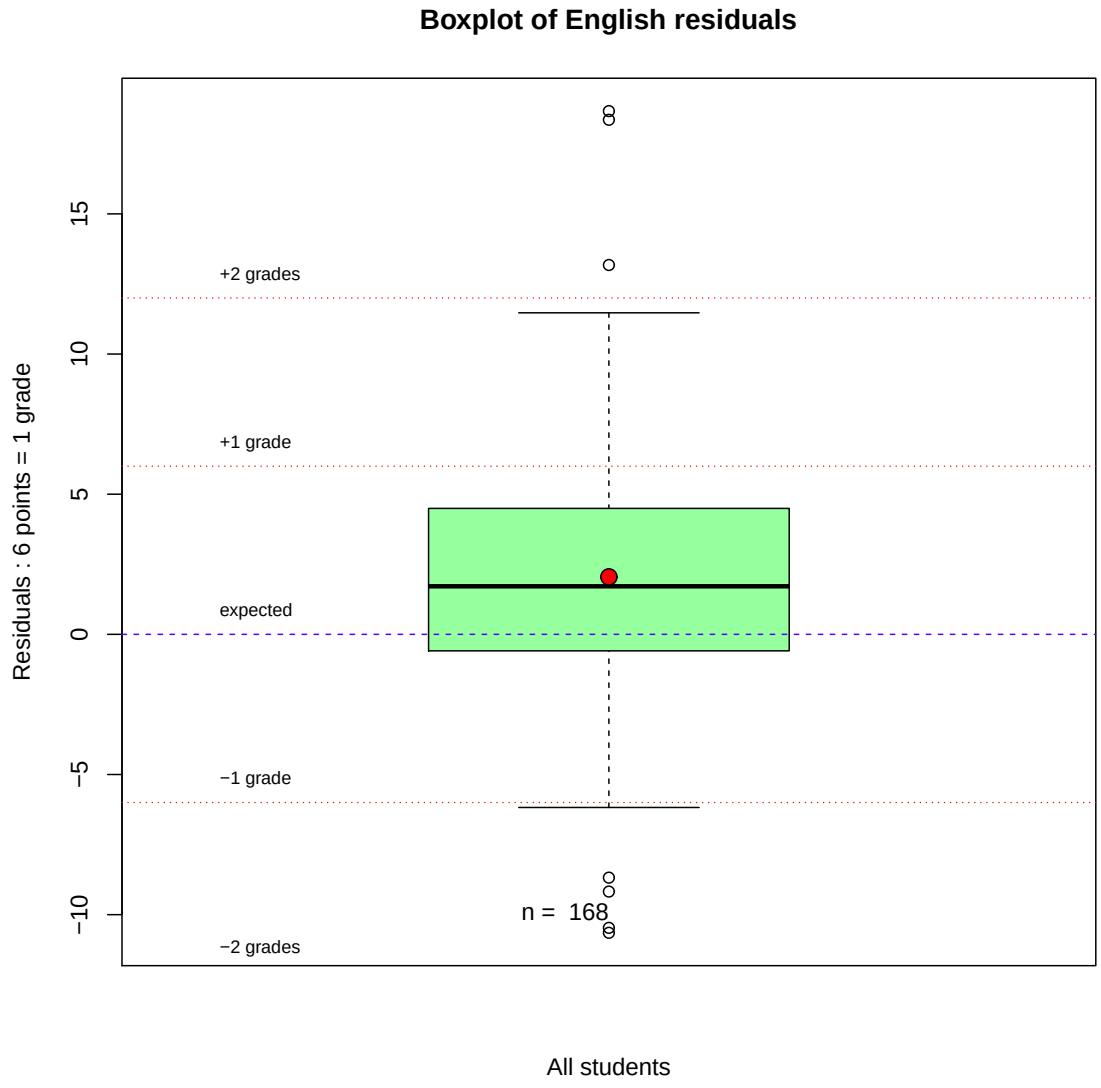


# 13 Boxplot of residuals vs FFT Type B

Below is a standard box plot of the FFT residuals for English.
This boxplot essentially shows the same information as the residual histogram.

Things to look for:

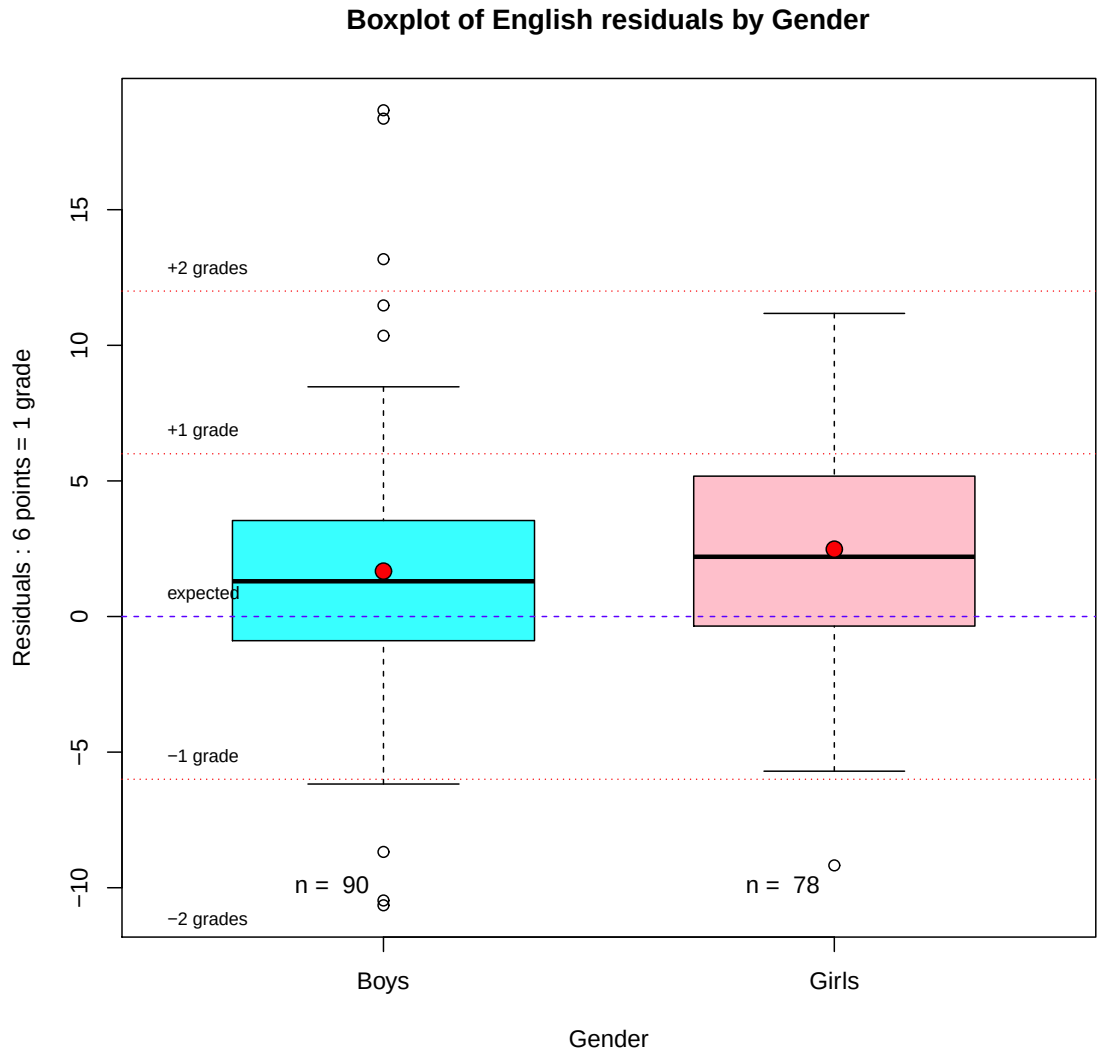
- How do the mean/median compare with "expected progress"
- Is the spread of residuals wide, suggesting poor control over progress, or is it narrow, suggesting good control?



# 14 Residuals by Gender vs FFT Type B

Things to look for:

- Is progress in boys different from in girls? How much is the difference in "grades"?
- Does either gender have an unusual number of outliers (extreme values outside the whiskers)?



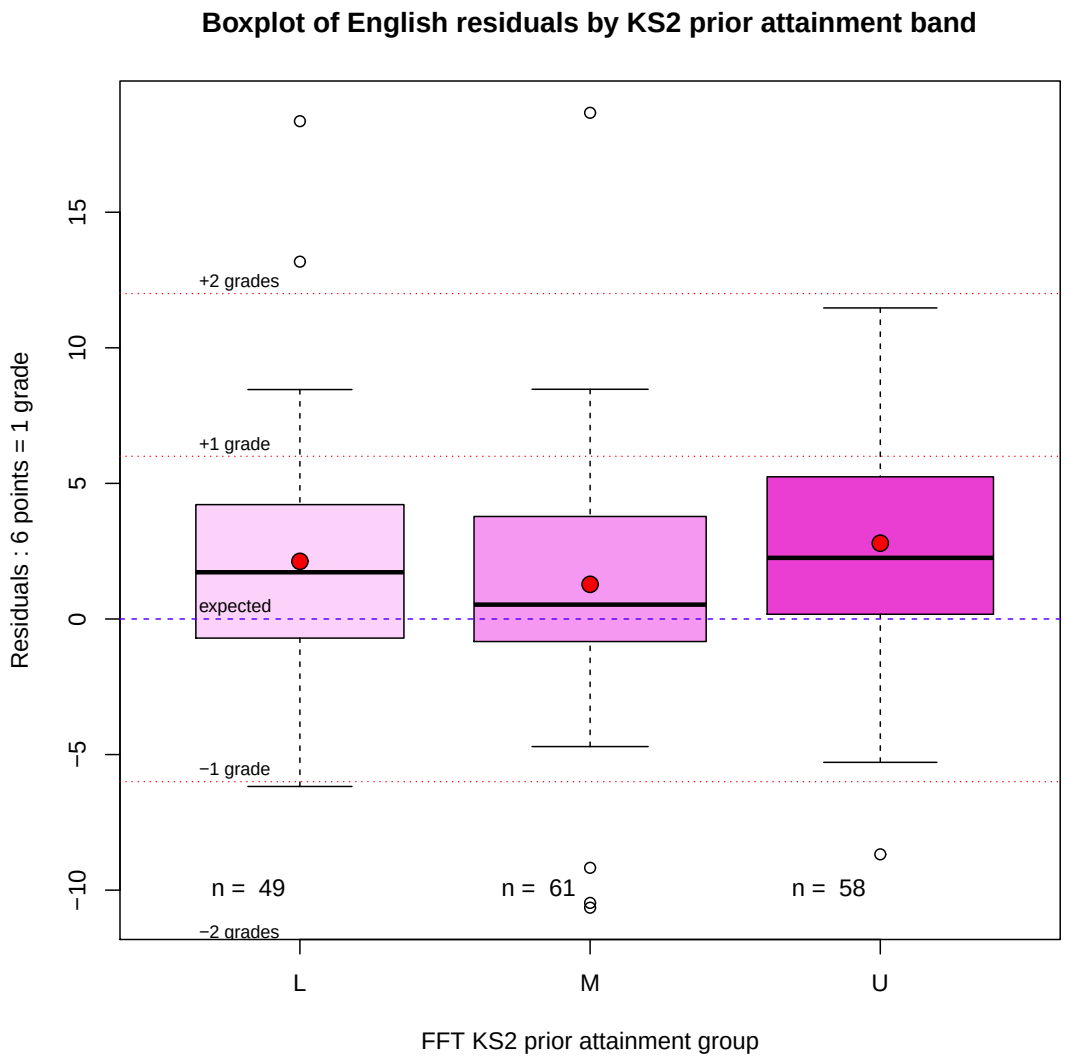

The difference between groups could have been due to chance.

# 15 Residuals by ability band

FFT groups students according to their attainment in the KS2 tests. The groups are called "U", "M" and "L" for upper, middle and lower attainment bands. The analysis below shows boxplots for each of these three groups in English. For Demonstration School as a whole, there were 58, 61 and 50 respectively in the U, M and L groups. The numbers below each box show the numer in each group for your subject and the box shows how they progressed.

Things to look for:

- Is progress different in the ability bands? How much is the difference in "grades"?
- Does any band have an unusual number of outliers (extreme residuals outside the whiskers)?
- Does any band have a significantly higher spread than the others i.e. is more likely to get extremely good or poor progress?




The difference between groups could have been due to chance.

# 16 Vulnerable Groups

The Every Child Matters agenda seeks to ensure that all children enjoy and achieve, so it is important that we know how our most vulnerable groups are doing. In this section your residuals are analysed according to membership of vulnerable groups.

The vulnerable groups we consider are as follows:

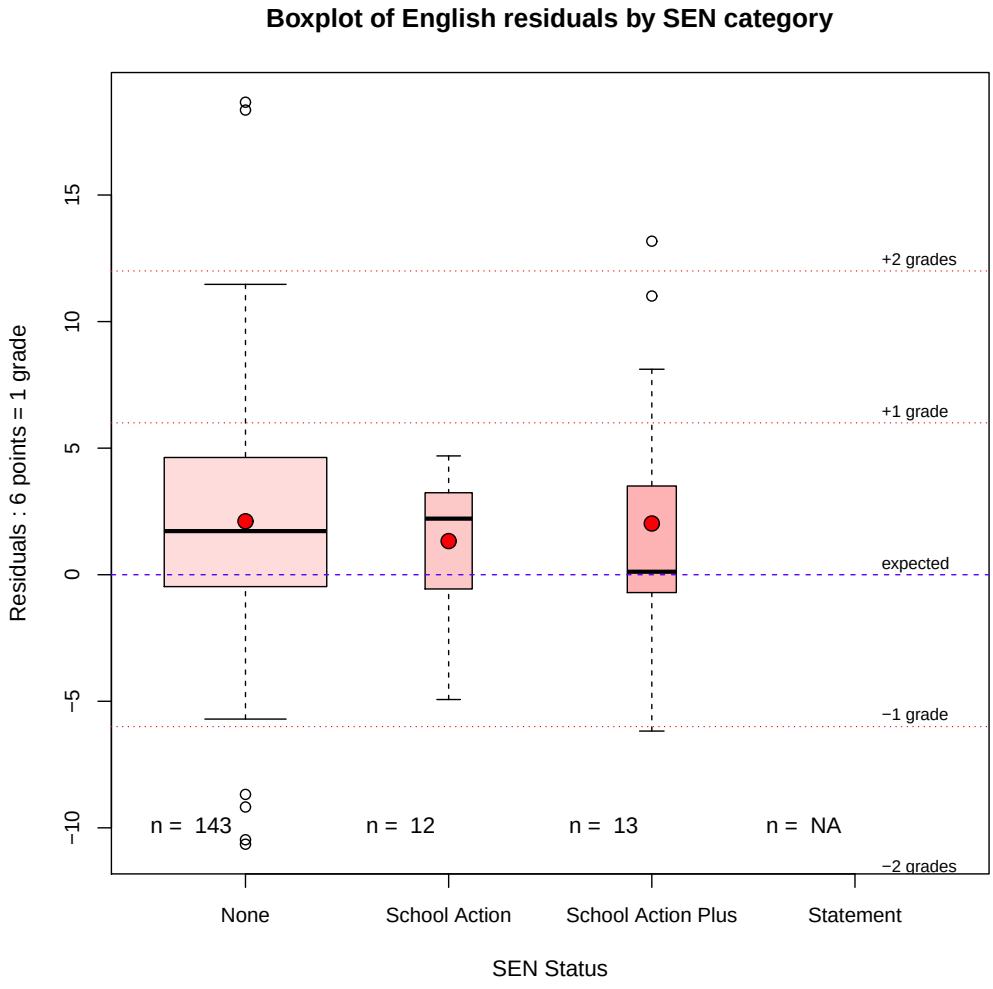
- Students with Special Educational Needs;
- Students with English as an additional Language;
- Students eligible for Free School Meals;
- Students who are "Looked After";
- Students grouped by ethnicity.
- Students on the gifted & talented register.

## 16.1 Special Needs vs FFT Type B

There were 179 in the Year 11 cohort of 2014. The number at each level of special educational need for the cohort as a whole were: none = 152, School Action = 12, School Action Plus = 15 and Statements = 0. The boxplots below show how students with different levels of SEN performed in your subject. Bear in mind that with small groups, it is not possible to make much sense of boxplots, so proceed with caution. The number of students with each level of SEN in English is indicated by "n = " towards the bottom of each group. It may be that in your subject there may be no students in a particular category of Special Need. This would be confirmed by "n = NA" at the bottom of that column on the plot.

Things to look for:

- Is there evidence that students with SEN make good, poor or expected progress in your subject? How much is the difference in "grades"?
- Does any group have an unusual number of outliers (extreme residuals outside the whiskers)?
- Does any group have a significantly higher spread than the others i.e. is more likely to get extremely good or poor progress?



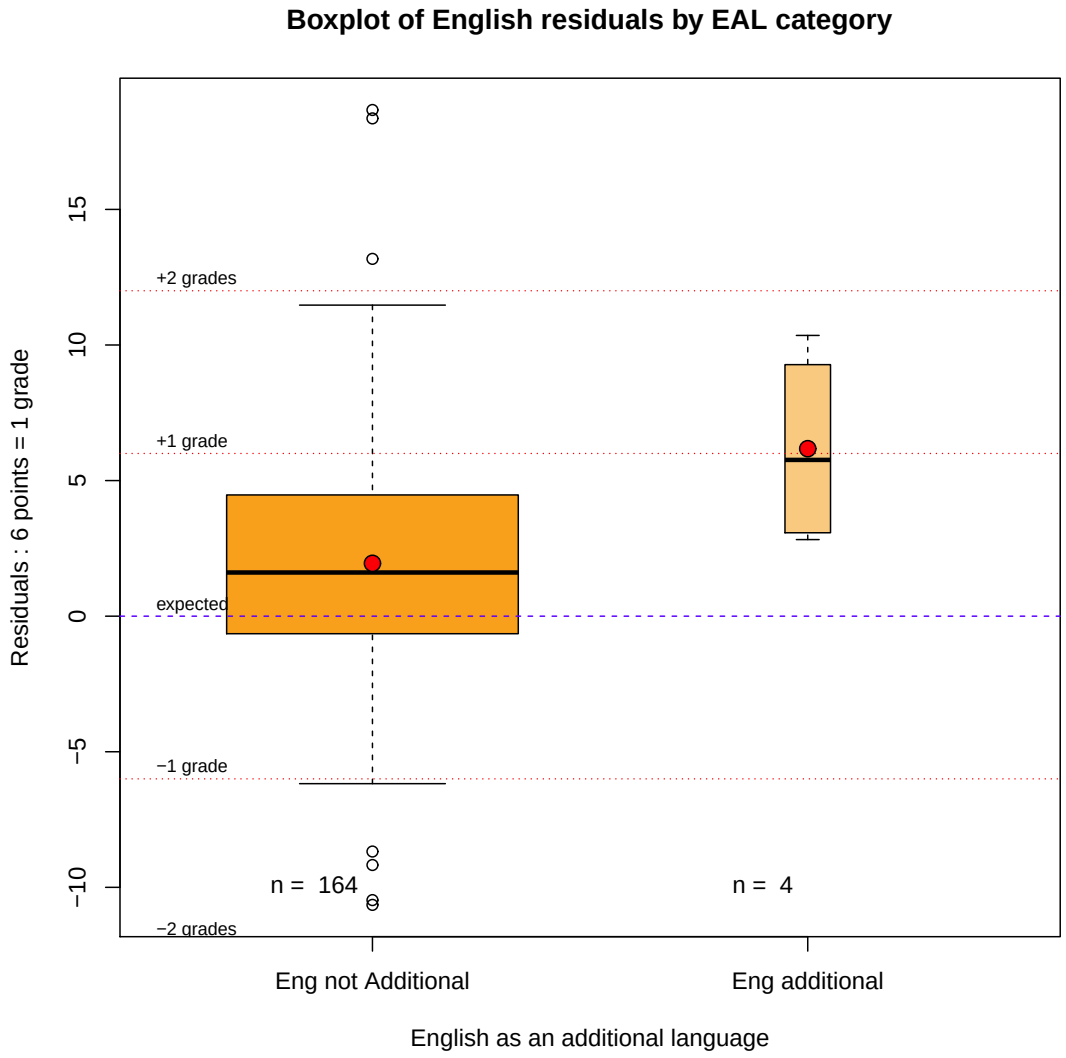

The difference between groups could have been due to chance.

## 16.2 English as an additional language (EAL) vs FFT Type B

There were 179 students in the Year 11 cohort of 2014. Of these, 8 had English as an additional language. This does not necessarily mean they are less able: some are very high attainers.
The boxplots below show how EAL and non-EAL students performed in your subject. Bear in mind that with small groups, it is not possible to make much sense of boxplots, so proceed with caution. The number of students with EAL or not in English is indicated by "n = " towards the bottom of each group. It may be that in your subject there may be no students with EAL. This would be confirmed by "n = NA" at the bottom of that column on the plot.

Things to look for:

- Is there any evidence that EAL students make good, poor or expected progress in your subject? How much is the difference in "grades"?
- Are there any outliers? Which students?



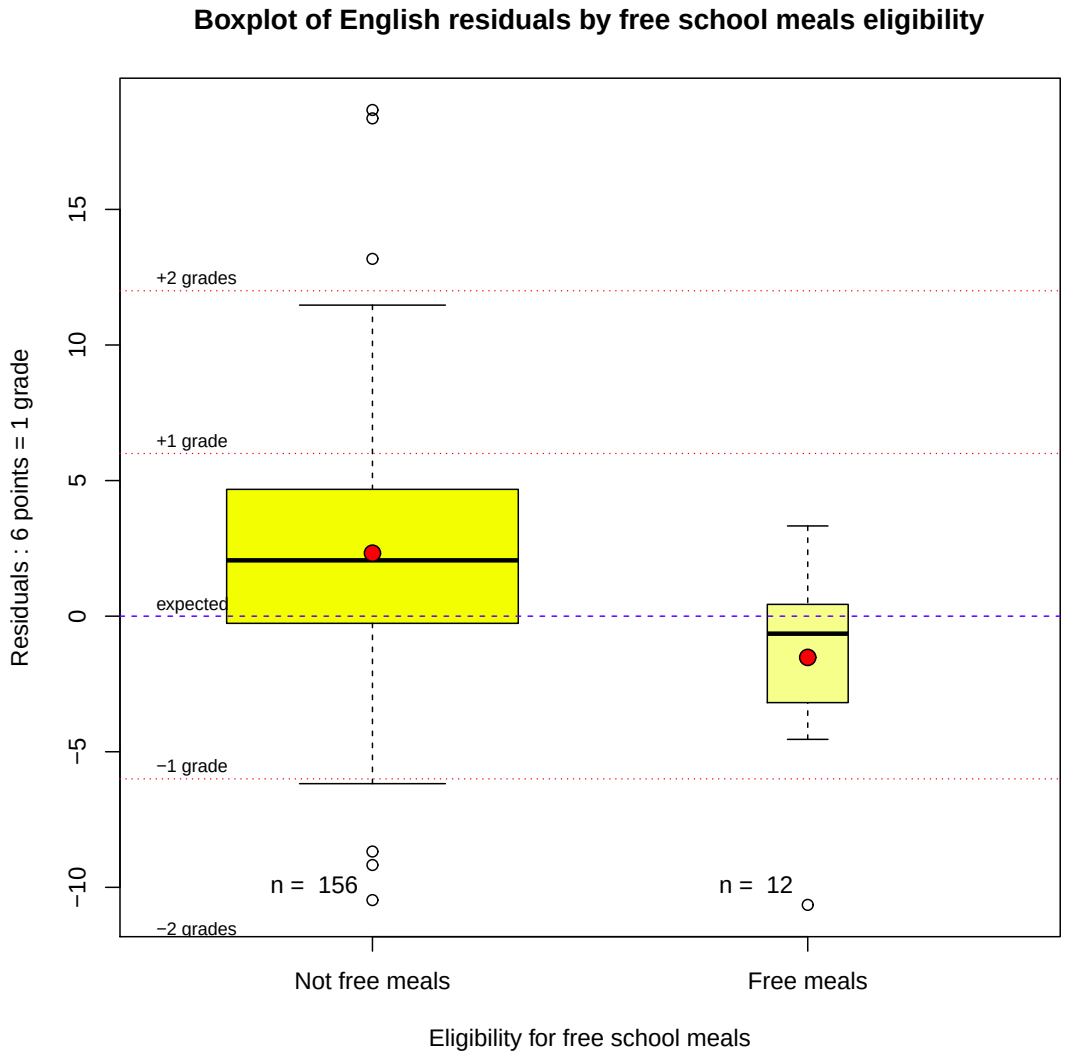

The difference between groups could have been due to chance.

## 16.3 Free School Meals eligibility (FSM) vs FFT Type B

There were 179 students in the Year 11 cohort of 2014. Of these, 13 were eligible for free school meals.
The boxplots below show how FSM and non-FSM students performed in your subject. Bear in mind that with small groups, it is not possible to make much sense of boxplots, so proceed with caution. The number of students eligible for FSM or not in English is indicated by "n = " towards the bottom of each group. It may be that in your subject there were no students eligible for FSM. This would be confirmed by "n = NA" at the bottom of that column on the plot.

Things to look for:

- Is there any evidence that FSM students make good, poor or expected progress in your subject? How much is the difference in "grades"?
- Are there any outliers? Which students?



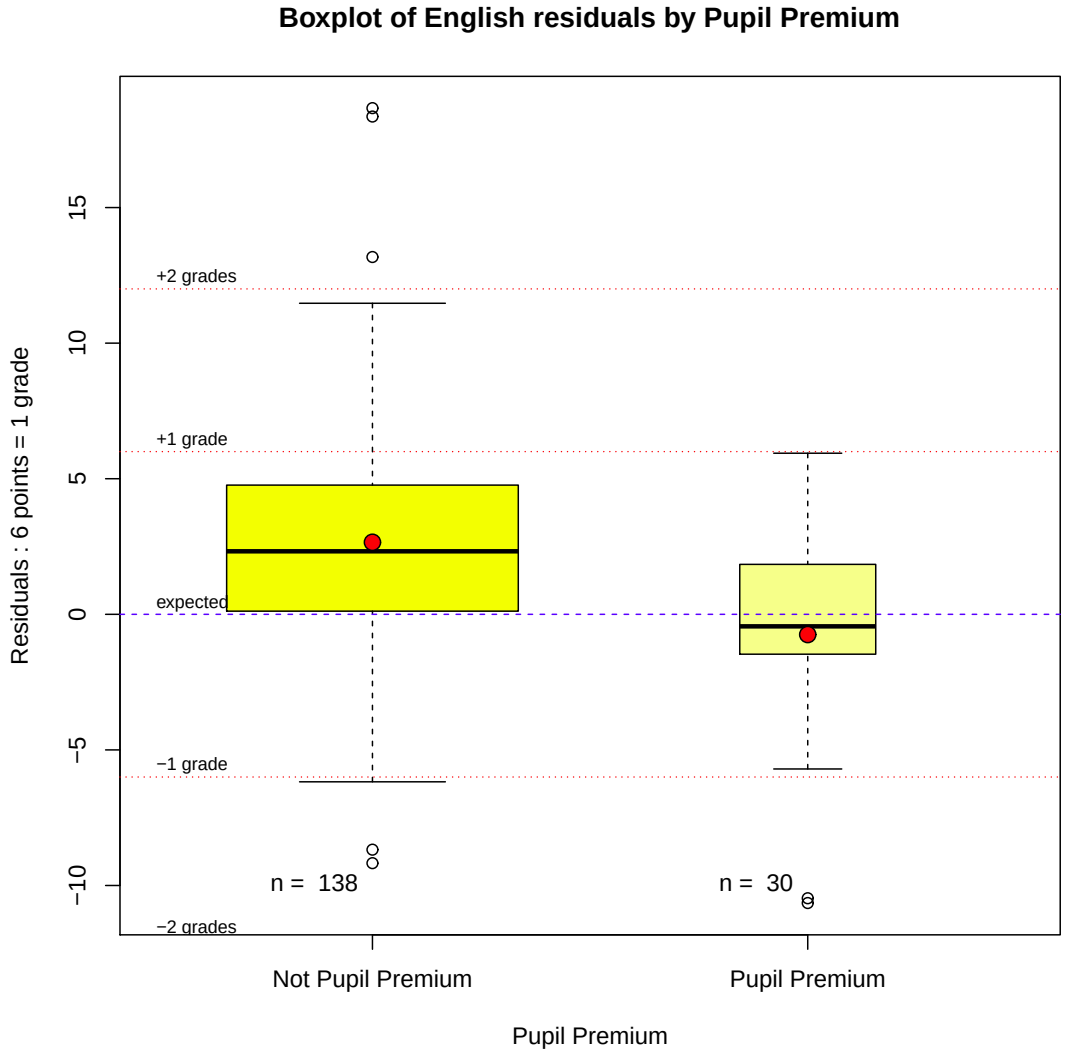

The difference between groups is highly unlikely to be by chance (p = 0.0043).

## 16.4 Pupil Premium vs FFT Type B

There were 179 students in the Year 11 cohort of 2014. Of these, 33 were funded for the pupil premium.
The boxplots below show how pupil premium and non-pupil premium students performed in your subject. Bear in mind that with small groups, it is not possible to make much sense of boxplots, so proceed with caution. The number of students funded with pupil premium or not in English is indicated by "n = " towards the bottom of each group. It may be that in your subject there were no students funded with the pupil premium. This would be confirmed by "n = NA" at the bottom of that column on the plot.

Things to look for:

- Is there any evidence that pupil premium students make good, poor or expected progress in your subject? How much is the difference in "grades"?
- Are there any outliers? Which students?



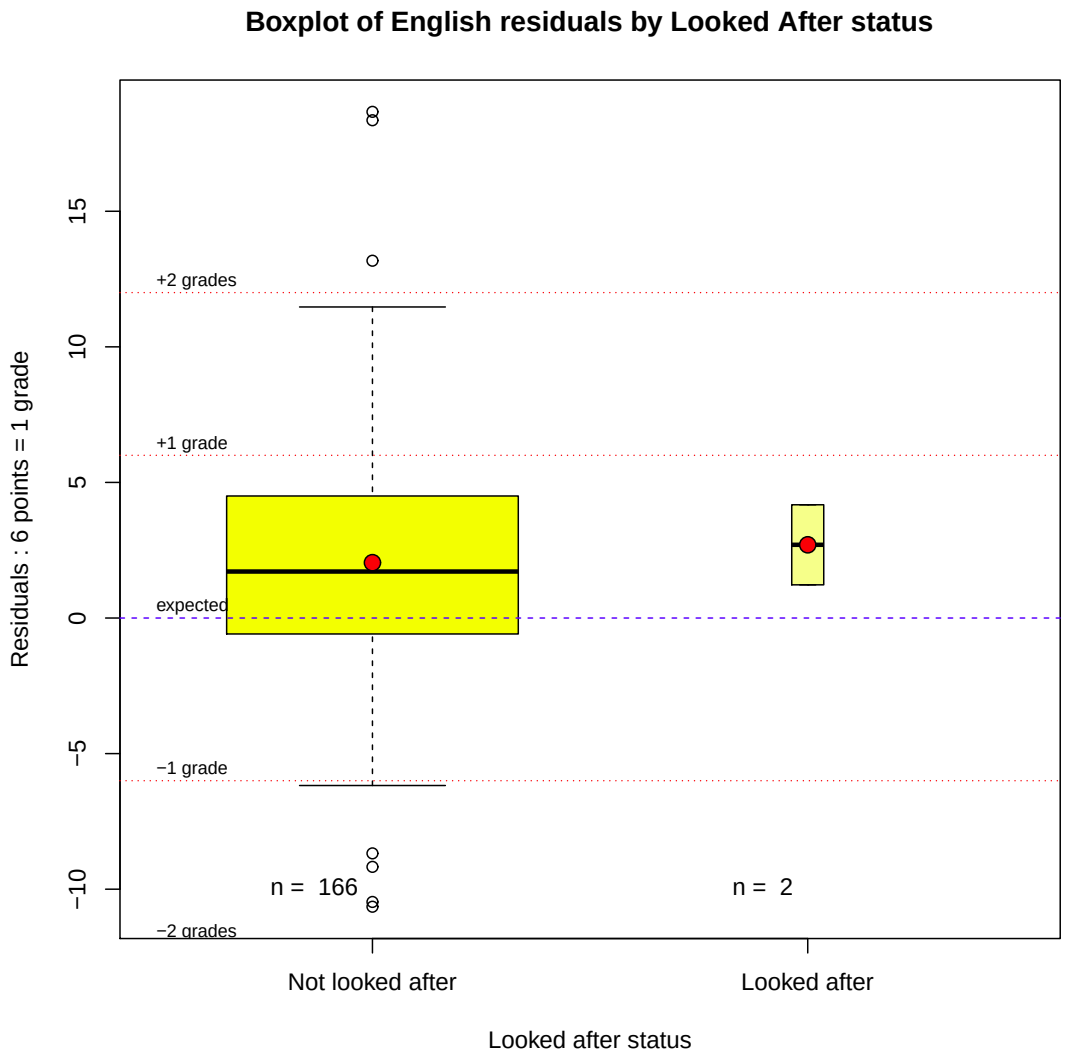

The difference between groups is highly unlikely to be by chance (p = 0.00015).

## 16.5 Looked After Child status (LAC) vs FFT Type B

There were 179 students in the Year 11 cohort of 2014. Of these, 3 were "looked after" children. The boxplots below show how LAC and non-LAC students performed in your subject. Bear in mind that with small groups, it is not possible to make much sense of boxplots, so proceed with caution. The number of students "looked after" or not in English is indicated by "n = " towards the bottom of each group. It may be that in your subject there were no "looked after" students. This would be confirmed by "n = NA" at the bottom of that column on the plot.

Things to look for:

- Is there any evidence that "looked after" children make good, poor or expected progress in your subject? How much is the difference in "grades"?
- Are there any outliers? Which students?



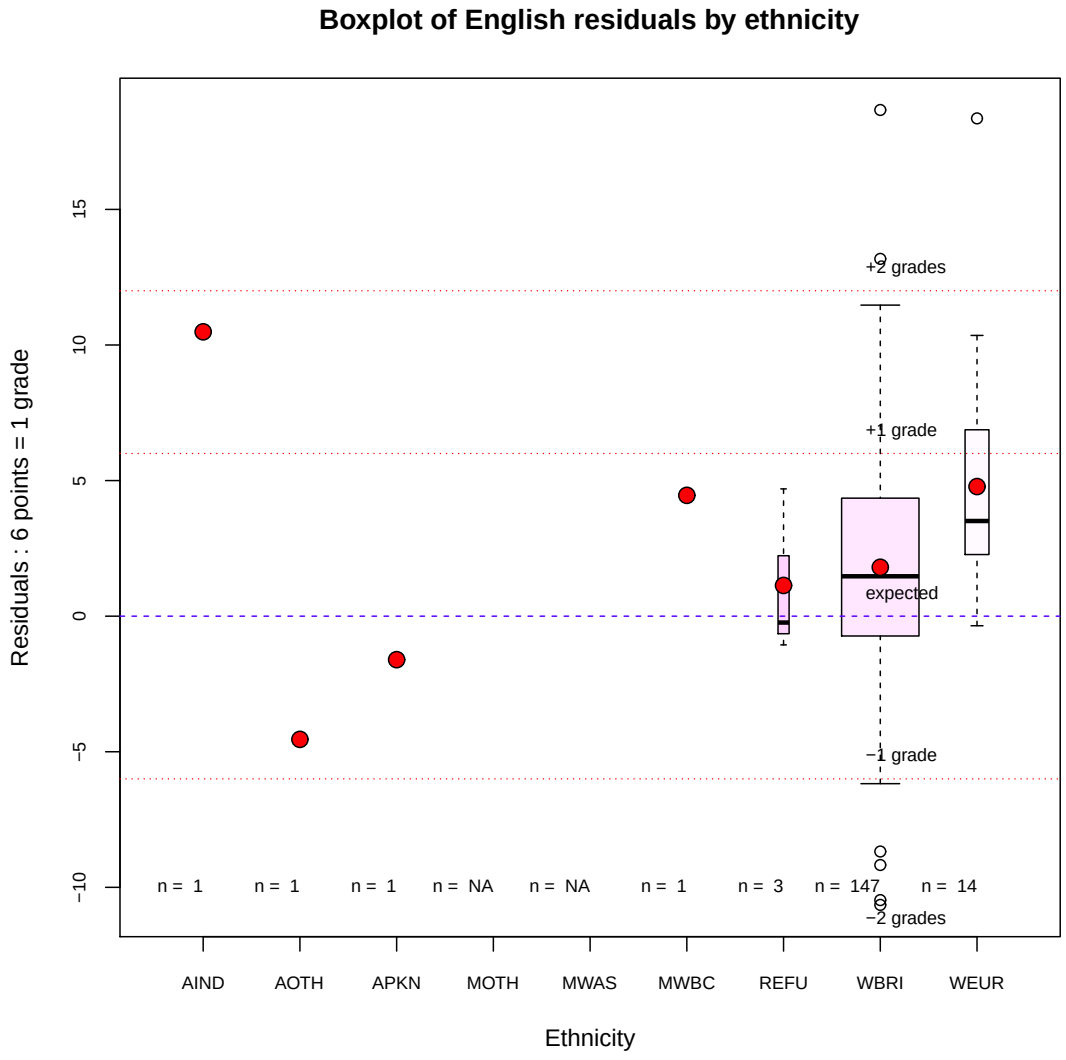

The difference between groups could have been due to chance.

## 16.6 Ethnicity vs FFT Type B

There were 179 students in the Year 11 cohort of 2014. There were 9 different ethnicities recorded for these students.
The boxplots below show how students of different ethnicity performed in your subject. Bear in mind that with small groups, it is not possible to make much sense of boxplots, so proceed with caution. Check the number in the group indicated by "n = " towards the bottom of each group. Also, your subject may have had no students from some ethnic categories. This would be confirmed by "n = NA" at the bottom of that column on the plot.

Things to look for:

- Is there any evidence that any ethnic group makes good, poor or expected progress in your subject? How much is the difference in "grades"?
- Are there any outliers? Which students?



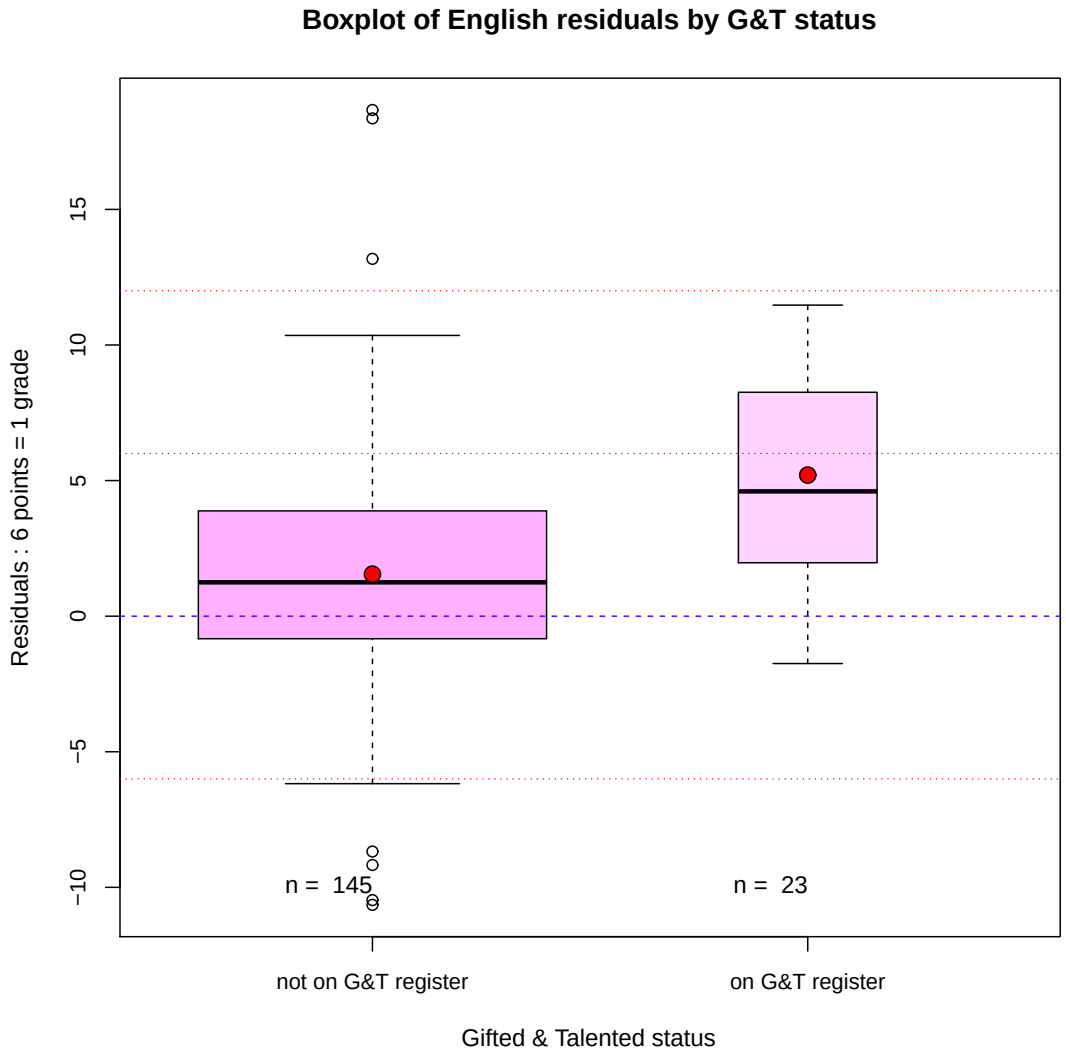

The difference between groups could have been due to chance.

## 16.7 Gifted & Talented vs FFT Type B

There were 179 students in the Year 11 cohort of 2014. Of these, 23 were on the gifted and talented register.
The boxplots below show how students with (and without) G&T performed in your subject. Bear in mind that with small groups, it is not possible to make much sense of boxplots, so proceed with caution. Check the number in the group indicated by "n = " towards the bottom of each group. Also, your subject may have had no students from some ethnic categories. This would be confirmed by "n = NA" at the bottom of that column on the plot.

Things to look for:

- Is there any evidence that G&T students make good, poor or expected progress in your subject? How much is the difference in "grades"?
- Are there any outliers? Which students?




The difference between groups is highly unlikely to be by chance (p = 0.00026).

# 17 Explanation of residuals

- The estimates used for calculating residuals in this document were FFT Type B.
- At the end of Year 6, students take the end of KS2 tests. The Fisher Family Trust (FFT) collect the marks for these tests and compares them to GCSE performance in 11 subject groups and 12 specific subjects.
- On the basis of this comparison, the FFT provides schools with estimates of likely performance to be used in target-setting. Many schools used the "most likely" grade from the FFT to calculate residuals, but this is a flawed procedure.
- More details about which subjects belong to each of the 11 subject groups can be found here (pages 15-27) `http://www.fischertrust.org/GetDownload.aspx?156` - this document is also a good guide to the FFT Live website.
- The FFT now provides probabilities for achieving each grade, and using this it is possible to calculate a decimalised expected points score on the QCA scale. For example, a student's decimalised expected points score for their GCSE points score in a subject may be 44.3
- The QCA scale is A*=58, A=52, B=46, C=40, D=34, E=28, F=22, G=16 and U=0. Notice that each grade is 6 points away from the next. The exception is U.
- 44.3 is not one of these numbers. It is more than a C and not quite a B. Using these decimalised estimates may seem odd, but it involves less error than rounding to the 'nearest' grade. Some schools use the single "most likely" grade to perform residuals with and this is wrong as it is a biased estimate of performance.
- Suppose the final result is a grade B, worth 46 points. The residual is calculated as 46 - 44.3 = +1.7 points.
- Each result where the student has an FFT estimate will result in a residual like this, which may be positive or negative.
- For example, suppose the prediction was 34.2, but the student got a U (worth 10 on my scale). The residual is then 10 - 34.2 = -24.2, a very bad residual, of around 4 grades below expectation.
- Remember that 6 points on this QCA scale is worth a grade.
- Most subjects have a spread of residuals from around -12 points to +12 points. If you have many outside this range, think about why. Of course the more students who take your subject, the more likely you are to have extreme residuals, but they should be rare.
- In analysing residuals, it is common to be defensive: to seek reasons as to why this student did so badly which were beyond your control. However, try also to think positively, why did this student, this group of students do so well? This may unlock some ideas for improvement.

# 18 Explanation of boxplots

- The boxplots in this document show how residuals are distributed. Expected performance is for the residuals to be zero, but there is inevitably a spread. Towards the top of the plot are the positive (good) residuals, while towards the bottom are the negative (poor) ones.
- Instead of showing each residual, they are grouped into rough quarters with the box and whiskers of the plot showing each quarter.
- There is a blue dotted horizontal line for zero residual representing expected progress. There are also red dotted lines at ± 1 and 2 grades (i.e residuals of ± 6 and 12 points).
- Towards the bottom of the plot it says "n = 99" or some such number. This is the number of residuals available for analysis. It may be that the total number is not the same as the number taking your subject. This is likely to be because some students did not have KS2 test scores available, the FFT could not provide estimates and so it is impossible to calculate residuals for them.
- The box in the boxplot represents the middle half of all the residuals. The line across the centre of the box represents the middle residual when they are placed in order. (Technically, this is the **median**). Thus, there are a quarter of all the residuals in the top half of the box, and a quarter of all residuals in the bottom half of the box.
- Look where the median is. If it is above zero, you can say that more than half of your students made better than expected progress.
- If the whole of the box is above zero residual, you can say that more than 3/4 of your students made better than expected progress.
- The whiskers stretch from each end of the box to try to cover the remaining residuals. As long as the residuals are not too extreme, the whiskers stretch to cover them. Then, each whisker covers the remaining 25% of residuals. Any residuals which are extreme are not covered by the whiskers and these are known as **outliers**. These should be investigated as the reasons for extreme residuals might be important. You can find their names on other plots or in the basic data.
- The red blob (usually near the centre of the box) represents the **mean** which is the most common type of average used in statistics. The mean is not necessarily identical to the median, and is more influenced by extreme outliers than is the median.
- Where a boxplot has different groups (e.g. gender, Special Needs status, free school meals eligibility), the question arises as to whether the different groups have made equal progress. This is not always obvious on looking at a boxplot. When the group sizes are small, random effects can be large. A statistical technique called analysis of variance (ANOVA) can help here. Below such boxplots in red is printed the result of carrying out an ANOVA. It is a simple statement of whether there is statistical evidence of unequal progress or not. All such an analysis can say is how unlikely the boxplot is if the progress of the groups were really equal, and random effects caused the apparent difference. If the difference is unlikely (less than a 1 in 20 chance = 0.05) there is statistical evidence of unequal progress. If the difference is very unlikely (less than a 1 in 100 chance = 0.01) there is strong statistical evidence of unequal progress. The "p" value at the end of the statement is this probability. There are some statistical difficulties in applying ANOVA to residuals based on the FFT estimates - think of the ANOVA analysis as providing a guide rather than a decisive judgement.
- As always, building up a picture across subjects and trends across years is more helpful than a single analysis taken on its own.

# 19 Acknowledgements

Thanks to the open source software industry for developing the tools used in this analysis:

- First to the thousands of people who developed GNU/Linux and are still improving it
- Second to the R Development Core Team (2005). R: A language and environment for statistical computing. R Foundation for Statistical Computing, Vienna, Austria. ISBN 3-900051-07-0, URL `http://www.R-project.org/`
- Finallly to the TeX and LaTeX projects URL `http://www.latex-project.org/`

Thanks also to the Fischer Family Trust Data Analysis Project URL `http://www.fischertrust.org/` for making a wide variety of data available to help with self-evaluation and target-setting at individual, school and local authority level. Without them, this analysis would not be possible.