How schools prepare students for the Queensland Core Skills Test

Queensland Government

Queensland Studies Authority
Partnership and innovation

How schools prepare students for the Queensland Core Skills Test

Foreword

How schools prepare students for the Queensland Core Skills Test reports results from a survey, completed by over 90 per cent of schools with OP-eligible students in 2005, of what schools commonly do to prepare students for the QCS Test. The report also, at the request of the Principals Reference Group, analysed school performance data to see what kinds of preparation give the best return in terms of students performing well on the QCS Test; that is, their QCS Test performance matches or is better than their within-school achievement.

The report provides a comprehensive analysis of the data. It will allow principals and senior school administration staff to make judgments themselves regarding their school's current approach for the QCS Test preparation, and alternatives they may wish to adopt both short and long term. Others, including teachers, should find the analysis informative and interesting. I commend this report to all those at schools who have a role in shaping QCS Test preparation for their students.

Kim Bannikoff

Director

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Glossary of terms

The following terms and acronyms have been used throughout this report.

Bolt-on preparation: Preparation which is conducted as a stand-alone exercise and explicitly teaches students how to approach the QCS Test by doing practice tests and/or using workbooks. This type of preparation is also referred to as developing "test wiseness"; that is, being familiar with the format and structure of the test and using appropriate strategies to achieve the best result.

Box-and-whisker plot: A graphical way of showing the lower quartile, median and upper quartile of a dataset. It is also able to show any outliers.

Built-in preparation: Focus on the teaching and learning of thinking and process skills within subjects that happen in the classroom.

Common curriculum elements (CCEs): The 49 generic skills that are common to at least two subjects in the Queensland senior curriculum, testable in the current format of the QCS Test, and within the learning opportunities of a high proportion of students (see Appendix 1).

Latent variable: A variable that cannot be measured directly, but may underlie the observed variables.

Polyscore: An estimate of achievement based only on within-school (level of achievement) data. It is a computer-generated measure and although it has no built-in weightings for subjects, it does not assume, for example, that a VHA in Mathematics B is the same achievement as a VHA in Mathematics A. It is, therefore, a better measure than simply averaging levels of achievement. To enable comparisons it is put on to the same scale as the QCS Test.

QCS school group mean: Average QCS Test score of a cohort in a particular year.

QCS–polyscore difference: The relationship between QCS Test performance and polyscore. A positive difference is one where there is a match between the QCS Test results and polyscore or where students at a school have achieved more highly on the QCS Test than would be expected from their polyscore. A negative difference is one where students at schools have achieved lower than would be expected, given their within-school achievements.

Queensland Core Skills (QCS) Test: A cross-curriculum test which assesses achievement in the 49 common curriculum elements covered by students across their senior subjects.

Within-school achievement: Subject results at school.

Summary

At the Queensland Studies Authority (QSA) we are continually trying to improve our advice to schools about preparing senior students for the Queensland Core Skills (QCS) Test. In 2006, we wanted to find out more about the common practices schools use to prepare students to sit the QCS Test. At the QSA we refer to two kinds of preparation: bolt-on, which is conducted as a stand-alone exercise and usually takes the form of practice tests and preparation sessions that are part of the school timetable; and built-in, which is focused on the teaching and learning of senior subjects that happens in the classroom. The Principals Reference Group for Subject Achievement Indicators (SAIs) also asked us to look into school performance data and to combine that with the other research so that they could see what kinds of preparation give the best return.

Over 90 per cent of schools with OP-eligible students responded to the QCS Test preparation survey. Quantitative data were compared with the 2005 QCS Test performance data to establish the relationships between the kinds and amounts of preparation. We followed up with five schools in a telephone interview. These schools had performed significantly better on the QCS Test than would be expected from their students' within-school achievements.

Interestingly, the data showed that there is no correlation between the number of hours spent on bolt-on QCS Test preparation and the resultant QCS Test school group mean. Schools averaged 40 hours over a two-year period in QCS Test preparation, but the schools that performed significantly better on the QCS Test than would be expected from their within-school achievements averaged only 30 hours.

There also did not appear to be any gain in undertaking a large number of full-scale practices. Schools that had a focused approach to full-scale practices — for example, extra writing tasks or splitting the full-scale practices over more than two days — achieved more highly in terms of QCS Test results. When the number of full-scale practices was compared with within-school achievements, however, the data showed that the more full-scale practices that were done, the worse students did on the real test compared with what was expected.

Some schools said that commercial QCS Test workbooks provided structure for the preparation and helped engage students, thus improving their attitude in preparation sessions; however, other schools said that the workbooks had little effect on students' attitudes or performance.

In schools that had undertaken a review of built-in preparation, and described the review as "having a very positive effect", students performed better on the QCS Test. These schools also had the highest positive difference between QCS Test and within-school achievement. This shows that improvement in QCS Test performance is unlikely to be independent of improved within-school performance. This is exactly what should be expected since the QCS Test is grounded in the Queensland senior curriculum.

The data also showed that schools where the QCS Test–polyscore difference had improved tended to focus on the common curriculum elements (CCEs) or on higher-order thinking skills when undertaking a review of built-in-preparation. Schools that focused on higher-order thinking skills achieved better both in terms of QCS Test performance overall and in terms of the QCS–polyscore difference.

Each year the data show that there is a high correlation between the way OP-eligible students perform on the QCS Test and the way they perform in their school assessment. Therefore it is not surprising that it is quality assessment and teaching, delivered over two years, that is most significant, rather than bolt-on preparation. In schools where there is a high positive difference between QCS Test and within-school achievement, there is typically an assessment program which challenges students and has prepared students to be familiar with the expectations of the QCS Test.

Key findings

- There was no clear relationship between the number of hours spent on QCS Test preparation (bolt-on) and performance on the test.
- Schools that had preparation only in Year 12 performed slightly better on the QCS Test than schools with preparation in Years 11 and 12.
- Schools that provided a focused program that targeted the weaknesses of a particular cohort felt that this had a positive effect.
- A whole-school focus on the CCEs had a greater impact than a whole-school assessment review.
- Changes to curriculum organisation and a focus on higher-order thinking skills were beneficial in improving the relationship between QCS Test performance and polyscore.
- The most significant improvements occurred when senior staff and administration staff were involved.
- Schools that provided only oral feedback on practices to students tended to do less well than schools that provided more than one kind of feedback.
- Some schools are still trying to find a balance between too much preparation and not enough.

Conclusions

From the information provided by schools and an examination of the data provided by performance on the QCS Test, we have reached the following conclusions:

- Increasing the amount of time spent on QCS Test preparation alone will not ensure that students do well.
- Built-in preparation is more significant than bolt-on preparation.
- If a school sees that a change in preparation for the QCS Test is necessary, the best results are achieved by involving staff who are willing to make changes and can focus on more than increasing students' test-wiseness.
- Students' attitudes to the QCS Test seem to be important in improving performance.

Introduction

Since the QCS Test was introduced in its current form in 1992, different views have developed about the best ways to prepare students for it. At the Queensland Studies Authority (QSA), we refer to two kinds of preparation: bolt-on, which is conducted as a stand-alone exercise and usually takes the form of practice tests and preparation sessions that are part of the school timetable; and built-in, which is focused on the teaching and learning of senior subjects that happen in the classroom. The main divide in the debate is whether workbooks and multiple practice tests provide the best preparation for good performance on the QCS Test or whether a focus on thinking skills and the CCEs is a better foundation for success.

In 2006, the Analysis and Evaluation Unit began a project to investigate what schools commonly do to prepare students for the QCS Test. The Principals Reference Group then asked that the project be extended to analyse school performance data in conjunction with information about preparation to see what kinds of preparation give the best return in terms of students performing well on the QCS Test; that is, their QCS Test performance matches or is better than their within-school achievement.

Method

The survey was designed to take as little time as possible to complete and to enable quantitative analyses of the data provided. It also provided schools with some opportunities for comment. We sent the survey on 21 March 2006 to all 373 schools with OP-eligible students in 2005 (see Appendix 2). We had a 65 per cent response and, after follow-up, the return rate increased to more than 90 per cent.

Qualitative data were coded and entered into a database. Quantitative data were compared with the 2005 QCS Test performance data to establish whether there were any positive or negative relationships between the kinds and amounts of preparation and within-school achievement.

We identified schools that had performed significantly better on the QCS Test than would be expected from their within-school achievements, and we followed up with five of them to find out more about their practices for QCS Test preparation. This follow-up survey (Appendix 3) consisted of five open-ended questions designed to give participants the opportunity to offer detailed information, specific to their school.

We also contacted intervention schools; that is, schools where the QSA intervened in the data because of the significant negative mismatch between within-school achievement and QCS Test performance. We found out more about how a few of these schools significantly improved their QCS Test performance so that it better reflected their students' within-school achievements.

Quantitative analyses

Section A of the survey asked questions about the school's built-in preparation and Section B asked about bolt-on preparation.

For each question on the survey, analysis of the data is in terms of overall performance on the QCS Test and then QCS–polyscore difference. Box-and-whisker plots are used throughout this report to illustrate the data.

This is an example of a box-and-whisker plot that shows overall performance on the QCS Test. It compares the performance of schools that focused on higher-order thinking skills to those that made other kinds of changes or did not make any changes.
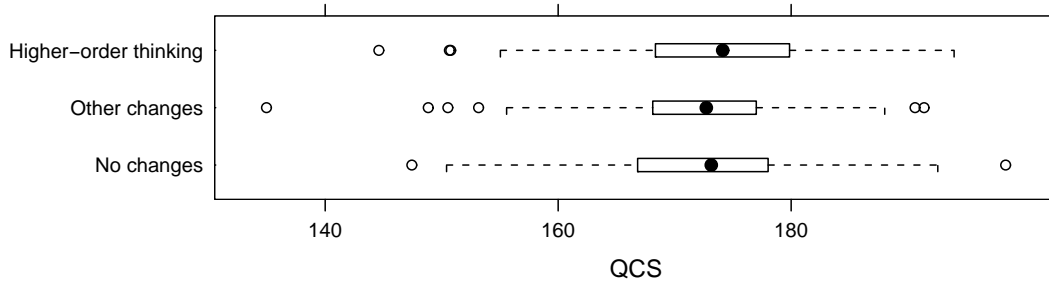
The numbers show QCS Test scores. The box represents the performance of the middle 50 per cent of schools. The black dot within the box represents the median. The lines (whiskers) show the range of QCS Test scores that were achieved by 80 per cent of schools. The open dots on either side of the whiskers (if any) show the outliers.

This plot shows the difference between QCS Test scores and polyscore. On the scale, zero means there is a match between QCS Test performance and polyscore. Where there is a positive difference, students at these schools have achieved more highly on the QCS Test than would be expected from their polyscore. Conversely, a negative difference shows students at schools which have achieved lower than would be expected.
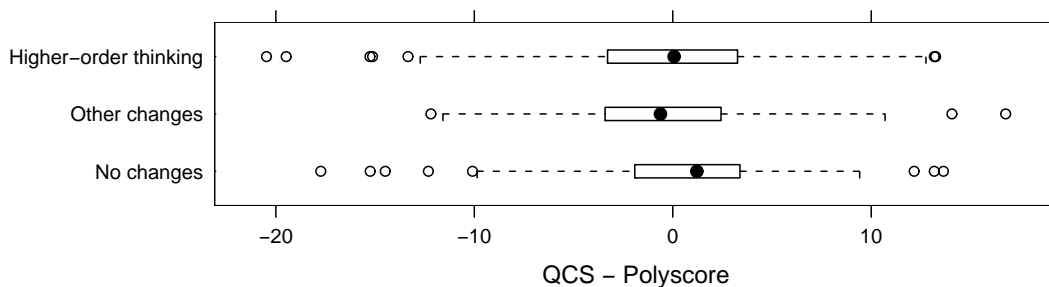
Section A: Built-in preparation

In this section we asked schools whether they had worked on any reviews of built-in preparation in the past few years. The types of reviews of built-in preparation included a whole-school review of assessment, a focus on the CCEs, introducing a new method of curriculum organisation (e.g. Dimensions of Learning) and a focus on higher-order thinking skills. We also asked schools who had been involved in these reviews of built-in preparation how positive the effect was on their students' performance on the QCS Test.

Generally, in schools where students' QCS Test performance has been higher than expected, there was no review of built-in preparation or change to built-in preparation.

Schools that did not undertake a review of built-in preparation

When the QCS Test performances of those schools that had worked on a review of built-in preparation and those that had not were plotted, there was little difference in overall performance. The graph shows those schools that indicated they had not made changes to their built-in QCS Test preparation and those schools that indicated they had made changes.
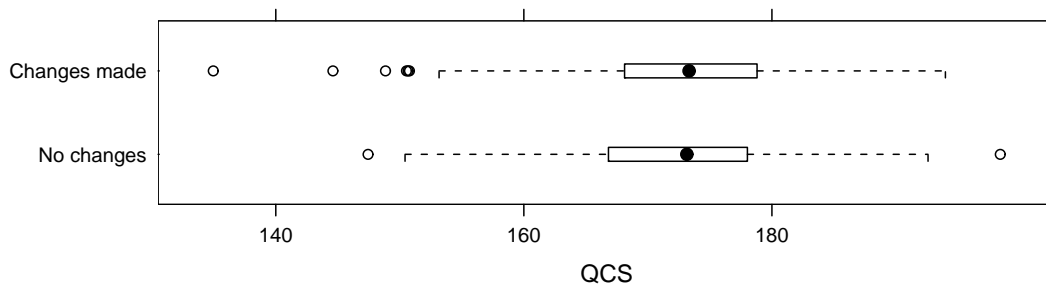
However, when the match between polyscore and QCS Test performance is plotted there is an interesting difference between the two groups. The schools that did not change their preparation were, on average, already achieving more highly on the QCS Test relative to polyscore. This probably is to be expected: if QCS Test performance has been higher than expected, there has been no perceived need for a review of built-in preparation.
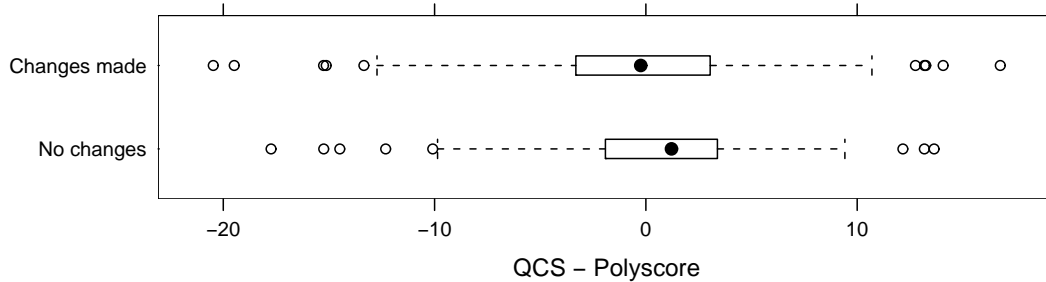
Of the schools that did undertake a review of built-in preparation, those that had a positive QCS Test–polyscore difference tended to focus on higher-order thinking skills or CCEs.

Focus on higher-order thinking skills

Of all the schools that undertook a review of built-in preparation, those that focused on higher-order thinking skills were far more successful in improving the relationship between QCS Test performance and polyscore than those that tended to focus on a whole-school review of assessment. However, this was of little benefit compared with other types of changes to how schools prepare students.

When looking at responses to Question 1, in schools that focused on higher-order thinking skills, students achieved higher results in terms of overall QCS Test performance.
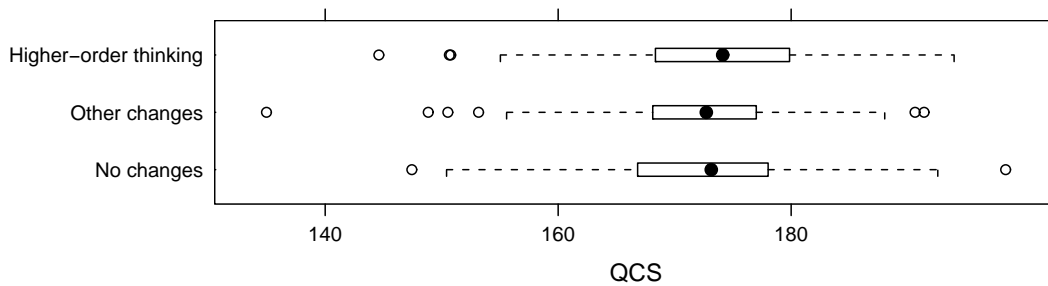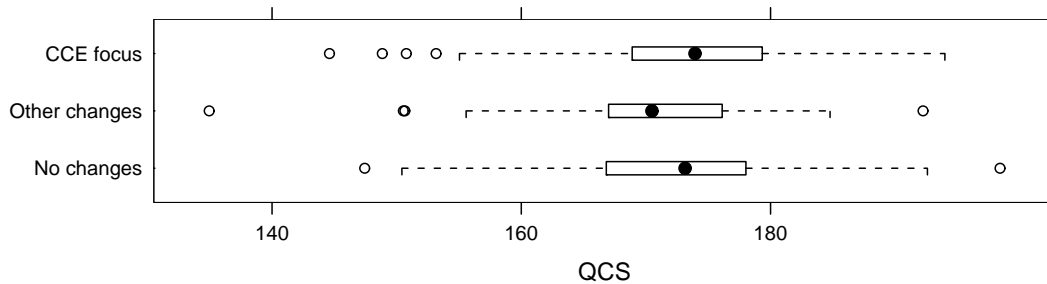

This type of review was also more beneficial than other changes, in terms of improving the QCS–polyscore difference.
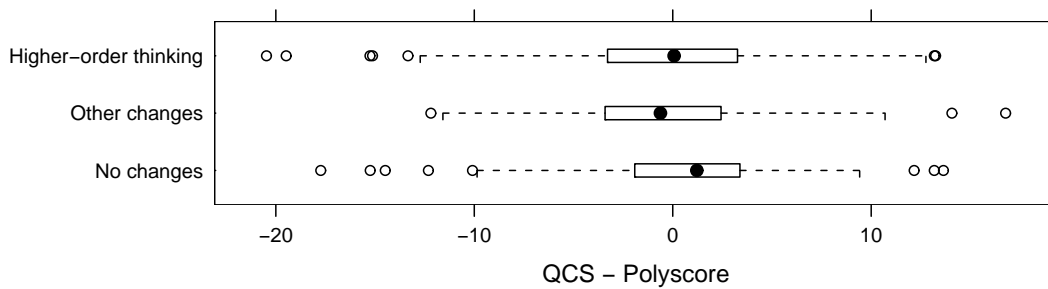
Focus on CCEs

In schools that focused on CCEs, students also generally achieved higher results in terms of overall QCS Test performance.


Despite the fact that focusing on CCEs generally produced better results, the overall effect of the reviews in terms of the QCS–polyscore difference was not significantly different from that produced by other types of changes.
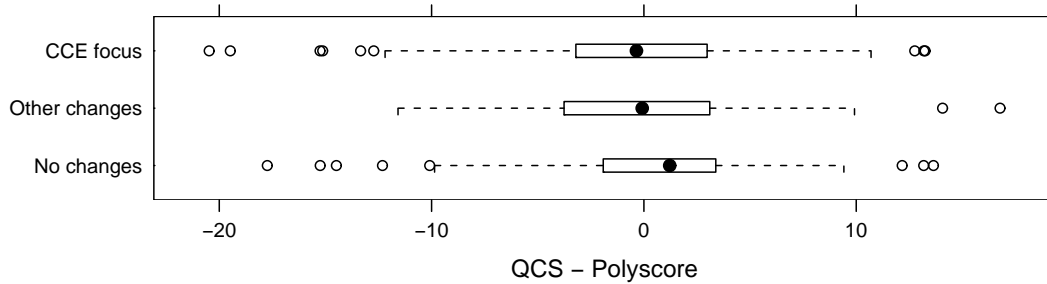

Whole-school review of assessment

In schools that carried out an overall assessment review, students achieved lower results in terms of overall QCS Test performance than in schools where other types of changes were made.
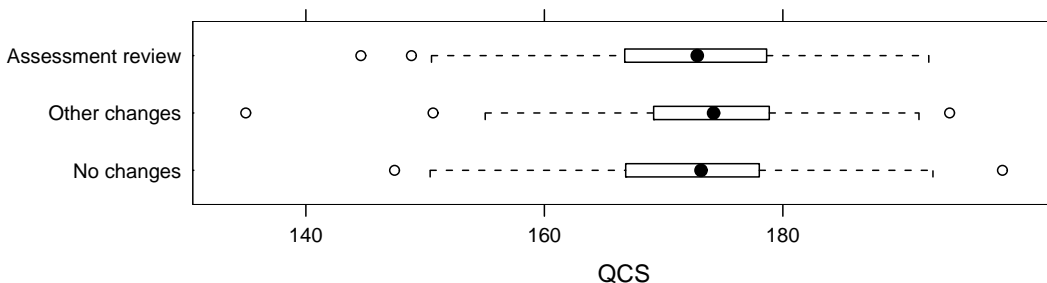
When looking at the QCS–polyscore difference, conducting a whole-school review of assessment appears to have had a less positive effect than other types of changes.
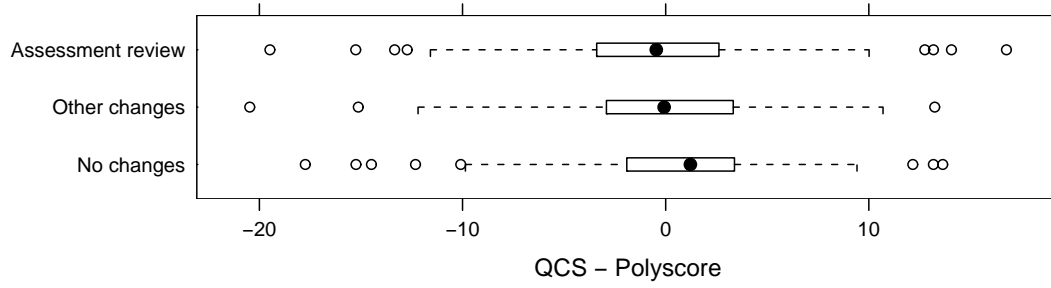
New curriculum organisations

Students in schools where new curriculum organisations were introduced (e.g. Dimensions of Learning) achieved slightly higher than other schools in terms of QCS Test performance overall.
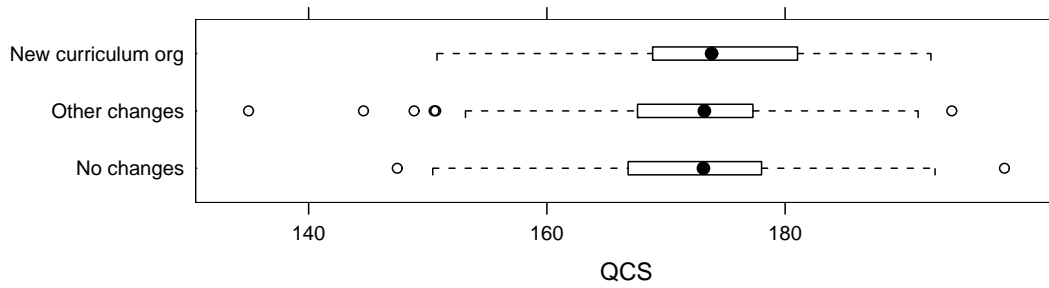
The effect of introducing new curriculum organisations was more beneficial in terms of the QCS–polyscore difference than other types of changes.
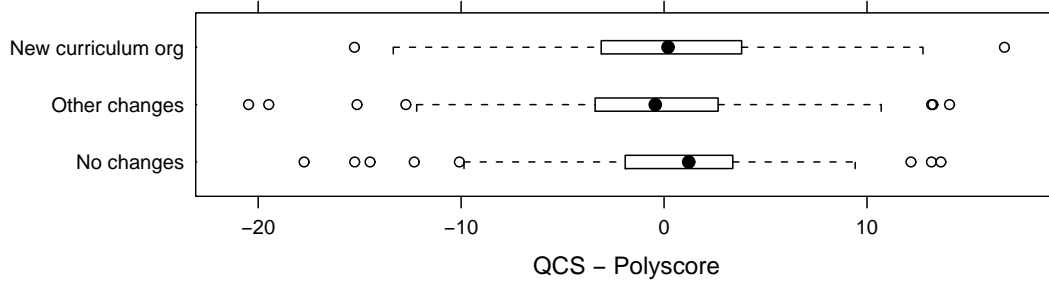
Other types of changes

Schools that introduced other types of changes ("unclassified changes") did not achieve differently to other schools in terms of QCS Test performance overall.
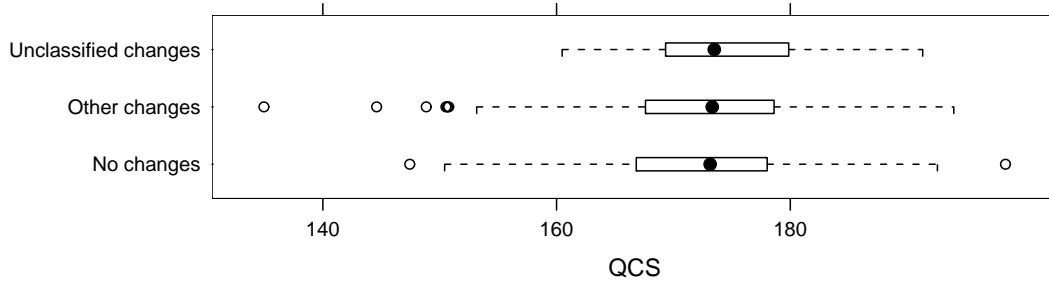
On average, the benefits of the changes included under the category of "other" or "unclassified changes" were much less beneficial than those for the other four responses in terms of the QCS–polyscore difference.

Schools where the cohort had a QCS Test mean higher than their polyscore tended to involve the QSA and external consultants in reviews of built-in preparation. However, the most significant improvements happened when senior staff and school administration were involved.
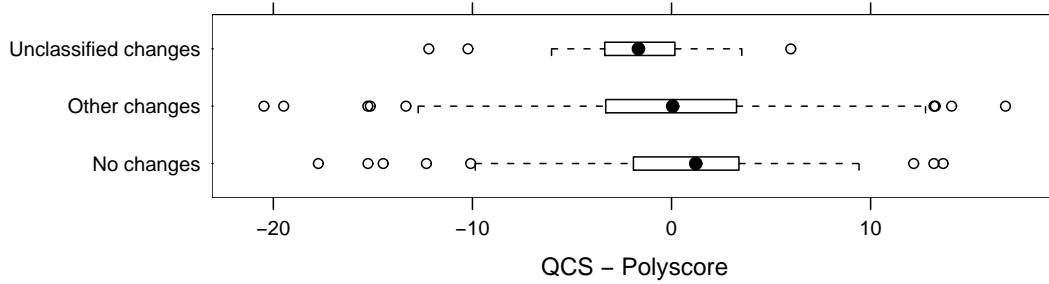
This is to be expected, because it is these people in the school who have the ability to drive change, and without their involvement most attempts to change classroom practice on a school-wide basis would be ineffective.

Only a small number of schools indicated that they involved consultants or the QSA in a review of built-in preparation.

Involvement of senior school staff

In schools where only senior staff were involved in the process, students achieved about the same as in those where other groups were involved in terms of QCS Test performance overall.

Overall, schools where senior staff were involved were more successful than those where other groups were involved, in terms of the QCS–polyscore difference.
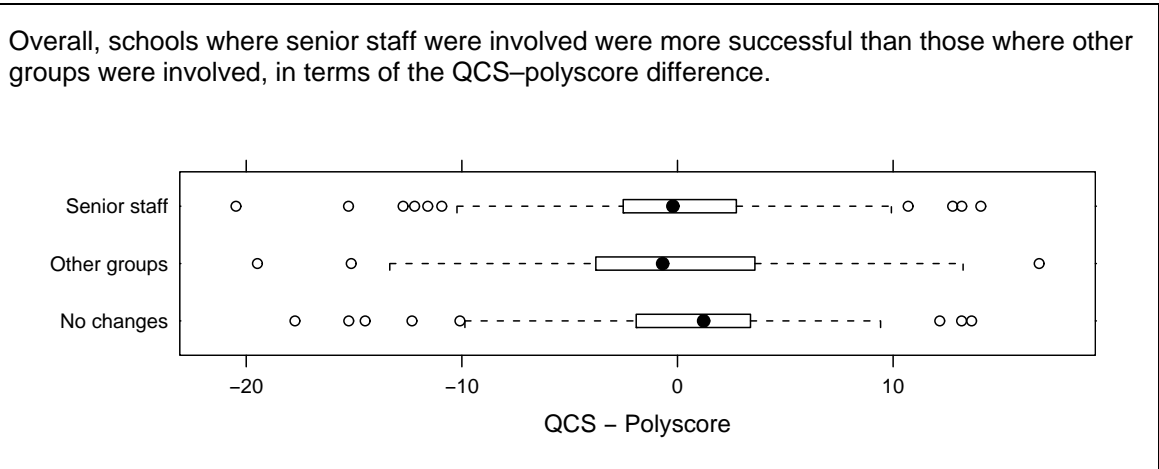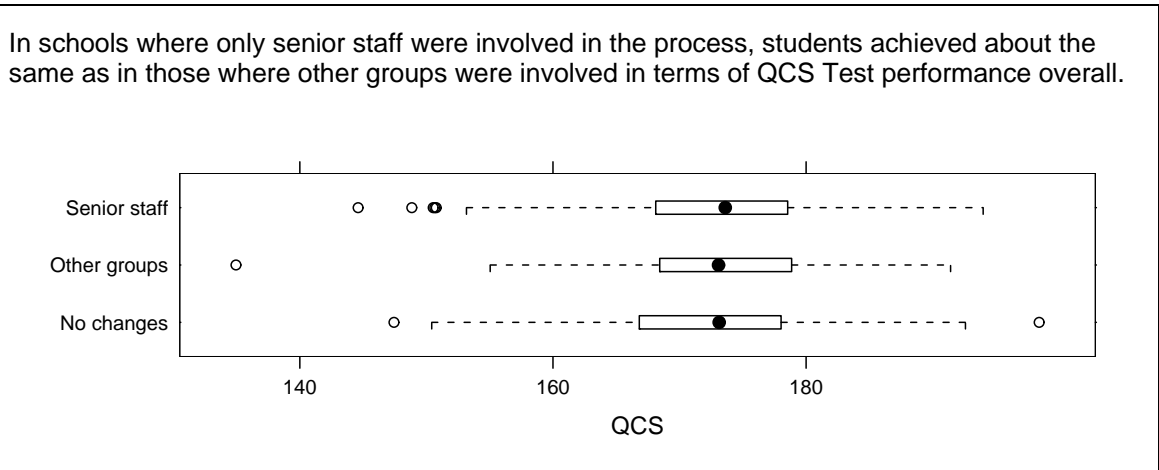
Involvement of school administration staff

Those schools where school administration staff were involved in the process achieved lower results than those where other groups were involved, in terms of QCS Test performance overall.
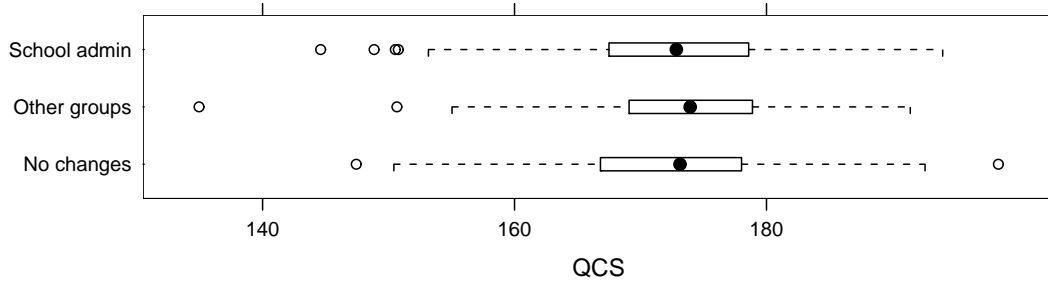
Overall, however, schools where school administration staff were involved were more successful than those where other groups were involved, in terms of the QCS–polyscore difference.
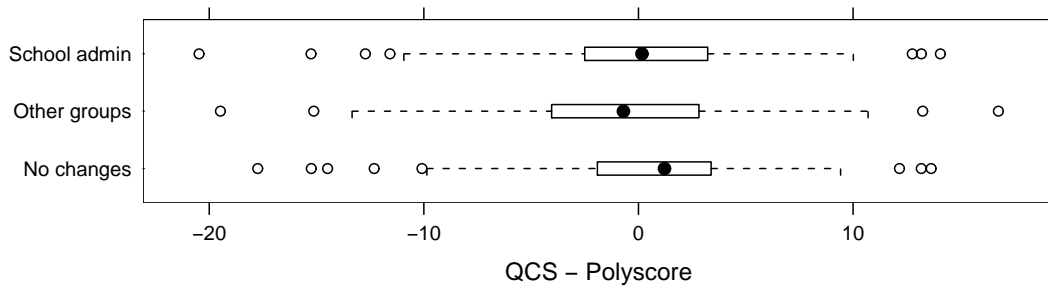
Involvement of all school staff

Schools where all staff were involved achieved a little more highly in terms of QCS Test performance overall than those who involved other groups. It should be noted that 184 of the 271 schools that had done a review of built-in preparation involved all staff, and so it is to be expected that this group is typical, as it includes most schools.
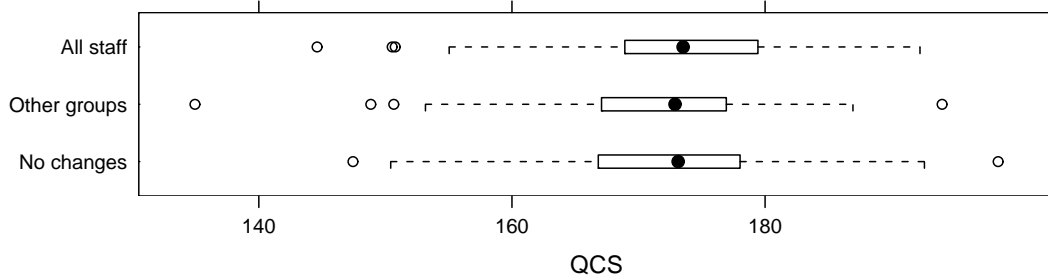
The outcomes in terms of the QCS–polyscore difference for schools where all staff were involved were not significantly different from schools where other groups were involved.
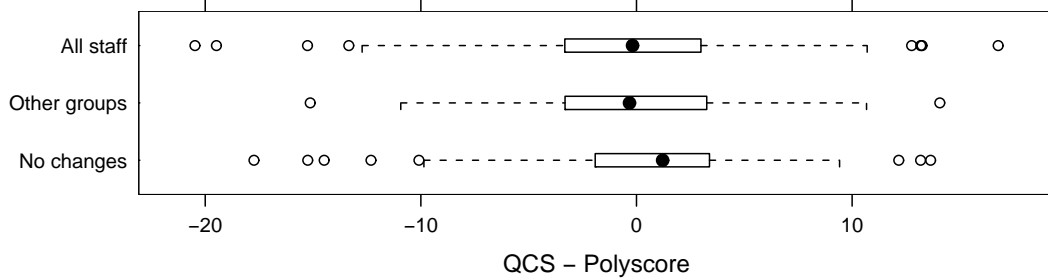
Involvement of QSA staff

Schools who asked QSA staff to be involved in reviews of built-in preparation achieved overall more highly in terms of QCS Test performance (although only 36 schools indicated they had involved the QSA).
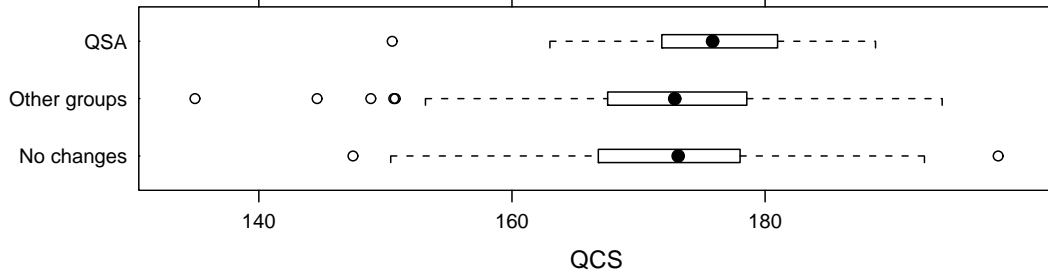
The outcomes for this group were not significantly different from those of other schools in terms of the QCS–polyscore difference.
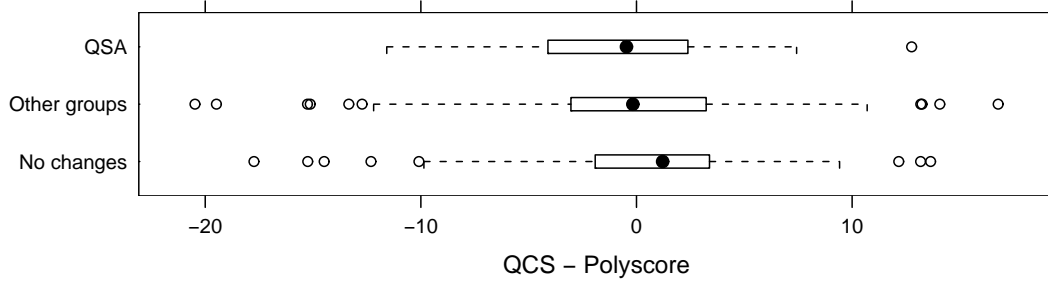
Involvement of external consultants

Overall, schools that used external consultants to conduct whole-school reviews achieved more highly in terms of QCS Test performance overall.
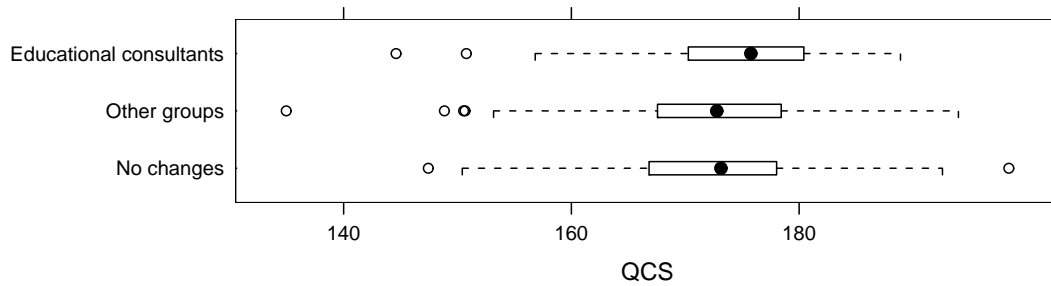
The outcomes for these schools were not significantly different from those schools that did not use external consultants, in terms of the QCS–polyscore difference. This perhaps means that highly achieving schools that are well-resourced can afford to employ education consultants. However, the benefit was not always evident.
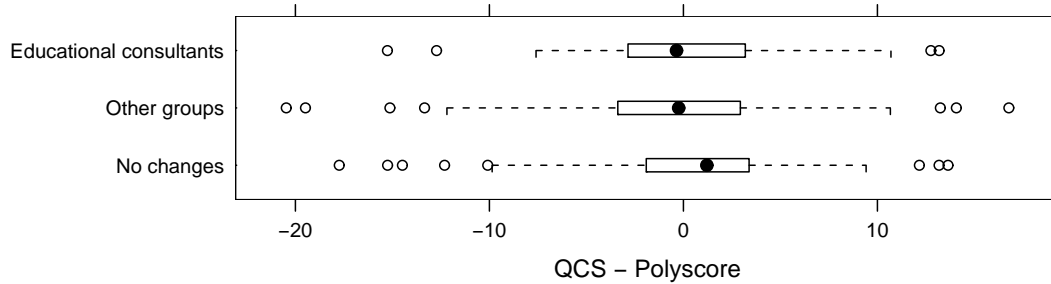
Other types of involvement

Only a small number of schools indicated that they involved people other than specific groups of school staff, QSA staff or education consultants ("Not classified").
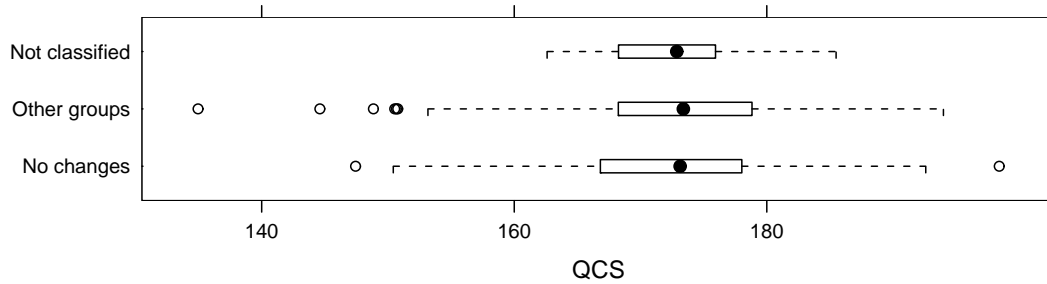
The outcomes for these schools were slightly better in terms of the QCS–polyscore difference. It is hard to generalise from this because we do not know the exact nature of the groups that were involved.
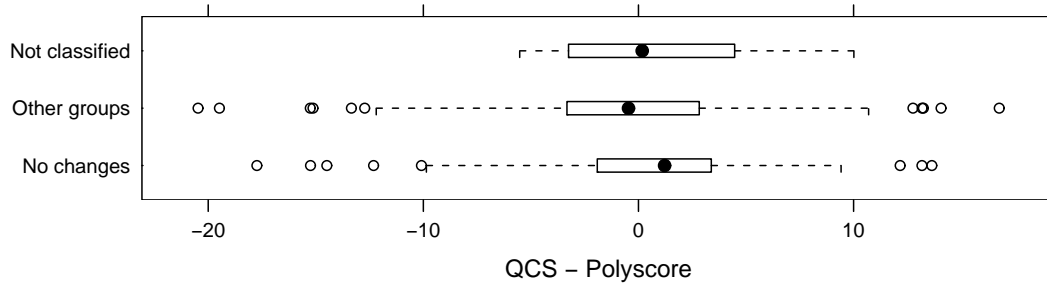
Schools where QCS Test performance was higher were also those that described the review of built-in preparation they had undertaken as having had a very positive effect on their students' performance on the QCS Test.

Question 3 was "How positive an effect do you believe [the preparation] has had on student performance on the QCS Test?" No schools responded that QCS Test preparation had a negative effect. This left three groups — very positive, some positive, or no effect.

This graph shows that where schools thought their review of built-in preparation had a very positive effect, they did indeed have a much higher QCS Test performance. Those who thought there were some positive effects or no effect achieved lower in terms of QCS Test performance overall.
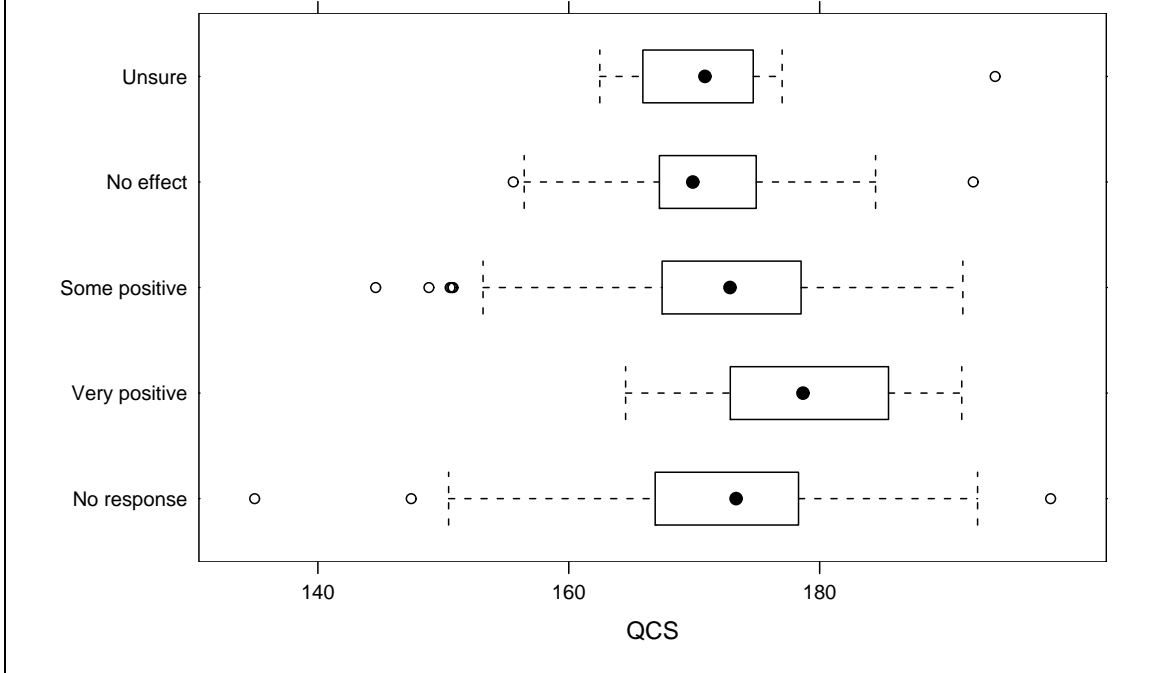
This graph shows whether the QCS Test performance was also higher than expected when compared with polyscore. Although the difference is much less marked, the schools that thought their review of built-in preparation was very positive also had the highest positive QCS–polyscore difference.
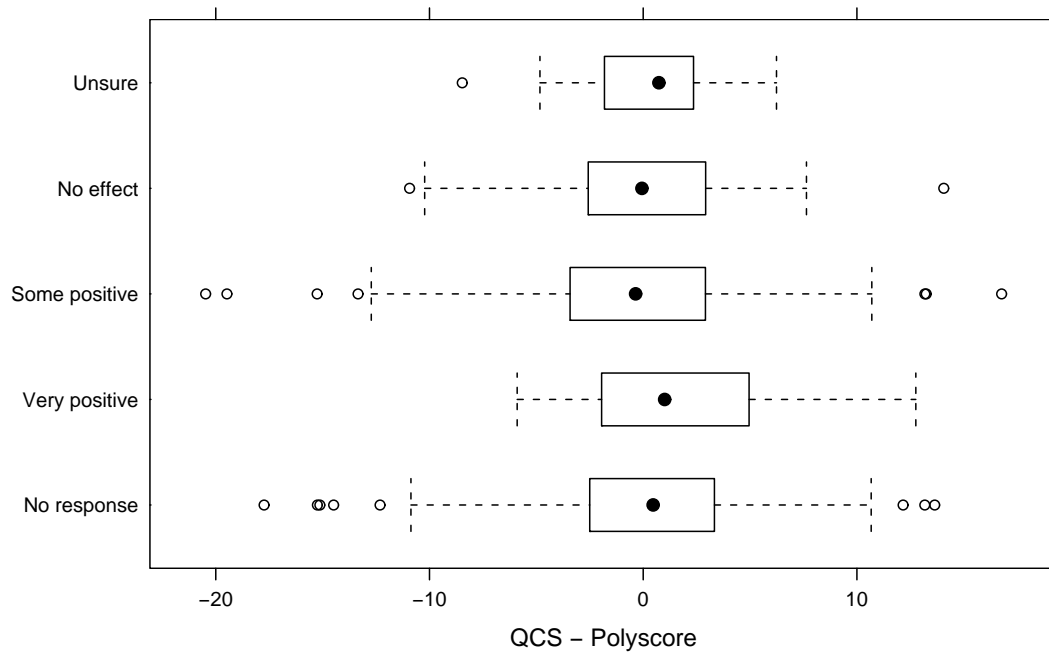
Conclusions about built-in preparation from Section A

The analysis shows that improvement in QCS Test performance is unlikely to be independent of improved within-school performance. A whole-school review that has had positive effects on QCS Test performance appears to correspond strongly with overall higher achievement for the group. This is exactly what should be expected from built-in preparation.

Section B: Bolt-on preparation

This section asked schools a range of questions about their bolt-on preparation including how much preparation they did, the kinds of programs used and the marking and feedback students received from full-scale practices.

Question 4 asked about the number of hours schools spend on explicit preparation for the QCS Test. The responses are of particular interest because we have learned that some schools believe that a particular number of hours of preparation will yield good results. Again, the analysis is considered in terms of overall performance on the QCS Test and then QCS–polyscore difference.

Time spent in preparation

The data indicate that there is no correlation between the number of hours spent and the resultant QCS Test school group mean.

The data tell us that schools spend an average of 40 hours in QCS Test preparation over a two-year period. Of the schools that responded to the survey, 149 (45 per cent) do not do any preparation in Year 11, 184 schools (55 per cent) do, but 34 schools (10 per cent) do three hours or less and this is usually just an introductory seminar. Each point represents a school. The data show there is no relationship between the number of hours spent in QCS Test preparation, either in Year 11 or 12, and performance on the QCS Test.
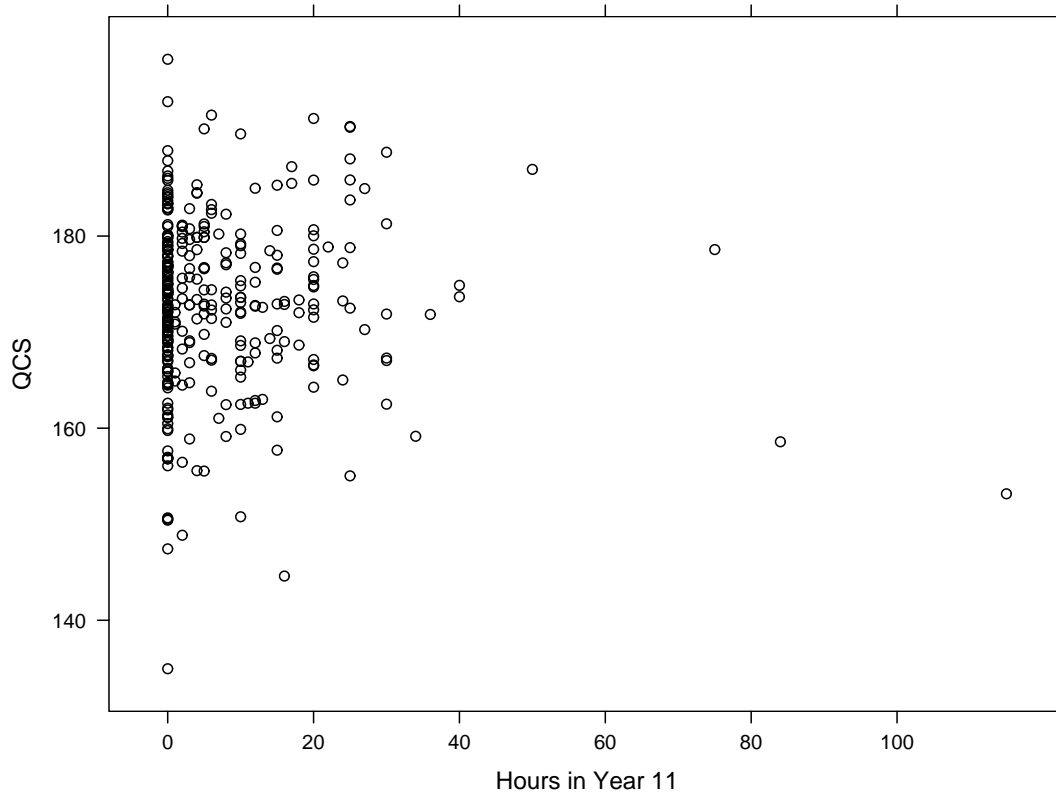
Hours in Year 11 versus QCS Test results

Hours in Year 12 versus QCS Test results
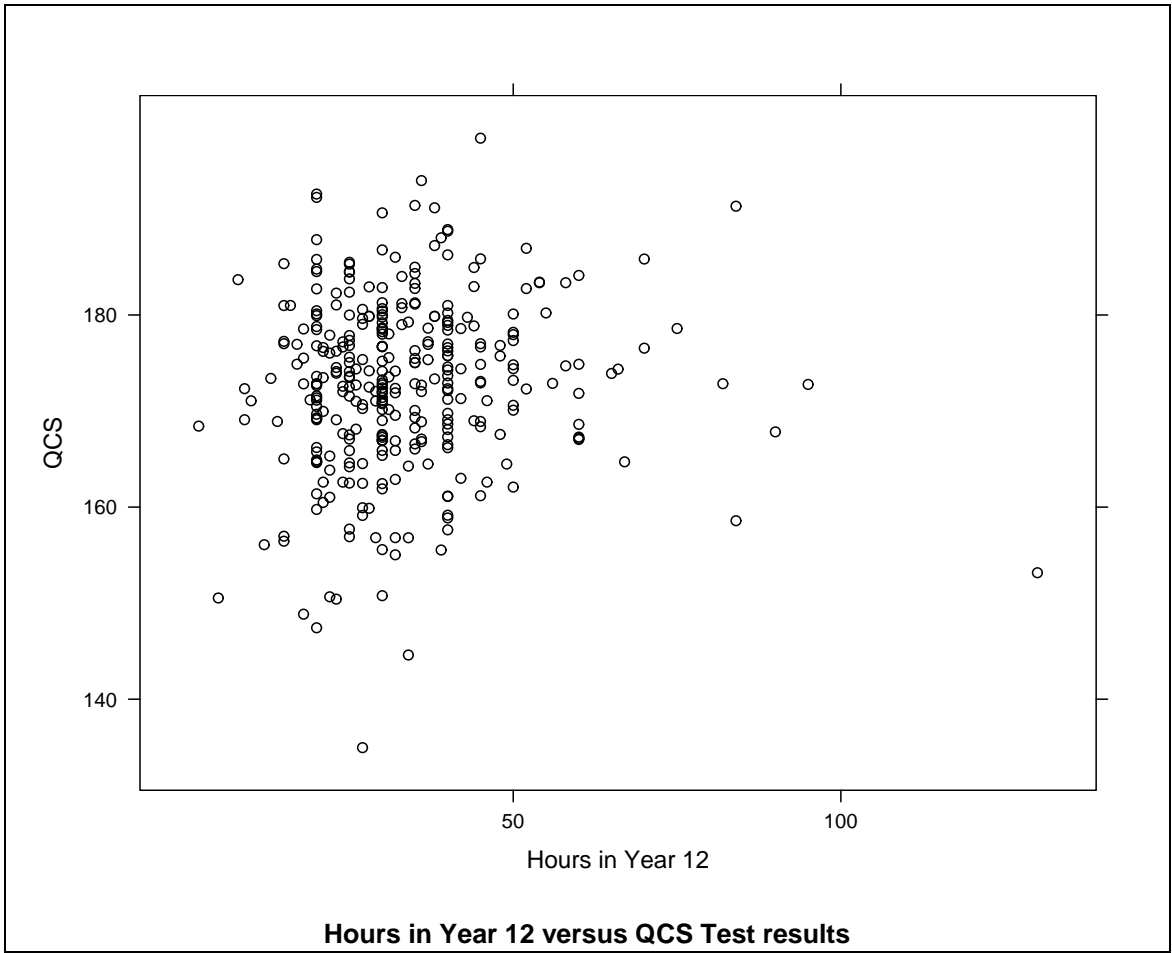
The relationship between average QCS Test results and the total number of hours spent in Years 11 and 12 is shown in the following graph.

The graph shows there is no relationship between the total number of hours spent in preparation and average QCS Test results.
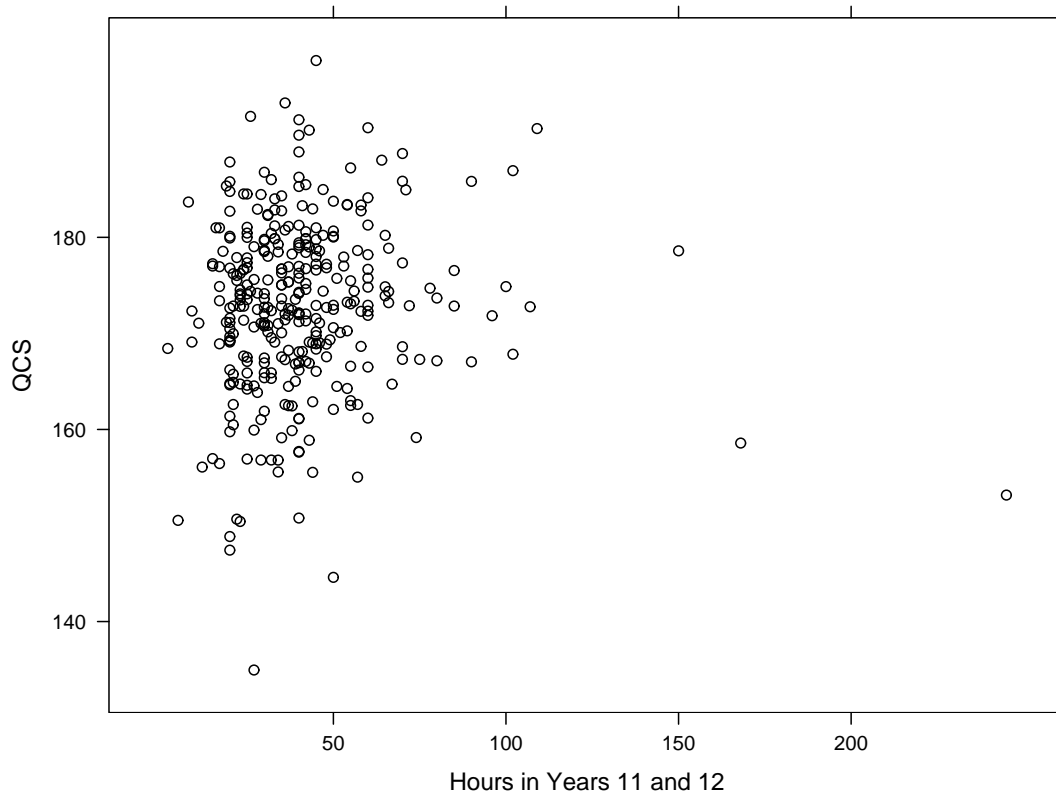
Hours in total versus QCS Test results

When the total number of hours is broken down over Years 11 and 12, the data show that there is no relationship between the number of hours spent in preparation and the match between polyscore and QCS Test performance in Year 11 or Year 12. (Correlation for Year 12 preparation is -0.001.)

QCS–polyscore versus hours in Year 11
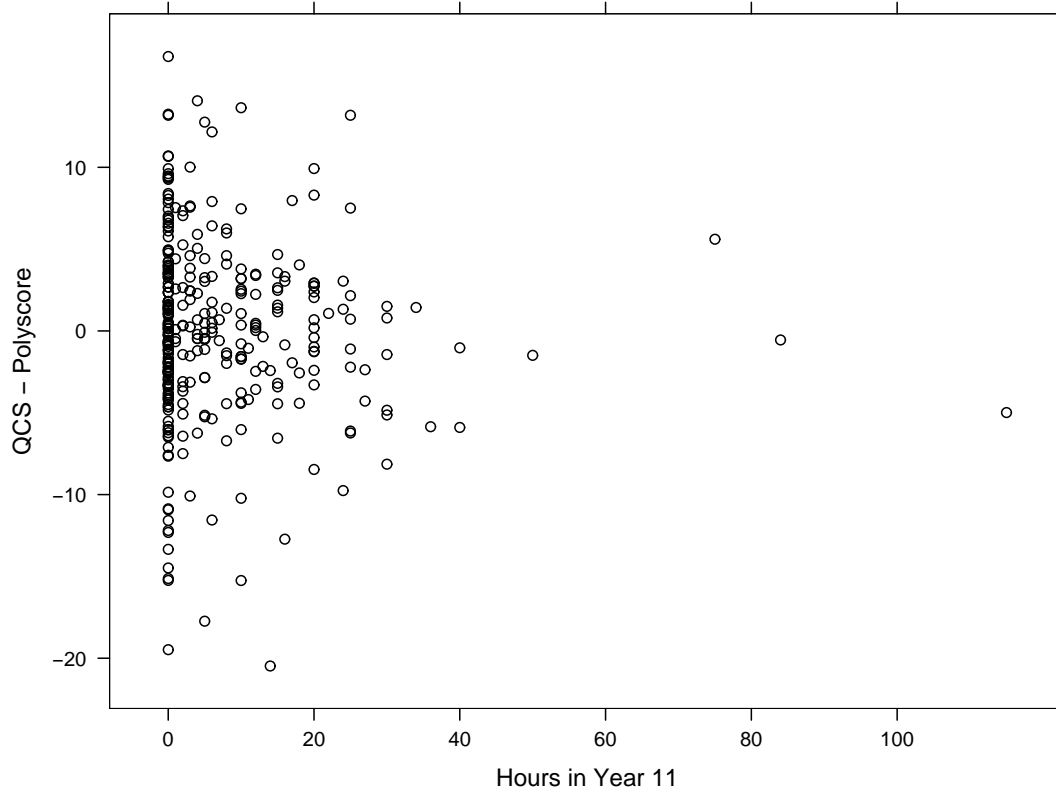
QCS–polyscore versus hours in Year 12
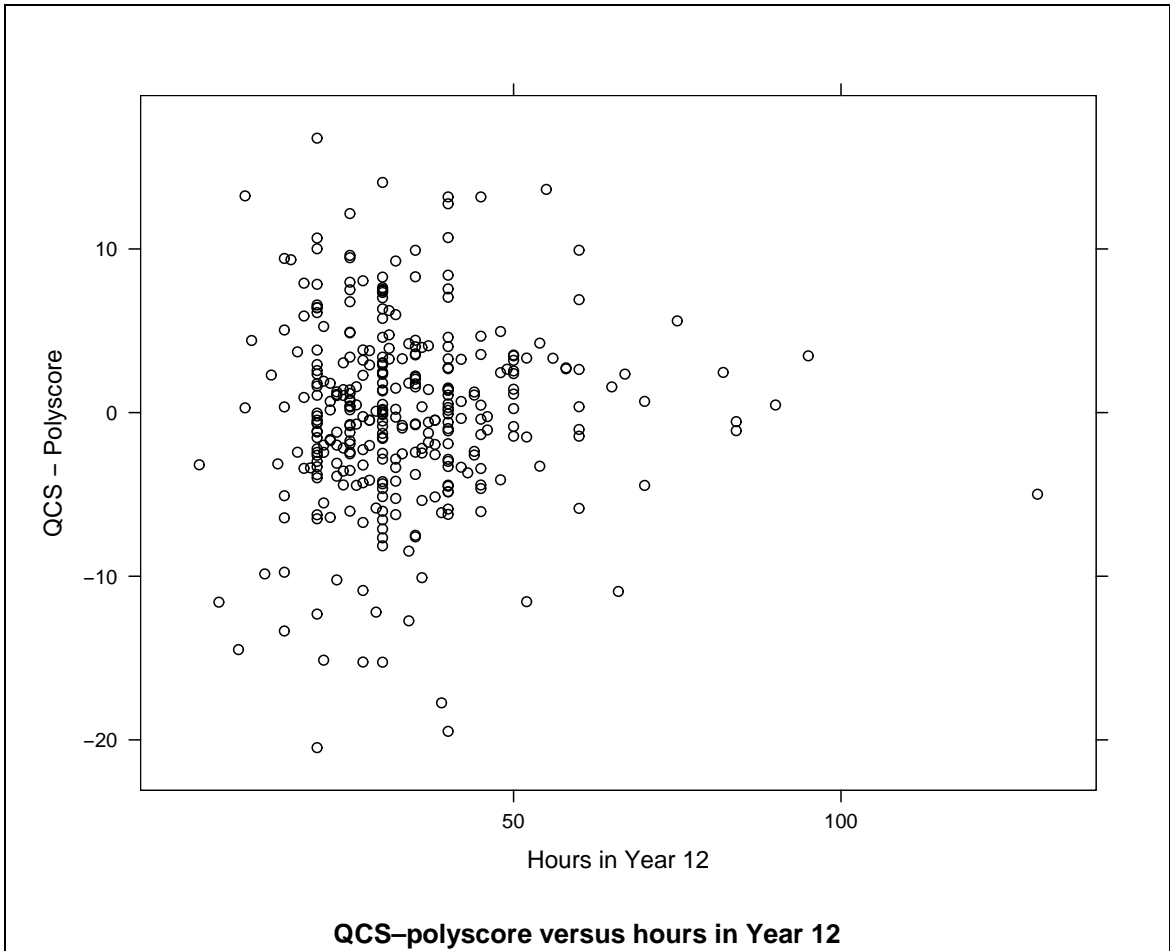
A related question, which may be more important, is whether additional QCS Test preparation allowed students to perform better than their within-school achievements suggested. This can be gauged by comparing student performance on a measure based on levels of achievement (known as polyscore) with the corresponding QCS Test results.

The following graph shows the relationship between hours spent on QCS Test preparation, and how much higher the average QCS Test performance was when compared with the average polyscore for the same group. Each point represents a school. On the graph, schools above zero have achieved more highly than expected on the QCS Test.
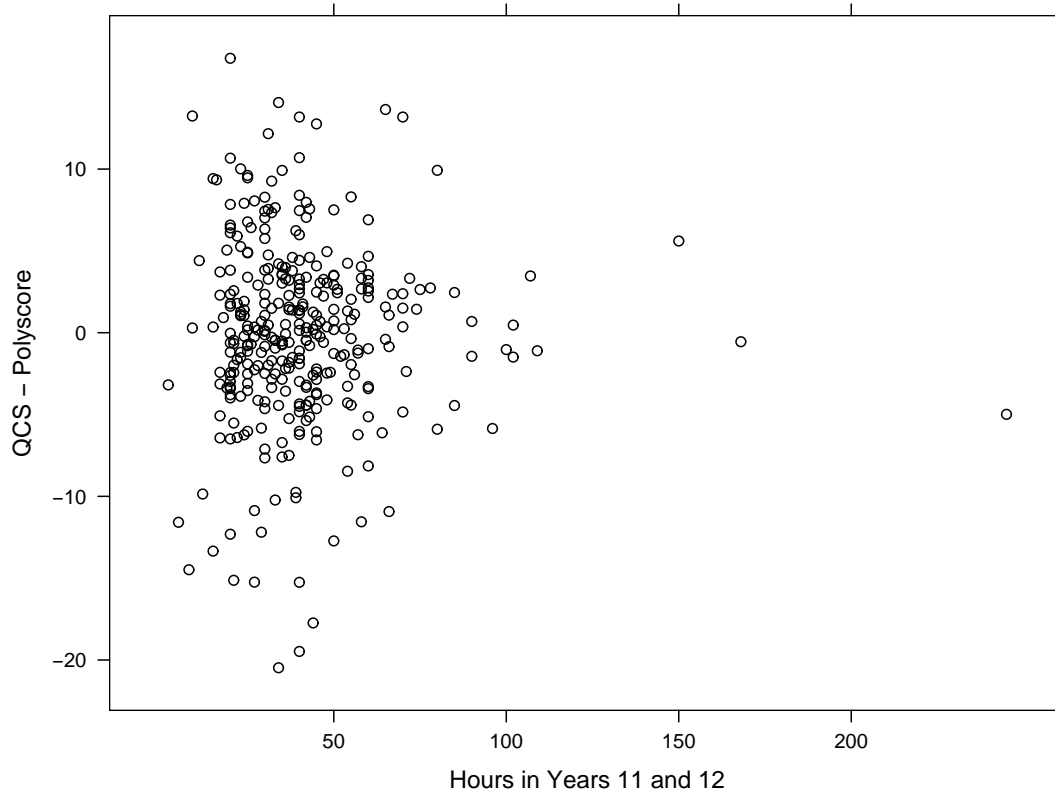
QCS–polyscore versus total hours in Year 11 and 12

Again, it is clear that there is no direct relationship. There were about as many schools providing fewer than fifty hours of preparation who under-performed on the QCS Test as those who over-performed. At one school where it was indicated that almost 250 hours were spent doing bolt-on preparation, the students did not appear to have benefited and they under-performed on the test. These results are probably as expected. Good preparation and good results are more likely to be due to good teaching and learning in the classroom, rather than the number of hours spent in QCS Test preparation.

There was no significant difference, on average, between schools that prepared students in both Years 11 and 12 and those that did preparation in Year 12 only.

Question 5 asked about the kinds of programs schools had for preparing students. There was a great deal of overlap in responses. The following two graphs show the results for schools that ticked any box in Question 5. Schools that ticked both "Years 11 and 12" and the "Year 12" box were just put in the "Years 11 and 12" category.

There are no significant differences among the groups. On average, the schools that prepared students in both Years 11 and 12 performed better on the QCS Test, but the most highly achieving schools included those who did preparation in Year 12 only. The differences were very slight.
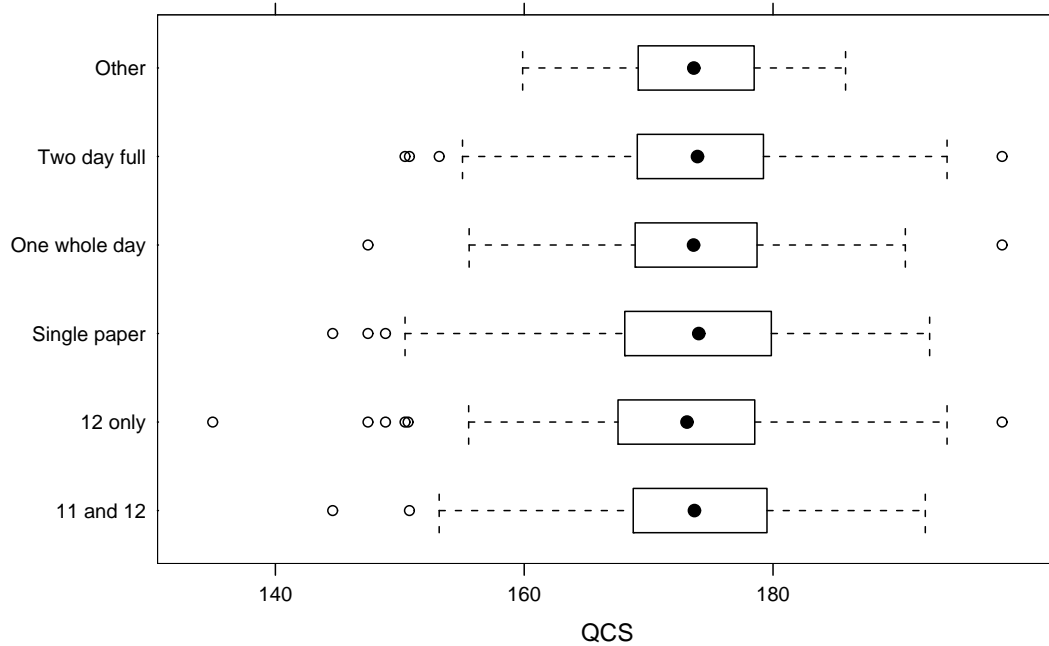
Again, there are no significant differences when the match between polyscore and QCS Test performance is plotted, but those who did preparation in Year 12 seem to only slightly outperform those who did preparation in both years.
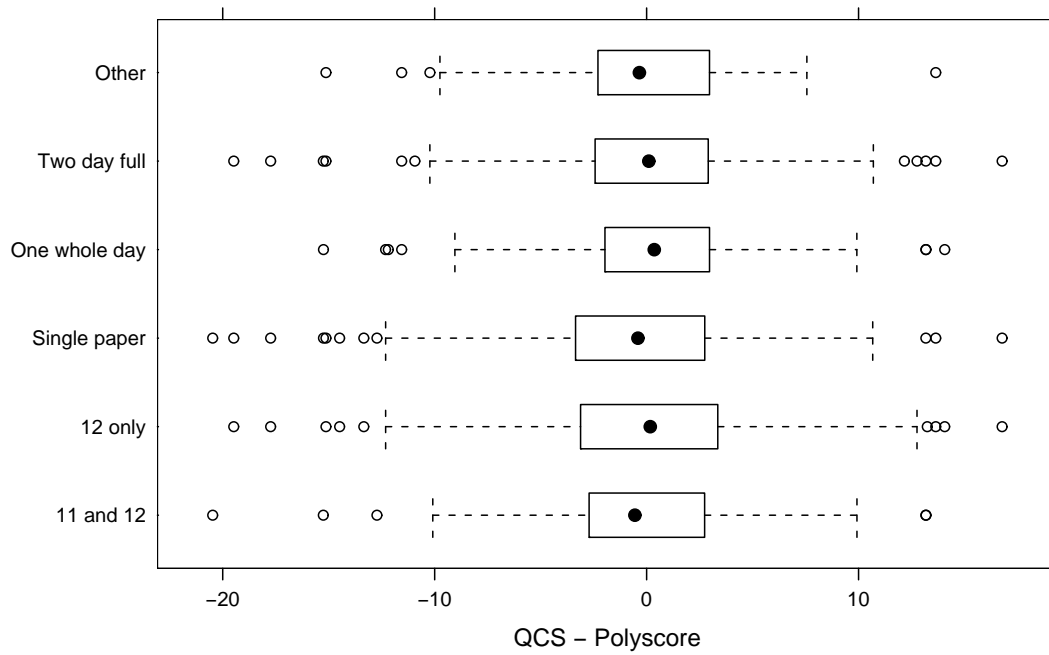
Students perform better on the test when QCS Test preparation is compulsory for all students.

Question 6 asked whether sessions were compulsory, and some significant differences emerged in the ways schools responded. A number of schools offered responses outside the three options on the survey, and these schools showed significant differences from schools that responded only to the options. This must be interpreted with some caution, because there may have been a number of schools that also would have said the same if the other options had been on the form. There may also be something different about the type of school that would include their own option compared with other schools in the first place. For example, the schools that offered their own options may have stronger feelings about QCS Test preparation and so put more time and emphasis on preparation — this might account for differences rather than the type of preparation done.

In terms of overall performance, the highest-performing group on the QCS Test were schools that made QCS Test preparation compulsory for all students, followed by those who only made the sessions compulsory initially (that is, in Year 11 or early Year 12 and not compulsory afterwards). There is a very clear difference between the two large groups of respondents — "Yes, for all students" (97 responses) set against "Yes, OP-eligible students" (197 responses). It could be considered though, that this is a latent variable effect.[1] For example, it could be that schools in remote or lower socioeconomic areas are less likely to make it compulsory for all students.

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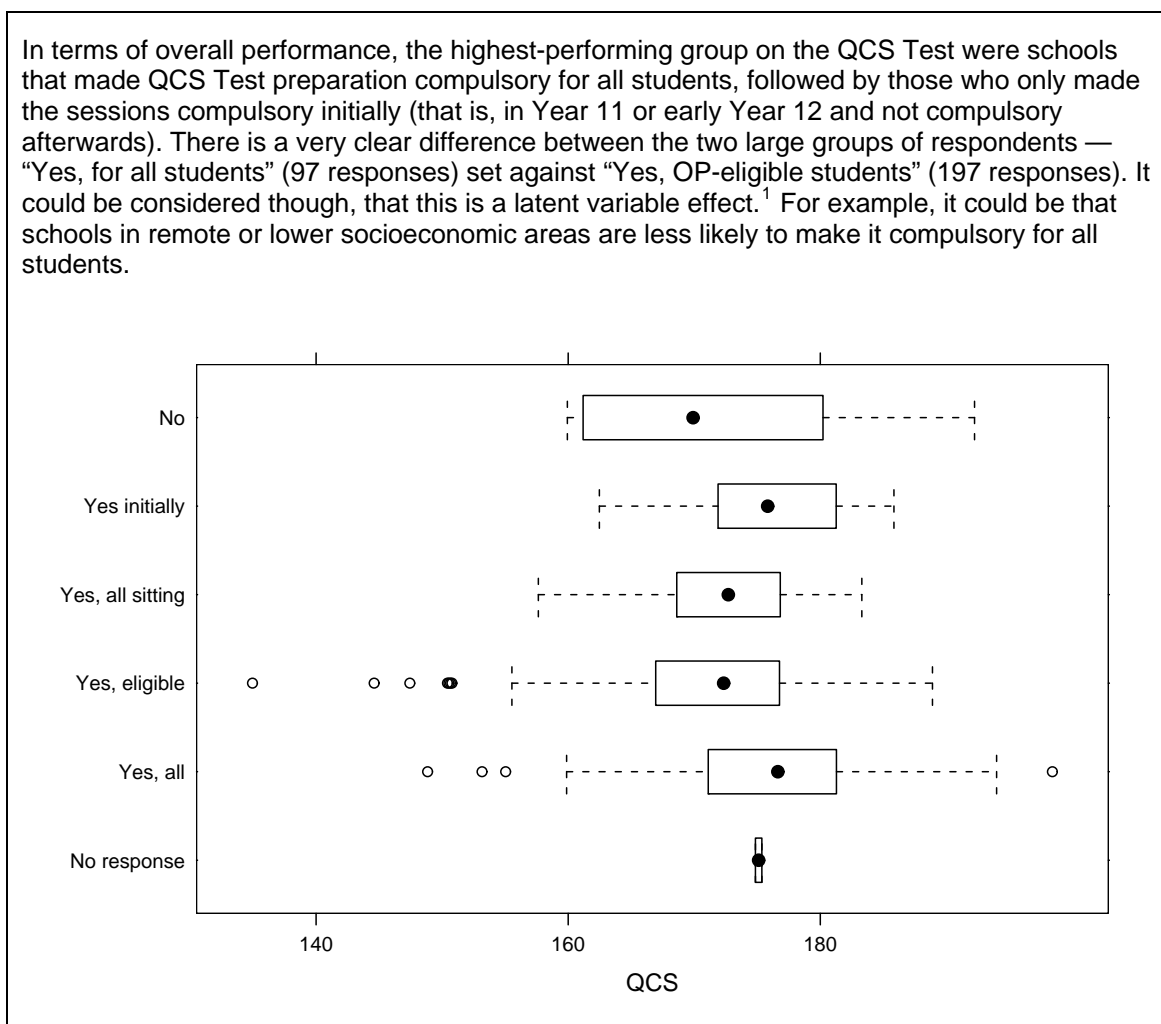
[1] In this context we might infer that a latent variable is school location; that is, that a school located in a remote area may find it difficult to access resources and professional development that is more readily available in other places. The survey did not ask about school location, but it may have an impact.

Of the schools that performed better than expected, the highest-achieving were those that made sessions compulsory only initially. These were followed by the group who made it compulsory for all students who were sitting the test. These were the two groups of schools who gave responses not covered by the options (22 responded "Yes, for all students sitting the test" and 17 responded "Yes initially"). It could be that these two small groups are not a representative sample of all schools that would have given this response if it had been offered. Schools that made it compulsory for OP-eligible students only were a slightly better performing group, and this supports the "latent variable" explanation.
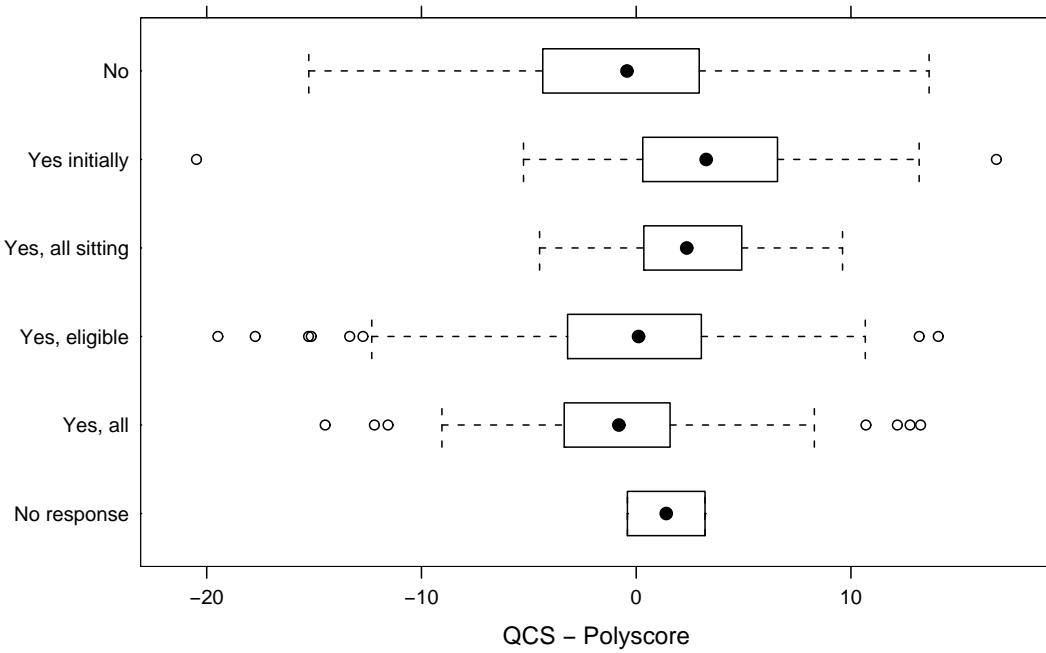
In schools that hold QCS Test preparation sessions outside school time there was no significant improvement in performance.

Almost all (308) schools held sessions in school time (Question 7). There were 29 schools that held some sessions outside school time, and only two schools that held all sessions out of school time. There was some difference between the group of schools that responded to the options and the schools that added their own.
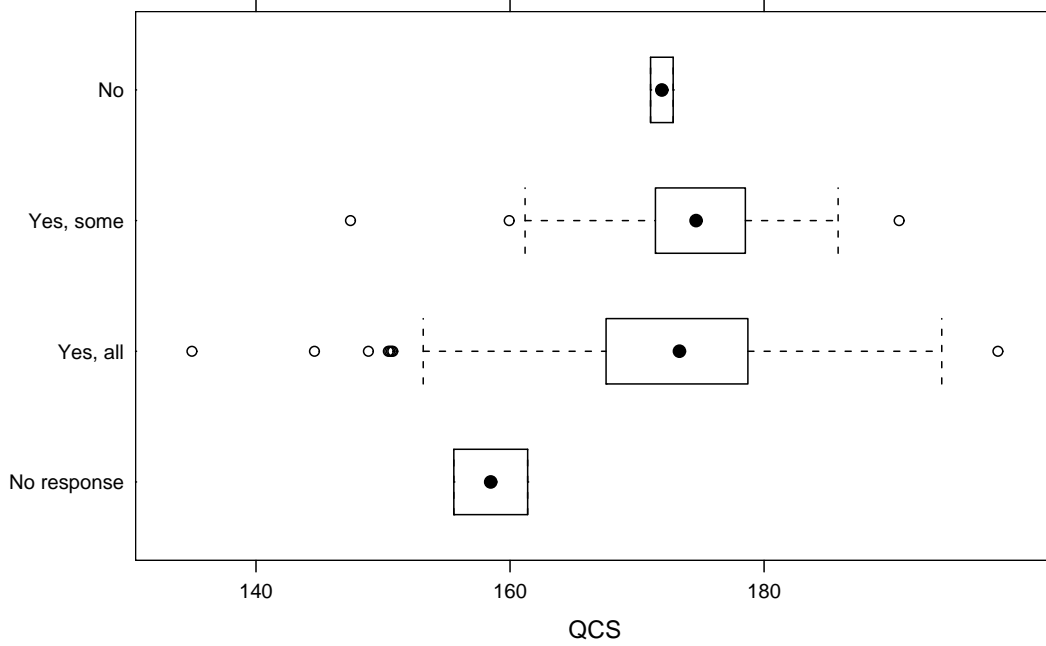
Higher-achieving schools in terms of QCS Test performance held some sessions out of school time, but on average these schools did not perform as well as expected in terms of QCS Test–polyscore difference, given the students' within-school achievements.
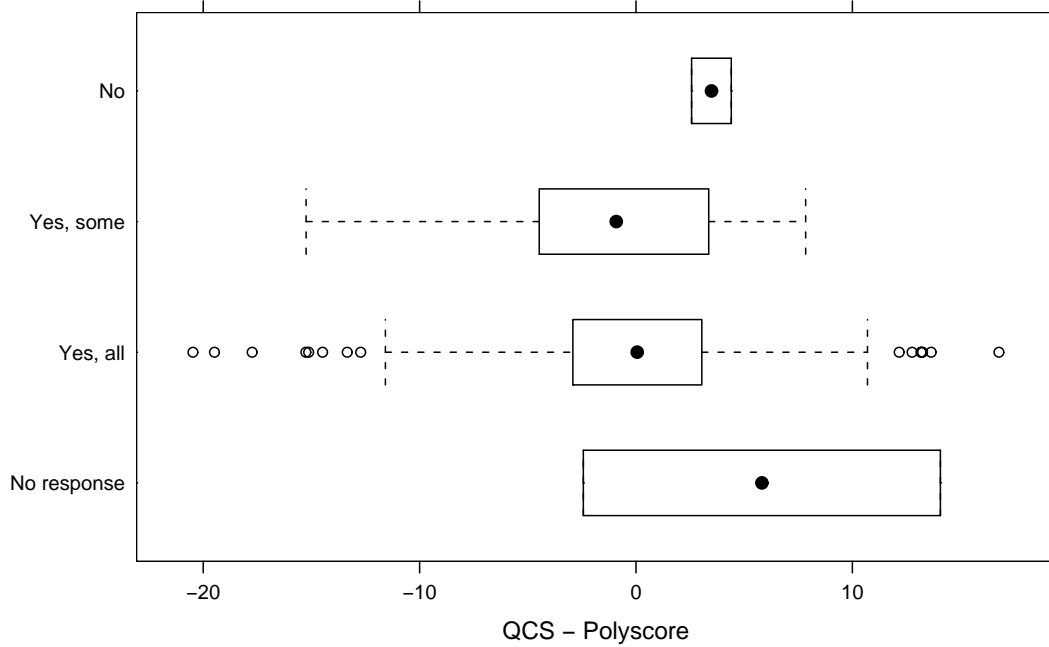
There does not appear to be any gain in undertaking a large number of full-scale practices.

Question 8 asked schools how many full-scale practices they did.

Overall, there was a slight positive relationship between the number of full-scale practices and QCS Test results. The group who ticked "other" were the highest-achieving group on the QCS Test. Most of this group either had a focused approach to the full-scale practices — for example, extra writing tasks — or split the full-scale practices over more than two days. Those who indicated N/A did not do any full-scale practices.
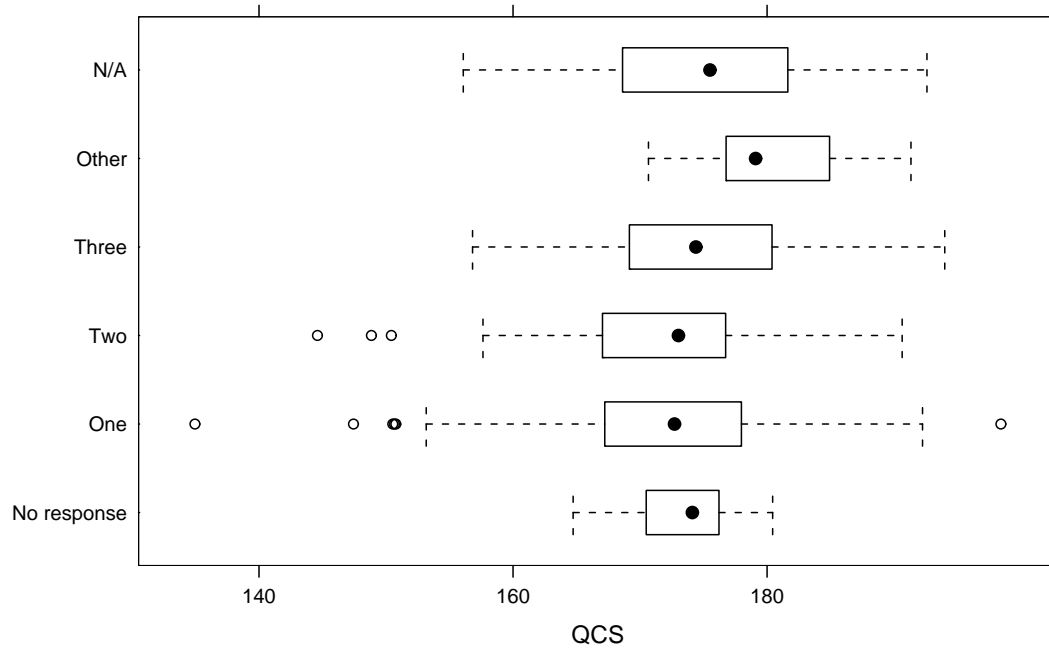
When looking at better than expected performance on the QCS Test compared with within-school achievements, the relationship was slightly negative — that is, the more full-scale practices, the less well the students did on the real test, when their performance was compared with what was expected. This result again supports the possibility that the positive relationship between the QCS Test and the number of practices is probably a result of a latent variable, such as where schools are located. The benefit of having many practices is not proved here.
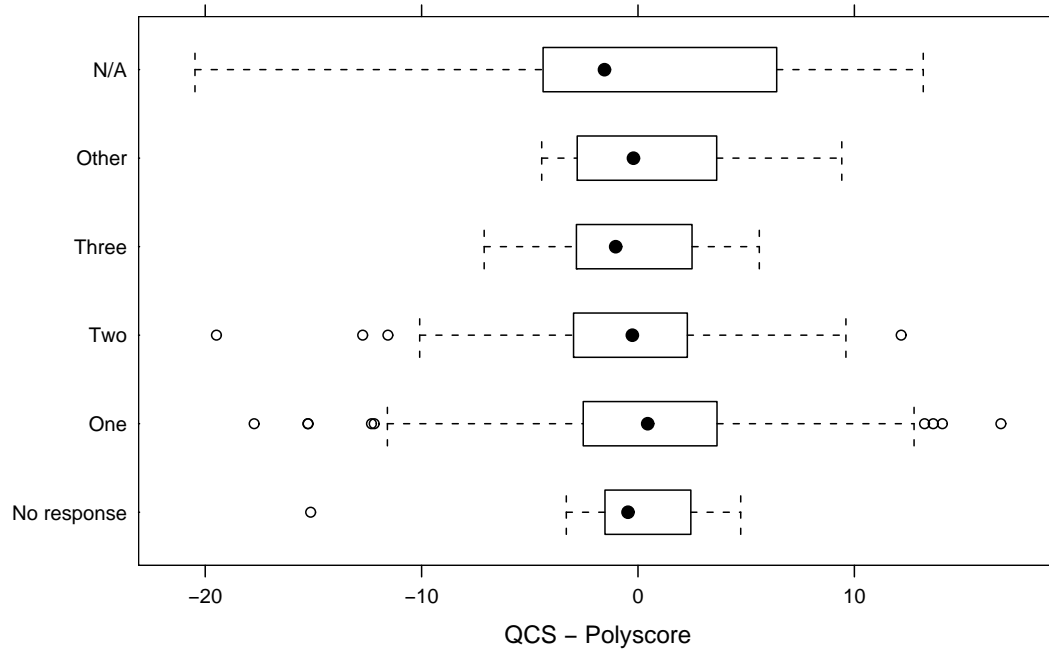
On average, schools that employed external markers to mark practice tests did slightly less well than schools that used their own teachers to mark.

The answers to Question 9 (Who marks the practices?) were a little ambiguous. Many schools ticked both "teachers at the school" and "QCS-certified markers", which could mean that the teachers are qualified markers, but some of the respondents may have interpreted "qualified markers" as being external people rather than their own staff. All three categories (including "other") have been analysed.

There is little difference in the performance of the different groups. Only eight schools ticked "N/A", but this probably implies that they either do not have or do not mark the practice tests.
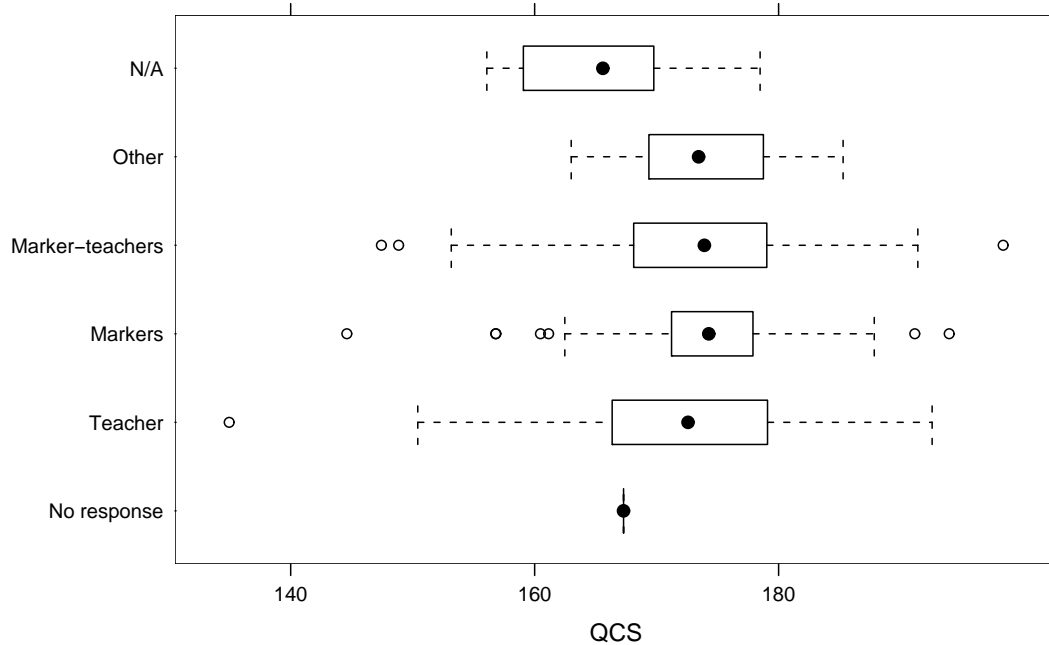
This graph reveals few differences, although on average schools that used external markers did a little more poorly in terms of the comparison between their students' QCS Test performance and their within-school achievements.

QCS – Polyscore
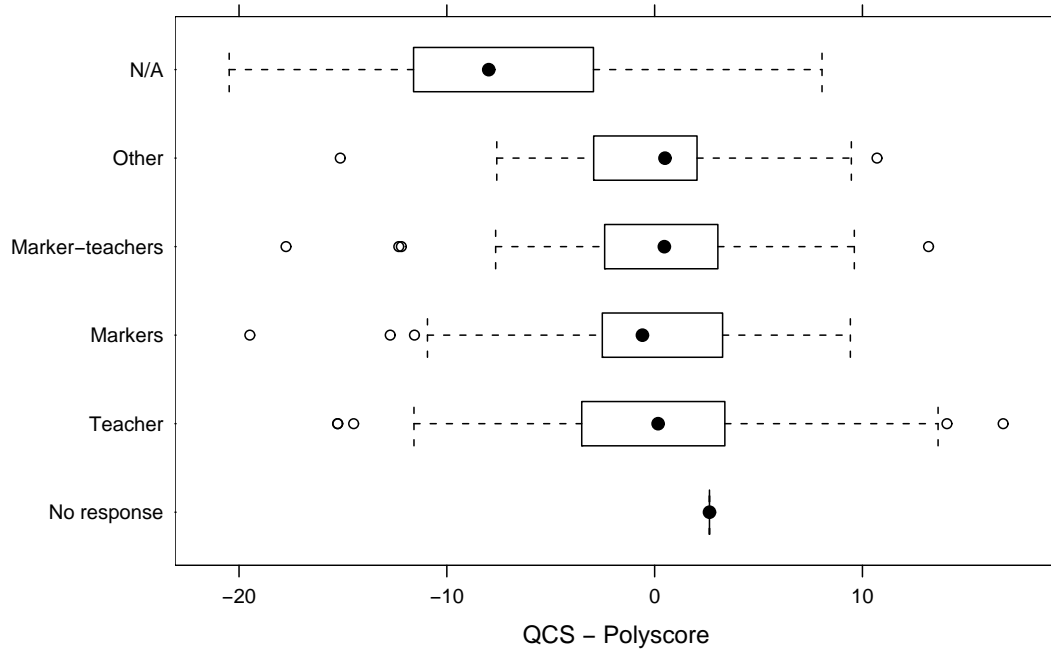
In schools that provided more than one kind of feedback on the practice tests, students tended to do better on the QCS Test.

In response to Question 10 (What kind of feedback?), most schools ticked most boxes indicating that they almost always gave some sort of feedback and often gave more than one type. It appears that it is not the type of feedback that makes a difference in performance of the groups, but rather that more than one type of feedback is given to students.

There was little difference between the groups in terms of the type of feedback provided and their performance on the QCS Test, but this reflects that most schools give more than one type of feedback, so most schools are in each category. Only 12 schools indicated that they gave a grade back to the students with no other type of feedback. Those who indicated "other", (12 schools) offered more information about the format of the feedback (e.g. full and explicit reports, individual consultation).
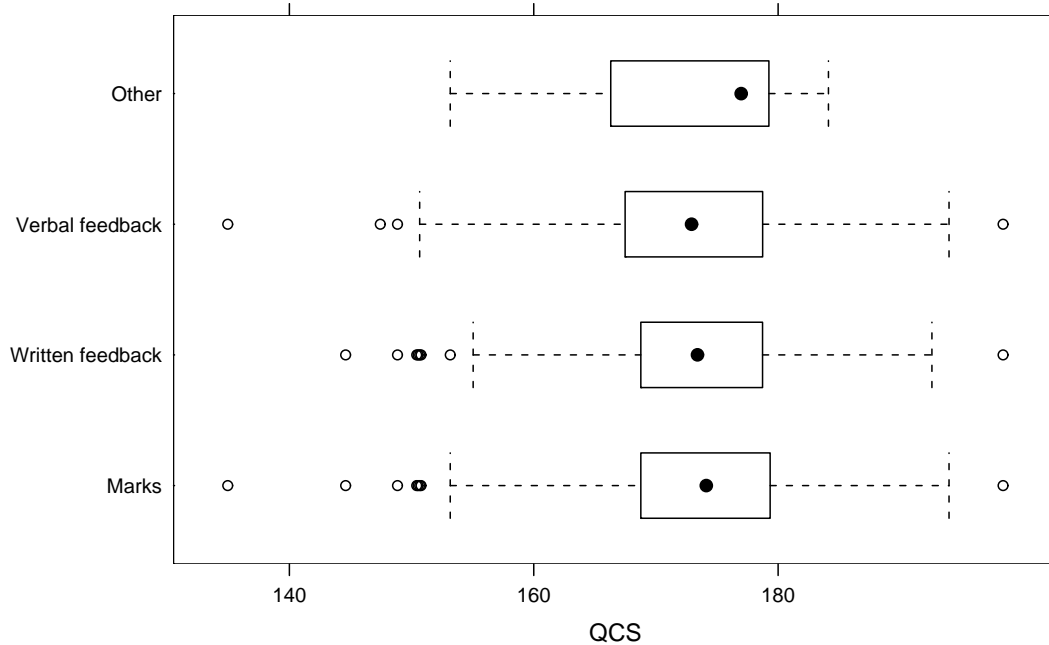
Similarly, there are not many distinctions that can be made on the type of feedback provided in relation to the QCS–polyscore difference. It is perhaps then more interesting to look at combinations of feedback.

QCS – Polyscore
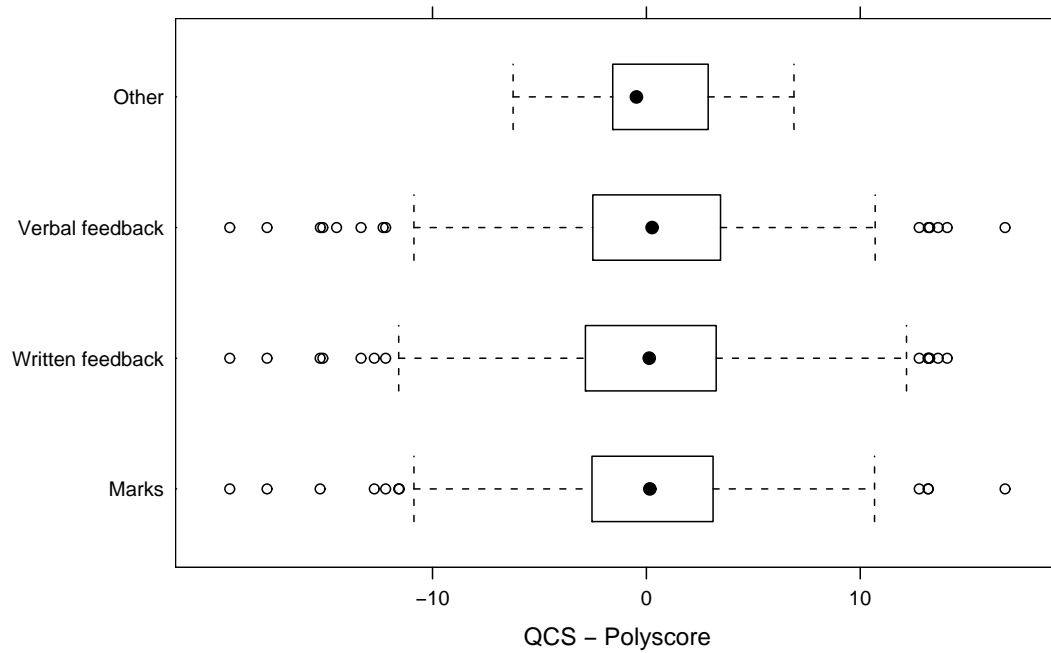
The poorest-achieving group on the QCS Test were schools who gave only verbal feedback, but only nine schools were in this category. Some of the highest-achieving schools gave only grades, but the highest-achieving groups overall gave all three types of feedback, or grades as well as verbal and written feedback.
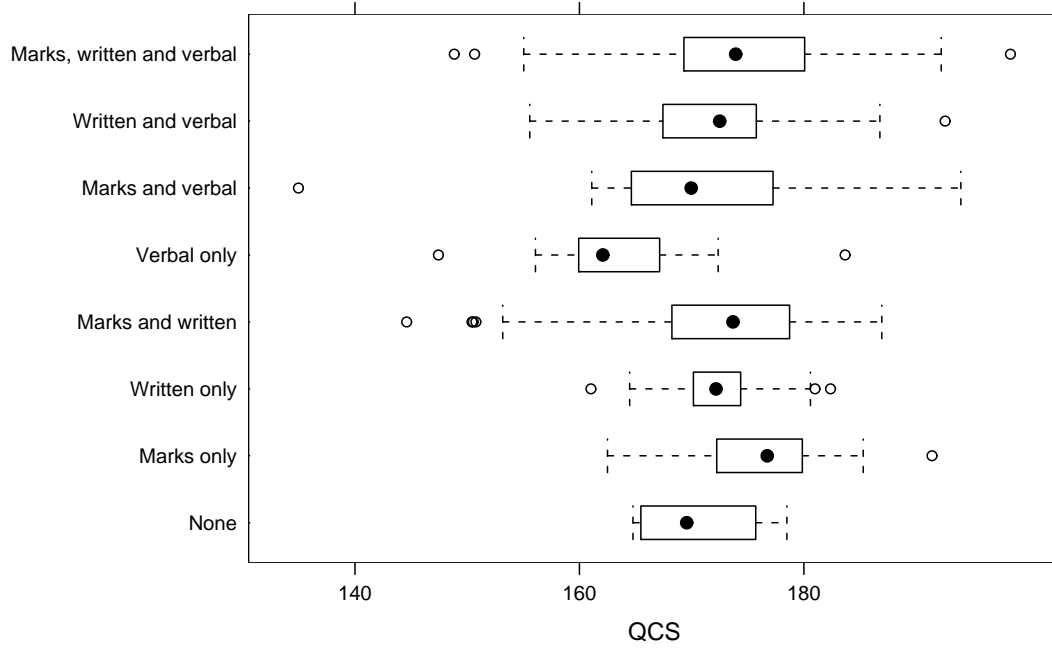
In terms of QCS–polyscore, differences were smaller, with the group that provided only verbal feedback being lower achieving again. Overall, however, the three groups that provided some sort of verbal feedback were higher achieving than the three groups that did not.
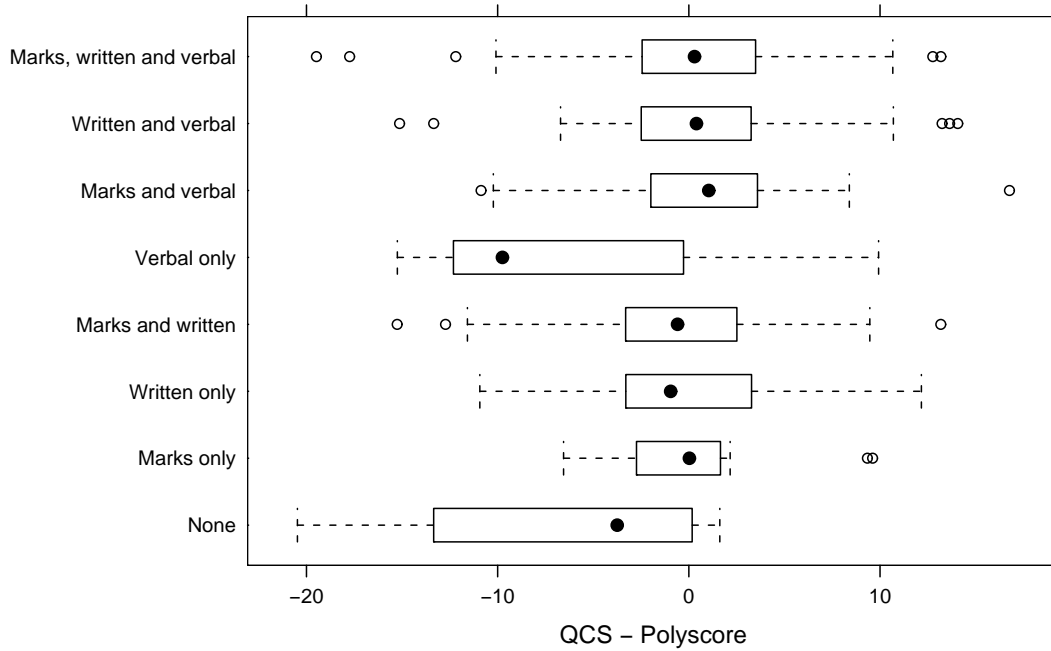
In Question 11, schools were asked how positive an effect they thought practices and feedback to students had been. The responses to this question showed that 167 schools thought the feedback had a very positive effect, 158 thought it had a positive effect and only two thought it had some negative effect. There were 14 schools that did not respond to this question.

The answers to Question 12 showed that 219 schools had changed their preparation in recent years and 116 had not.

There was no significant difference in the overall performance of the two groups on the QCS Test. However, the data do not show what the QCS Test performance would have been if these schools had not made changes to their preparation. Average QCS Test performance for these schools could have been worse if changes had not been made.
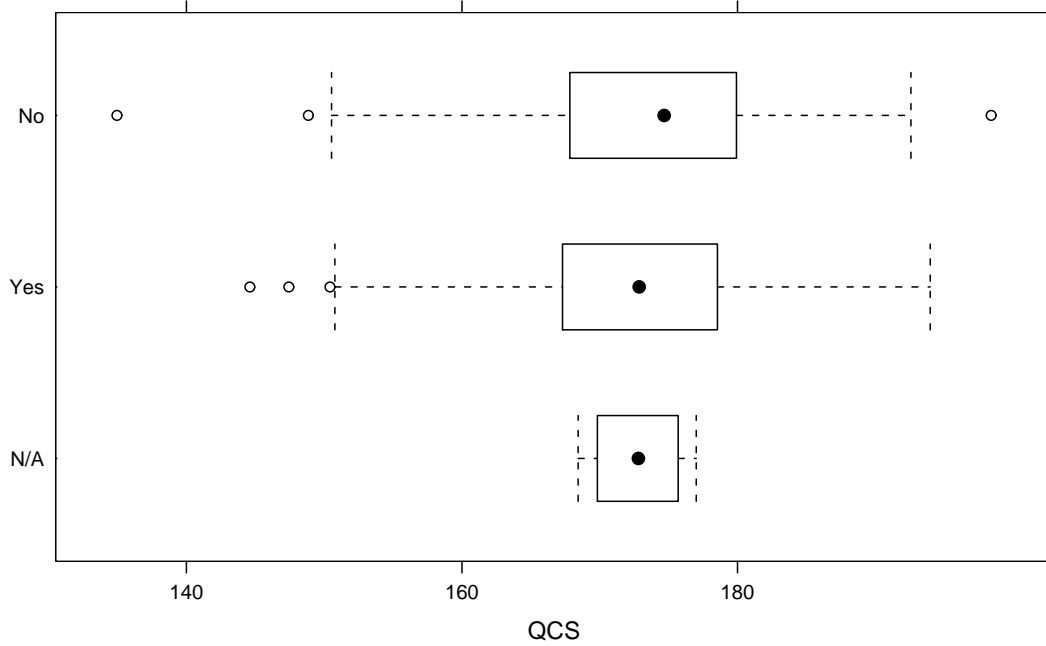
Schools where no changes were made to QCS Test preparation performed a little higher when compared with expectations than those that had. Perhaps, if no problem existed, changes were not needed. However, having made changes, schools will not necessarily see an immediate impact in that year or there might not be the desired impact, and so these schools are still more likely to have some problems.
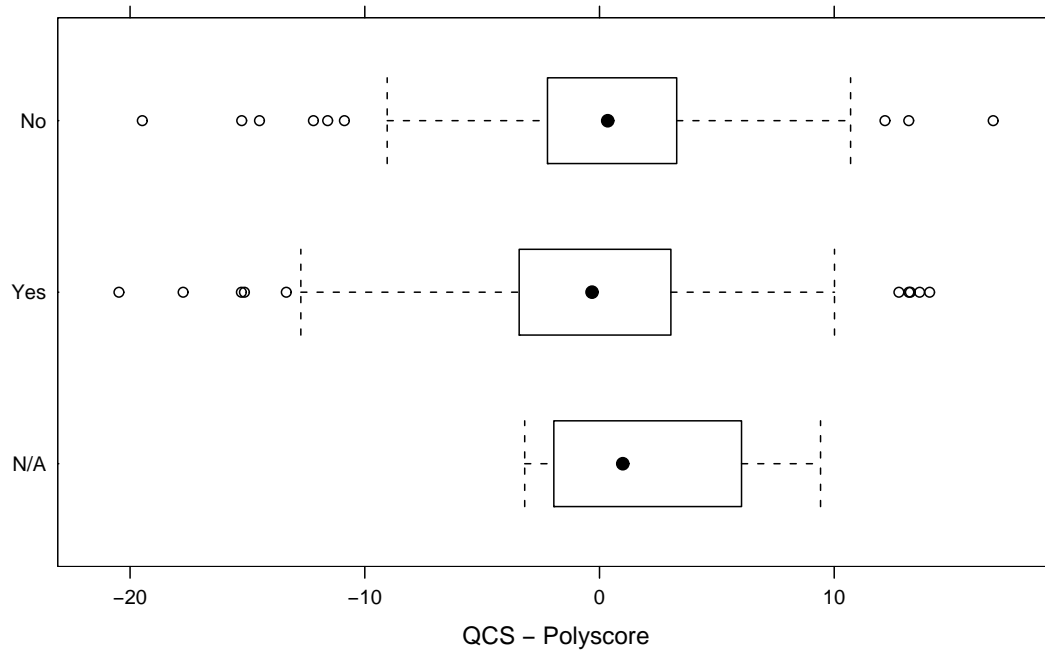
A number of schools indicated that they used some sort of external agency to deliver bolt-on preparation. From the survey, it was possible to construct an additional variable which involved whether schools indicated that an external agency was involved.

There was no difference in the performance on the QCS Test overall of the two groups, but schools with very high or very low overall performance on the test did not indicate that they used external agencies.
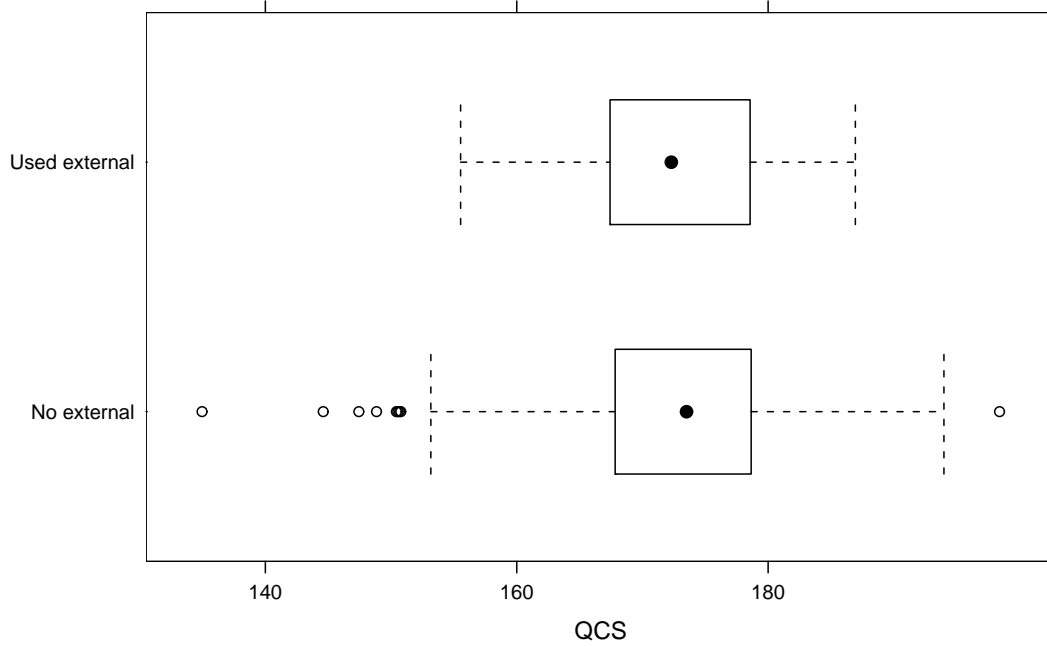
On average, the schools that used external agencies performed less well than expected when we compare QCS Test and within-school performance. This could be interpreted in two ways: either using an external agency does not develop skills among school staff and this in turn hinders the students' performance on the test; or schools that have problems are more likely to seek help from an external agency. The result could be due to a combination of these or other aspects.
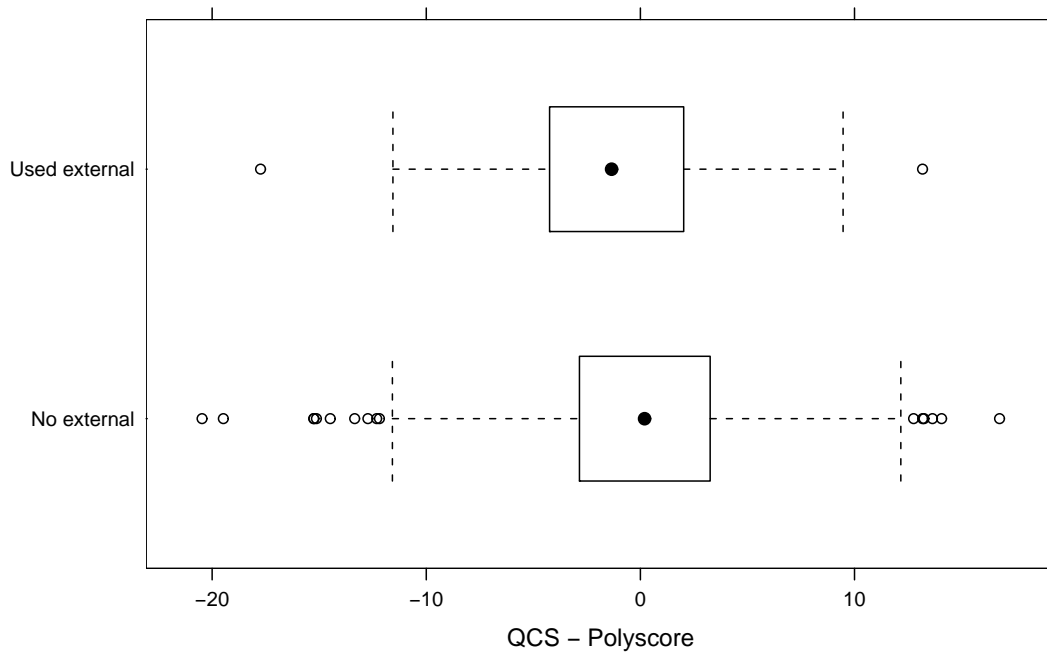
Modelling

We wanted to get a feeling for the factors that most significantly influenced QCS Test performance, so we fed information from the survey into a regression model. Responses to questions that were of the form "tick all that apply" or that were otherwise categorical in nature were modelled as dummy variables. Other information such as school size that was available was also included in the model. Question 3 (asking about the school's impression of how successful changes had been) was excluded because it was not information about the types of practices that led to success.

When predicting the difference between QCS Test performance and polyscore, no types of responses were particularly significant. The responses that were closest to showing significance were responses to Question 7 and Question 9. Question 7 was not of great interest because it showed that only a couple of schools held practices outside of school hours, and these schools tended to under-perform. Because only a handful of schools were involved, it did not yield useful data. Question 9 showed a little significance — schools that used their own teachers rather than external markers tended to have better results.

When just the QCS Test result was predicted, the most significant variable by far was school size. This is probably a latent variable effect — small schools are often in remote areas or low socioeconomic areas. It is interesting, however, that school size was not significant in predicting QCS–polyscore difference. This means that although smaller schools were lower-achieving, this was because the students were lower-achieving overall, and was not related to worse performance on the QCS Test.

Qualitative analyses

Summary of written comments in response to Questions 13 and 14

Fifty-eight per cent of schools indicated, in Question 12, that they had changed their QCS Test preparation in recent years.

In Question 13, these schools described how they had changed their preparation in recent years. In Question 14, they were asked what effect these changes had had on students' attitudes or performance.

We read and recorded all written comments and then allocated them to categories dealing with the more common ways schools have, in recent years, changed their preparation of students for the QCS Test and what effects these changes had on students' attitudes or performance. For Question 13, we coded and analysed up to three comments from each school (only a very small number of schools responded with more than three different comments). For Question 14, we also coded and analysed up to three comments (no school provided more than three different comments).

Schools provided a range of written comments, but typically these related to the nine key areas detailed in Table 1.

Table 1: Written responses to Questions 13 and 14

Area	Total responses	Number of responses, by what they focused on
1. Bolt-on preparation	107	27: offering a more structured and focused preparation program 14: introducing full-scale two-day practices 17: more focus on WT and/or SR
2. Logistical/ time	97	22: increasing amount of preparation 20: starting preparation in Year 11 11: including preparation sessions as part of the school timetable
3. Marking	46	22: using a commercial company to mark practice tests 18: providing more detailed and extensive feedback to students
4. External agencies	52	26: engaging services of an external agency 22: using an external agency to mark practice tests
5. Resources	29	22: purchase and use of commercial QCS Test workbooks
6. Built-in preparation	26	19: CCEs
7. School staff	25	10: using teachers with specific expertise 8: providing more training for teachers
8. Post-test refinement of preparation	11	5: collecting feedback from students 4: reviewing and analysing QCS Test data
9. Students and parents	10	4: introducing stress- and time-management strategies 4: more communication with parents

Note: Comments about using a commercial company to mark practice tests have been counted in both the "Marking" and "Education consultant" categories.

Our analysis of and commentary on the written comments are now listed, in order of the most to the least frequently mentioned.

Bolt-on preparation

Not unexpectedly the survey showed the majority of comments about changes made in recent years were about bolt-on preparation; that is, preparation which is usually done in the form of practice tests and preparation sessions that are not part of regular subjects studied by students.

Twenty-seven schools described their bolt-on preparation as now "more structured and focused". Comments that reflected what some schools are doing to provide a more structured and focused program include:

A more structured training program in Year 12. The focus is on developing "test- wiseness" (bolt-on strategy). We have moved away from both long preparation programs and intensive one- or two-day programs.

More focused weekly sessions. More focused individual section practices.

More condensed, focused learning.

Very structured, targeting individual papers for extended periods of time. Students develop expertise on each paper, one at a time.

I've written an actual program with lessons so that students aren't just doing practice tests.

Eleven schools stated how they were providing a more structured and focused program by identifying their students' weaknesses and designing a preparation program to meet these needs:

We continue to identify weaknesses in a particular cohort and adjust activities accordingly.

Concentrated more in areas of weaknesses after a couple of trials have been completed.

More focus on individual student weaknesses in criterion baskets rather than general (or more!) practices.

Of the schools that told us they had introduced a more structured and focused program, 22 said the changes had had a positive effect, while five schools were not able to comment on the effect. However, for those schools that said the effects were positive, only one school specifically said that changes had improved their students' performance:

Our performance has improved markedly as a result of these changes.

Many more schools (15) said that the changes had had a positive effect on students' attitudes:

Students more confident and relaxed going into test days.

Students take the QCS Test seriously and understand its significance.

Students appear to be more focused on practices. Students more willing to participate in lessons.

Six schools described the positive effect in general terms, for example: "improved both (attitude and performance)", "very positive".

The five schools that were not able to comment on the effect explained that the changes had only been introduced this year. One school said that it was very difficult to tell because their cohort changes dramatically each year.

Fifteen schools told us they had, in recent years, introduced a full-scale, two-day practice under QCS Test conditions. The three schools that commented specifically about the effect of the introduction of a full-scale practice, offered positive comments:

Introduction of practices greatly improved students' attitudes and general performance.

Prepares them for the rigour of the test.

More confident. Know what to expect.

Fourteen schools told us that their QCS Test preparation had an increased focus on the Writing Task (WT) and more emphasis on writing skills. Schools believed that this extra preparation improved student confidence. Four schools wrote that their WT results "were better" or "improved significantly".

One school said they previously focused on the WT, but now "focus equally on the three test components". They were, however, as yet unable to comment on the effect this had had.

Four schools specifically mentioned that they had increased preparation for the short-response test (SR). Again, schools commented that student confidence had improved as a result of this preparation. One school said some improvement was noted but added, "The most noticeable factor in QCS Test results are the students. Their abilities are reflected rather than methods used".

Twelve schools said that in recent years they had increased the number of single-paper practice tests, without referring to any particular paper.

Ten schools told us how there was a greater focus on building test-wiseness. Schools described this as:

Focusing on test-taking strategies.

More implicit teaching of the examination strategies, e.g. timing, elimination method for MC [multiple-choice].

Emphasis on methods and techniques to answer questions.

One school described the effect of this preparation as:

[Building] students' confidence about the test. They are confident they have skills to approach questions. They are very well acquainted with all aspects of the two test days. No surprises "I didn't know what to expect".

Five schools said they had introduced or concentrated more on basic literacy and/or numeracy. Another four schools said they undertook more specialist programs with specialist staff in areas such as visual literacy and geographical literacy. None of these schools specifically mentioned the effects of these lessons on student's attitudes or performance.

Three schools emphasised, as part of their preparation, "a school team approach" and "making students responsible to others in their group for their performance".

Three schools commented that they had moved away from a concentrated two-day practice to more regular practices over a longer period. This had a positive effect with one school describing their students as more relaxed and prepared.

Other less frequent comments provided by schools included that they had:

- introduced preparation where previously there was none (two schools)
- moved to whole-day practice and less weekly practice (two schools)
- provided feedback after the practice was completed, rather than teaching techniques first (two schools)
- introduced a program for ESL students (one school).

Logistics/time

Schools made a substantial number of comments (97) about the logistics of and time allocated to bolt-on preparation. The most frequent change that schools mentioned, in relation to logistics of the preparation, was the increased amount of QCS Test preparation. Twenty-two schools said that they had, in recent years, increased the amount of QCS Test preparation. Most of these schools (16) believed that students took QCS Test preparation more seriously and were more confident as a result. These schools were also under the impression that by increasing the amount of time allocated to QCS Test preparation, students would be better prepared and achieve better results. This was reflected by the following comment:

We will not know whether students' performance is enhanced until the end of this year as the increase in preparation has only begun this year. However, already students' attitudes have improved because they feel they will be better prepared. Parents have already indicated they are pleased with the change.

In contrast, six schools said that they had reduced the amount of time spent on QCS Test preparation. Two schools explained their reasons for this:

We have decreased the amount of preparation as students were "burning out" prior to the test.

We tried to address over-exposure to practices which can lead to boredom and a definite lack of engagement and enthusiasm prior to the tests.

Of the six schools that had reduced the amount of preparation, three schools said the effect was positive, one said the effect was very small and another said it was too early to tell. Only one school expressed concern about the effect of reducing the number of weekly sessions:

There is concern from admin (and staff) that our results in QCS have dropped in the last couple of years. There has not been significant difference [from] like schools.

Twenty schools said they now start QCS Test preparation in Year 11. Eleven schools believed that there were a number of reasons or benefits for introducing preparation to Year 11:

Preparation in Year 11 allows students to make more informed decisions re sitting the QCS Test.

Students begin to focus on Year 12 exit requirements and standards.

The Year 11 preparation also introduces more teachers to the preparation process.

These schools believe that students are more confident because they are better prepared.

However, one school (with a large proportion of OP-ineligible students) said that introducing preparation in Year 11 did not work for their school:

Did do bolt-on sessions with Year 11s a few years ago but found students "turned off" as they felt the importance was not immediately relevant.

Eight schools said they were unable to tell at this point.

Four schools said they now started preparation in Term 1 of Year 12, whereas previously they had started in the second or third term of Year 12. Just one school was able to comment on the effect of this and believed that students had "greater confidence to handle the different aspects of the test and improved strategies to give optimum performance".

Eleven schools told us that in recent years they had either included preparation sessions as part of the school timetable (previously it was in subject or class time), or that they had timetabled and structured lessons more effectively. Two schools also reported making these sessions compulsory for Year 12s. Most schools reported this change as being positive for their students:

Emphasises the "seriousness" of the tests.

The students feel there is more continuity in learning about QCS.

Two schools said it was too early to comment on this change.

Six schools said they now had smaller groups in the preparation programs. Half of these schools said that it was either too early to tell or that QCS Test performance was very much specific to a cohort. The other schools commented on their students' more focused approach.

Four schools said they grouped their students according to ability. One school commented that there were "fewer distractions for more able students than in mixed-ability groups". Another offered that "students can target weaknesses more effectively through our new needs-based groupings".

Another three schools now group their students according to whether they are OP-eligible. A school commented that "classes are more focused since only OP-eligible students are involved".

On the other hand, three schools said there was more preparation involving lessons with the whole cohort rather than separate classes or having all Year 12s sit a full-scale practice together in one room, rather than in separate rooms. These schools noted that their students were more unified in motivation and purpose with a greater awareness of the importance of the "team's" performance.

External agencies

Forty-six schools told us that they engaged an external agency for QCS Test preparation. Schools commonly referred to these groups as "education consultants", "QCS experts", "commercial providers" or "private companies".

Twenty-five schools described how they used the services of an external agency for one or more of the following:

- developing and organising the preparation program
- conducting immersion days for students
- conducting training days for teachers
- running workshops for students
- running "enhancement sessions" for students
- running sessions for parents.

Twenty-five schools also described how they used an external agency to mark practice tests and to provide feedback to students. (See the later section on "Marking" for discussion on this.)

A further two schools told us of their plans to use an external agency for their QCS Test preparation next year.

From the comments it seems that there is an increasing reliance by some schools on external agencies to deliver bolt-on preparation. Schools describe this as "providing assistance with QCS Test preparation" and "supplementing the school preparation program". One school provided the following sentiment:

> Employed outside QCS experts to conduct a number of teacher and student sessions as it is onerous on staff to do this on top of a full teaching load. It has reduced pressure on m[e] to prepare sessions for non-expert teachers; also in-services staff.

Schools report that since engaging the services of an external agency for QCS Test preparation, students' attitudes have improved. Some QCS Test coordinators said:

> The students involved in the QCS preparation are generally far more engaged in QCS preparation lessons than has been the case in the past.

> Students were more informed and confident in their approach to QCS.

> Outside "experts" seem to motivate students.

There was a range of comments on the effect on students' performance. One school claimed that "OP results dramatically improved". Another school said that "in one year of running the program, the number of *A*s increased from 5 to 11, and *C*s from 19 to 39. Still need to work on increasing the number of *B*s and decreasing the *D*s". (It should be considered that this improvement could be attributed to the cohort being a better group as well; it is not possible to tell.)

Some schools were more cautious in the comments they offered about the effect on student performance:

> We cannot compare OPs 2005/06/07 but in the view of senior staff, [the] students are working harder.

> Performance has improved slightly.

> Students' QCS performance is above LoA performance but below state average.

> Students appear to have been happy with preparation (survey conducted in February 2006 with 2005 cohort). On the other hand 2005 QCS results had dropped from previous years.

A number of other schools were hopeful of an improvement in the overall performance of their students but said it was too early to tell, having introduced changes only this year:

> I'm hoping it will be a lot more positive. The goal is to prepare students much more thoroughly. Fifty-seven per cent received an OP 16 to 25 in 2005 and this needs to be addressed.

Although only one school specifically mentioned the cost of employing an external agency, it is still significant to note:

> This year our school has employed [company name]. This cost has been considerable to our budget.

Marking

Forty-six comments were made about changes to marking practice papers. These comments centred on who marked the practice papers and gave feedback to students.

Twenty-six schools told us they now engaged an external agency to mark practice papers. Three schools told us that staff at their school marked the papers. Another four schools told us they used an external agency to mark the SR and/or WT mark and their own staff to mark the other paper(s).

It was clear from the comments that students appreciated detailed and extensive feedback that would allow them to work on identified weaknesses. This in turn gave students more confidence:

> Since 2002, there have been significant changes each year in terms of development and feedback to students. Prior to that, students would receive papers marked by teaching staff with no feedback. Now we employ qualified QCS Test markers who mark papers with comments, provide written feedback (specific and substantial) to students and who provide verbal feedback on SR papers to students who register to attend feedback sessions.

> It is not so much our preparation, but rather our feedback which has changed. We now are able to provide quite detailed feedback and generic suggestions for improvement.

> Students appreciated explicit written feedback.

There were far fewer comments made about marking by school staff, but one school offered the following as an advantage of internal marking:

Teacher knows the students well and is able to give them more accurate feedback. WT teachers believe students' attitude and preparation is better because they work with the student all year and often for two years in their English classes.

Schools also used the experience of their own QCS-certified markers:

We make more use of staff who are QCS-certified markers.[2]

Yes, as I am a WT marker I have trained English staff in the process so they can mark practice and are aware of the areas [in which] students are marked.

Resources

We received 28 comments about resources and materials for QCS Test preparation. Twenty-two of them centred on the purchase and use of commercial QCS Test workbooks. Most of these schools (16) described the introduction of such workbooks as "providing structure to the preparation" and in turn "students see a more professional approach". One school said "the preparation booklet is engaging to students, improving their attitude in preparation sessions".

One school explained that they had incorporated a workbook to "assist students who are out of school on MultiPathway day (traineeships etc.) and so miss the in-class sessions". Another school commented that the introduction of a workbook was "a good resource for students and they were able to use the book at school and at home".

One school, having "purchased a significant number of workbooks for Year 11 and 12 instead of using just QCS Test papers", was unhappy and said, "Workbooks have been very unsuccessful. Student preparation this year seems worse than previous years". Another school said that the use of the workbooks had little effect on students' attitudes or performance.

Of those schools that had introduced commercial QCS Test workbooks to their preparation, four said it was too early to properly assess their effectiveness.

A further five schools said they had reviewed and updated their resources. For example, one school commented that they had "reviewed QCS Test-specific materials and rewritten/enhanced resources to give students a range of strategies to assist [them] with answering/approaching the tasks". None of these schools referred specifically to the purchase or use of commercial QCS Test workbooks. Four of these schools indicated that reviewing and updating resources had had a positive effect on students' attitudes. Only one of these schools said it was too early to tell.

One school described how they had "updated test materials" and "now work exclusively on materials from past papers", but the changes were introduced only recently and the effects were not yet known.

Built-in preparation

Twenty-six comments were made about changes schools had made to their built-in preparation. Eighteen of these were about how schools were creating a greater focus on the CCEs:

Greater concentration on the CCEs in subject classes.

Included the CCEs in all assessment tasks.

Senior subject areas are addressing CCEs relevant to subject and making explicit links to QCS Test.

In the past four years we have familiarised staff with CCEs and looked at awareness of these within the subject-specific assessment programs.

Three schools mentioned specifically that this focus on the CCEs replaced a more "How do you do the test?" approach. Two of these schools commented that this change in approach had created a greater focus for both students and staff on teaching and learning. The third school said this focus on CCEs, rather than on test skills, had been introduced only recently and that it was too early to comment on its effect.

Three schools said this focus on the CCEs had been introduced in Year 11 and another two schools said they were moving to integrate the CCEs into the curriculum from Year 8.

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[2] A QCS Test-certified marker is a person who has undergone training and successfully participated in the WT or one marking unit of the SR in one year. People who have attended a recruitment session in either WT or SR are not regarded as trained or qualified markers.

One school said they "had moved away from focus only on CCEs and developed a focus on visual literacy, numeracy and comprehension skills". This school was unable to comment on the effect this had had on its students because this change had been introduced only recently.

Three schools specifically mentioned that they had introduced a focus on higher-order thinking skills and were positive about students' feedback and performance. Two schools commented specifically that they had introduced a new method of curriculum organisation, such as Dimensions of Learning, which also focuses on thinking skills.

School staff

Twenty-five comments were made by schools about their own staff. Most of these centred either on using teachers with specific expertise for QCS Test preparation (10), or providing more professional development and training for teachers (8).

Schools that used their own teachers with specific expertise for QCS Test preparation rather than "just the teachers who would be timetabled on that lesson", assessed the impact on students as being positive. Schools also described how specialist teachers were being used:

Increased focus on using specialised team of teachers with expertise across the curriculum.

Placed teachers with QCS expertise on specific classes of OP-eligible students sitting the QCS Test.

Teachers delivering lessons have specialised on certain aspects, so teachers rotate through classes.

Schools described how they had placed "more emphasis on teacher training" and on "more intensive PD for staff". One school provided more detail about the training offered:

Immerse staff in higher-order thinking and test techniques.

One school said:

Preparation program has been run with all staff involved in senior subject delivery. This increases staff awareness of the nature of the tests and the skills required of the kids. This is manageable here as there are only seven secondary teachers in total. Performance is better as staff are able to hone skills in their classes as well as in the prep sessions.

Two schools described how, by inviting only interested teachers and heads of department to lead preparation sessions, "students were more focused because teachers are more committed". The other school commented how "there was better continuity because preparation sessions were led by the same teachers".

Two schools also described how the same staff were used for "preparation, practices and the real test". One school provided the following:

For each part of the test, the same two teachers per QCS Test section (i.e. MC/SR/WT) are involved in delivery of instruction and marking. This provides continuity for both the students and teachers involved and helps identify areas which could be improved in the following year. It also allows staff to focus on [the] cohort's weaknesses in a given year. It also allows the teachers to focus on problem areas in class teaching, e.g. English punctuation, genre if these need fine tuning etc.

Another school provided some information about their preparation for WT:

Preparation for the Writing Task is done by the students' English teacher. Teacher knows the students well and is able to give them more accurate feedback. WT teachers believe students' attitude and preparation is better because they work with the student all year and often for two years in their English classes.

Post-test refinement of preparation

Schools also made comments about how they reviewed and refined their preparation after the QCS Test. There were 11 comments, and five schools said they collected feedback about the preparation from students. Schools may make changes based on this feedback:

Following the QCS Test each year, a sample of the cohort is asked for feedback, i.e. the preparation program. Adjustments are made based on this feedback, e.g. students suggested that one more SR session would be beneficial. This resulted in a MC session being changed to SR.

Discussion with students allows for greater depth of understanding of their needs.

Four schools also told us they "reviewed and analysed their QCS Test data to gain a focus on improvement areas". One school said:

This year in the data analysis, we are trying to examine the implications of performance in the test criteria for individual subjects, R3/R6 feedback, level of achievement distribution for individual subjects and scaling parameters for individual subjects. Again [we are] trying to make changes to total process.

Students and parents

Of the ten comments about parents and the wellbeing of students, four described how they had "increased and improved communication with parents and students". This was achieved by providing information about the QCS Test preparation program at parent information evenings and in school newsletters.

Four schools also specifically provided feedback about introducing stress- and time-management strategies:

We have also incorporated lessons on the importance of health, nutrition, Tai Chi and stretching for relaxation.

Two schools provided breakfast on test days to bring students together. Schools described how these strategies reduced anxiety for students and resulted in a more positive attitude to QCS Test preparation.

Case study schools

We followed up via a phone survey with five schools where students had performed significantly better on the QCS Test than would be expected from their within-school achievements. Of the five schools interviewed, three were government and two were non-government.

All five schools told us they focused on explicitly identifying CCEs and teaching higher-order thinking processes. One school told us they had staff meetings to identify higher-order thinking strategies, which extended down to the junior school. Form teachers at this school held 35-minute lessons every day on thinking skills. Another school said they identified the CCEs in faculty areas to focus teaching. This was ongoing and began in the middle school.

These schools all commented on the positive school culture that they believed contributed to good performance on the QCS Test. Some schools worked hard to raise an awareness of the way the test works and emphasised its importance. One school commented that they tried to encourage the less successful students too. At the other schools, students were keen and understood the nature of the test, and one school commented that "everyone wants to do their best. No one goes into the test thinking this is not important to me".

When it came to bolt-on preparation, only one school did regular QCS Test preparation in Year 11, but one other school had an introductory session. This group of schools spent an average of 30 hours in QCS Test preparation, compared with the average of 40 hours for all other schools surveyed.

All schools in this group held just one full-scale practice test, although one school did do an extra WT practice because of weaker performance on that subtest. Practice tests were marked by teachers at four of these schools. Their responses indicate that giving individual feedback (either verbal and/or written), as well as giving marks or a grade was considered important. One school, however, noted that there was some difficulty in getting teachers to mark the practices because of their workloads. Another school used an external agency to mark the practice tests to take the pressure off their teachers. It was not clear whether these were qualified markers contacted through the QSA.

Preparation at these five schools focuses more on built-in preparation. A positive school culture exists in response to the test or is actively developed, and this contributes to good performance on the QCS Test. It seems that success on the test does not depend upon the number of hours spent in preparation since this group spent, on average, less time in explicit preparation than the other schools did. From these case study schools, we can conclude that successful bolt-on preparation involves teachers at the school giving more than one type of feedback (marks as well as verbal and/or written feedback) on a practice test.

Intervention schools

During the end-of-year processes, the QSA staff examine the data to see whether what schools have told us about their students in terms of their within-school achievement is matched by their performance on the QCS Test. When there is a large negative mismatch, that is, the students have under-performed significantly on the QCS Test, the QSA may intervene in the data to either lift the mean or increase the spread. These schools are then identified as intervention schools. When they are notified of the intervention in their data, the schools are generally offered workshops, run by QSA staff, that seek to find reasons why the mismatch may have occurred. At every school there will be a unique combination of factors that may account for why a negative mismatch has happened. QSA staff can work with schools and offer appropriate advice to staff at these schools. These workshops equip schools to work on the areas identified in order to improve the match in the following years. As part of this project, we contacted three schools where an intervention had been made and the school had changed their practices and approaches in ways that resulted in a better match between QCS Test results and within-school achievement.

Each of the intervention schools we contacted told us that the intervention on their school data had prompted them to re-examine their whole assessment program. One school said they focused on identifying the CCEs in units of work in each subject, rewriting assessment tasks using the language of the CCEs and explicitly teaching students the CCEs. Another school said they revisited the CCEs and went right back to Year 8 and looked at every assessment task to ensure that the CCEs were included. The third school said they focused on the CCEs that their students were weaker at. This school also told us they taught their students higher-order thinking skills in a more explicit way.

These schools described how there was a changing culture at their school. The students now understood how the QCS Test results directly affected the whole group and saw their performance as a team effort. Two of the schools described a culture of care and support. The principal demonstrated his/her support, and breakfast and lunch were offered to students on the test days. One school paid for the services of an external agency, and this was perceived by students and parents as the school's commitment to bolt-on preparation.

For bolt-on preparation, their comments about what they did included "focusing on the CCE baskets during lessons rather than just completing practice papers" and "working on weaknesses and making QCS Test preparation mandatory for OP-eligible students". One school appreciated the "brutal" feedback they received from a QCS-certified marker.

Findings

The following findings are a summary of the data and analyses:

Review of built-in preparation

- Schools tended to make changes to QCS Test preparation when they perceived there was a need to do so. There is no sense that change was made for its own sake. Therefore schools that were already achieving a good match between QCS Test performance and polyscore did not make significant changes.

- A whole-school focus on the CCEs had a greater impact than a whole-school assessment review.

- Changes to curriculum organisation and a focus on higher-order thinking skills were beneficial in improving the relationship between QCS Test performance and polyscore.

- Whole-school reviews that were seen as having a positive impact on QCS Test performance also led to an improvement of within-school achievement.

- Conducting a whole-school review of assessment had the least impact on the QCS–polyscore difference.

Involvement of staff, QSA staff and education consultants in reviews

- The most significant improvements occurred when senior staff **and** administration staff were involved. This is perhaps because these are the people in schools most likely to drive successful change.

- There was less impact on QCS Test performance in schools that involved only the school administration staff in trying to implement changes.

- Schools using external agencies did not experience significantly improved outcomes compared with those who involved internal staff or QSA personnel.

Time spent in preparation

- There was no clear relationship between the number of hours spent on QCS Test preparation (bolt-on) and performance on the test.

- Schools that had preparation only in Year 12 performed slightly better on the QCS Test than schools with preparation in Years 11 and 12.

Nature of preparation sessions

- When QCS Test preparation was compulsory, students performed better on the test than in schools where the preparation was optional.

- There was no significant improvement in performance in schools that held QCS Test preparation sessions outside school time.

Full-scale practices, marking and feedback

- There was a slight relationship between full-scale, two-day practices and QCS Test results. However, the more of these there were, the less well students tended to do on the test, on the whole.

- Schools that used internal markers tended to see slightly better results than those that used external markers, though concerns were expressed about the workload on teachers.

- Students tended to do less well in schools that provided only verbal feedback as opposed to more than one kind of feedback.

- Schools that used external agencies tended to perform less well than expected when QCS Test results were compared with within-school achievement.

Effect on changes to built-in preparation

- In an attempt to improve results, schools were more likely to focus on bolt-on preparation than built-in preparation. (Reflected in a number of qualitative comments.)

- If schools perceived there had been an improvement in attitude and performance as a result of change, this was usually reflected in the data.

- Schools that provided a focused program that targeted the weaknesses of a particular cohort felt this had had a positive effect. This was a change from general lessons or practices.

- Schools that had changed their preparation commented that students seemed more confident in their approach to the test.

- Some schools were still trying to find a balance between too much preparation and not enough.

- There seemed to be some concern about the workload on teachers involved in preparation and giving feedback to students.

Conclusions

From the information provided by schools and an examination of the data provided by performance on the QCS Test, we have reached these conclusions:

- Increasing the amount of time spent on QCS Test preparation alone will not ensure that students do well.
- If schools believe that a change in preparation for the QCS Test is necessary, the best results come from involving staff who are willing to make changes and who can focus on more than test-wiseness.
- Students' attitudes to the QCS Test seem to be important in improving performance.
- Built-in preparation is more significant than bolt-on preparation.

Appendix 1

Common Curriculum Elements

1	Recognising letters, words and other symbols.
2	Finding material in an indexed collection.
3	Recalling/remembering.
4	Interpreting the meaning of words or other symbols.
5	Interpreting the meaning of pictures/illustrations.
6	Interpreting the meaning of tables or diagrams or maps or graphs.
7	Translating from one form to another.
9	Using correct spelling, punctuation, grammar.
10	Using vocabulary appropriate to a context.
11	Summarising/condensing written text.
12	Compiling lists/statistics.
13	Recording/noting data.
14	Compiling results in a tabular form.
15	Graphing.
16	Calculating with or without calculators.
17	Estimating numerical magnitude.
18	Approximating a numerical value.
19	Substituting in formulae.
20	Setting out/presenting/arranging/displaying.
21	Structuring/organising extended written text.
22	Structuring/organising a mathematical argument.
26	Explaining to others.
27	Expounding a viewpoint.
28	Empathising.
29	Comparing, contrasting.
30	Classifying.
31	Interrelating ideas/themes/issues.
32	Reaching a conclusion which is necessarily true provided a given set of assumptions is true.
33	Reaching a conclusion which is consistent with a given set of assumptions.
34	Inserting an intermediate between members of a series.
35	Extrapolating.
36	Applying strategies to trial and test ideas and procedures.
37	Applying a progression of steps to achieve the required answer.
38	Generalising from information.
41	Hypothesising.
42	Criticising.
43	Analysing.
44	Synthesising.
45	Judging/evaluating.
46	Creating/composing/devising.
48	Justifying.
49	Perceiving patterns.
50	Visualising.
51	Identifying shapes in two and three dimensions.
52	Searching and locating items/information.
53	Observing systematically.
55	Gesturing.
57	Manipulating/operating/using equipment.
60	Sketching/drawing.

Appendix 2

Officers from Testing and Analysis frequently present workshops to schools about preparing senior students for the Queensland Core Skills (QCS) Test. To enhance our work with schools, we would like to find out more about common practices in preparing students to sit the QCS Test and about what gives schools the best return for time invested. We would appreciate your response to this survey. When we collate the information, we may contact you to find out more about your practices, with a view to sharing what works well with schools that would like to improve their students' QCS performance. Individual schools will not be identified in any information we give to schools.

Please tell us the name of your school ─────────────────────────────────────

Section A — Built-in preparation

1. Which of the following have you worked on in the past few years? (Tick all that apply)

☐ Whole-school review of assessment

☐ Focus on the Common Curriculum Elements (CCEs)

☐ Introducing a new method of curriculum organisation (e.g. dimensions of learning)

☐ Focus on higher-order thinking skills

☐ Other ─────────────────

☐ No recent changes to built-in preparation *(Go to Question 4)*

2. Who have you involved in these reviews? (Tick all that apply)

☐ School administration staff   ☐ QSA staff

☐ Senior school staff   ☐ Education consultant/s

☐ All school staff   ☐ Other ─────────────────

3. How positive an effect do you believe this has had on student performance on the QCS Test? (Tick one only)

☐ Very positive   ☐ Some positive   ☐ No effect   ☐ Some negative   ☐ Very negative

Section B — Bolt-on preparation

4. What is the approximate TOTAL number of hours your school spends in explicit preparation for the QCS Test in Year 11 and in Year 12?

Year 11 ─────────────────   Year 12 ─────────────────

5. What kind of program do you have for preparing students for the QCS Test? (Tick all that apply)

☐ Weekly/regular sessions in Year 11 & Year 12   ☐ Single whole-day practices

☐ Weekly/regular sessions in Year 12   ☐ Full-scale, two-day practices

☐ Single paper practices, e.g. WT paper alone   ☐ Other ─────────────────

6. Are these sessions compulsory?

☐ Yes, for all students   ☐ Yes, for OP-eligible students   ☐ No

Please turn over

7. Are the sessions conducted during school time?

☐ Yes, all of them   ☐ Yes, some of them   ☐ No, all in students' own time

8. If you do full-scale practices, how many do you do?

☐ 1   ☐ 2   ☐ 3   ☐ Other _____   ☐ N/A

9. Who marks these practices?

☐ Teachers at the school   ☐ QCS-certified markers   ☐ Other _____   ☐ N/A

10. What kind of feedback do students receive? (Tick all that apply)

☐ Marks and a grade   ☐ Written feedback   ☐Verbal feedback   ☐ Other _____

11. How positive an effect do you think these practices and the feedback to students has had? (Tick one only)

☐ Very positive   ☐ Some positive   ☐ No effect   ☐ Some negative   ☐ Very negative

e.g. student confidence is improved   e.g. performance is enhanced   e.g. performance is not enhanced   e.g. student confidence is reduced

12. Have you changed your preparation in recent years?

☐ Yes (Continue to Questions 13 & 14)   ☐ No

13. How have you changed your preparation in recent years?

_____

_____

_____

_____

_____

14. What effect did this change have on students' attitudes or performance?

_____

_____

_____

_____

_____

So that we can contact you to find out more about your answers, please provide your details:

Name	
Contact number	

Thank you for taking part in this survey.

Please return your completed survey in the reply-paid envelope by **Friday 7 April 2006**.

Or you can return it by faxing it to **3221 2553**, Attention — Danielle Owens.

Appendix 3

Last year we sent out to schools a survey about QCS Test preparation. To enhance our work with schools, we wanted to find out more about common practices in preparing students to sit the QCS Test and about what gives schools the best return for time invested. We have collated the data and undertaken some initial analysis. Your school has been identified as a school that has performed significantly better on the QCS Test than would be expected from your within-school achievements. We would like to find out more about your practices, with a view to sharing what works well for schools in preparing their students for the QCS Test to improve their performance. Individual schools will not be identified in any information we give to schools. Would I be able to ask you a few questions?

School: ——

Contact person and position: ——————————————————————————————

Phone number: ——————————————————————————————————————

Interviewer: ———————————————————————————————————————

Section A — Built-in preparation

1. *What aspect of teaching and learning do you focus on with Years 11 and 12 that you believe prepares students well for the QCS Test?*

2. *Are there any aspects of school culture that you believe contribute to good performance on the QCS Test?*

3. *Do you plan any further refinements to senior studies at your school in terms of QCS Test preparation?*

Section B– Bolt-on preparation

1. *What bolt-on preparation do you believe have been the most significant in contributing to your students better than expected performance on the QCS Test compared with their within-school achievements?*

2. *You indicated there had been a change in your preparation. What prompted this change?*

Thank you for your time. If later you feel you have something to add to this survey or you have a question please feel free to contact me on 3864 0363