



BCAT Impact and Performance Evaluation

April 2015

Prepared by the Research Department

Executive Summary

This report was commissioned by the Bar Standards Board (BSB) Education and Training Department in order to explore and assess the performance and impact of the Bar Course Aptitude Test (BCAT) introduced in March 2013.

The objective of the analysis conducted for the purpose of this report was to investigate what (if any) impact the BCAT has made on key stakeholders and whether it is serving its intended purpose by testing the validity and reliability of the test's functionality.

Summary of results:

- Analysis of BPTC student data suggests the introduction of the BCAT has not had an impact on the profile of students on the course, with any changes in line with general trends across Higher Education.
- Analysis has shown that the five areas of the BCAT test are aligned with the skills required on the BPTC course specification requirements and the outcomes of the job analysis.
- Analysis of data on enrolments onto the BPTC in terms of the degree class and degree institution of students does not reveal any statistically significant change following the introduction of the BCAT.
- There has not been an increase in the pass rates on the BPTC since the introduction of the BCAT as an entry requirement – pass rates on BPTC have declined between both 2011/12 to 2012/13 and 2012/13 to 2013/14
- There is little evidence from interviews with students who failed the BCAT first time that the introduction of the BCAT is influencing their career / routing decisions.
- BPTC provider staff interviewed felt that the introduction of the BCAT had not impacted their selection procedures, was too easy to have any impact on standards, and was not an effective tool to improve standards beyond existing admissions and/or selection procedures.
- Parent(s) having a degree, being from a White ethnic background, holding a GDL degree, holding a 1st/1.2 degree, attending a Russell Group University, and Nationality classed as 'Home/EU' are all associated with a higher BCAT score.
- Of the characteristics analysed, ethnicity was the strongest predictor of BCAT score, and the effect of Ethnicity on BCAT score still exists independently of the effects of the other predictive variables. The differences in average scores between White and BME candidates were identified during the 2011 piloting of the test, and similar differences were observed in the 2012/13 cohort.
- Being from a White ethnic background, holding a GDL degree, holding a 1st/1.2 degree, attending a Russell Group University, and Nationality classed as 'Home/EU' are all associated with a higher BPTC score, and also (with the exception of degree class) all associated with a higher BPTC overall grade.
- BCAT score and BPTC overall score are significantly positively correlated (0.546), with those who scored higher on the BCAT tending to have a higher BPTC overall score. A correlation of 0.3 or above is desirable in using a test for selection.
- Regression analysis indicates that BCAT score significantly predicts both BPTC final overall score and final overall grade.
- Regression analysis indicates that BCAT score increases predictive validity beyond that of educational variables such as Degree Institution and Degree Classification
- The cut score (required pass mark) for the BCAT is currently at a level that means only 0.6% (13 students) of the 2012/13 cohort were unable to pass the BCAT after one or more attempts.
- The impact of potential cut scores in the range 38 to 46 were examined, with only a score of 46 providing a marked reduction in students who go on to fail the course without creating an enormous barrier for applicants or excluding many students who had good course outcomes.

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Introduction

1.1. Research Background

1.1.1. In response to the concerns surrounding the Bar Professional Training Course (BPTC) detailed in Appendix A, the BSB decided to introduce a further entry requirement to the BPTC in order to raise standards of entry to and exit from the course and improve the course experience for both BPTC students and BPTC providers.

1.1.2. The Bar Course Aptitude Course (BCAT) was introduced on the 3rd April 2013 and all BPTC students entering from autumn 2013 for the 2013/14 academic year onwards were required to pass the BCAT (with the exception of part time students who were doing the BPTC over two years and registered in the 2012/13 academic year).

1.1.3. The aim of the introduction of the BCAT was to:

- Improve standards on entry and exit of the BPTC;
- Increase student satisfaction on the BPTC;
- Increase tutor satisfaction delivering the BPTC;
- Have a positive impact on the first time failure rate of the BPTC; and
- Become an internationally recognised measure of critical thinking and evaluation required to perform to a high standard on the BPTC.

1.2. Evaluation – Impact and Performance

1.2.1. In order to measure and assess any impact of the BCAT since its introduction, the BSB commissioned IFF¹ Research and Work Psychology Group to undertake an evaluation to explore whether the BCAT is meeting its objectives. There are two strands to this evaluation:

- The performance evaluation –testing the validity of the BCAT in terms of its reliability and consistency. This strand was conducted by WPG.
- The impact evaluation –evaluating extent to which the BCAT is impacting on standards of entry, learning experience and tutor satisfaction. This strand was conducted by IFF.

¹ Based on performance a mutual termination of agreement was made between IFF and the BSB. The BSB's research team subsequently took ownership of the impact evaluation report whilst retaining the services of Work Psychology Group.

Methodology

2.1. Objectives of the Research

2.1.1. The objectives of the impact and performance evaluations are to provide a strong evidence base with actionable recommendations that answer the following research questions:

- Has the introduction of the BCAT exam impacted on the student profile?
- Has the BCAT been effective in improving entry and exit standards for the BPTC?
- Is the BCAT seen as an effective tool for improving standards on the course?
- Is the BCAT a valid test to use as part of the BPTC selection method?

2.1.2. This report will focus on the preliminary findings analysing the first full cohort required to take the BCAT (2013-2014).

2.2. Research Design

2.2.1. A mixture of qualitative and quantitative research methods were selected to reflect the nature of data available and to allow for triangulation of results to be carried out.

2.2.2. The following datasets and research methods were used:

- BPTC enrolment, mark and grade data – sourced from BPTC Providers
- BCAT mark data – sourced from Pearson VUE
- Student characteristics – sourced from Pearson VUE and BPTC Providers
- Face-to-face interviews - BPTC providers
- Telephone interviews - BCAT candidates that failed first time
- Telephone interviews - QLD/GDL providers
- Online survey - Prospective (QDL/GDL) students
- Online survey - BPTC students
- Literature review – Higher education trends, use of selection tests

2.3. BPTC Providers

2.3.1. Two stages of qualitative interviews were conducted with BPTC providers to assess what impact the introduction of the BCAT has had on the quality of students, tutor experience and wider admissions processes.

2.3.2. The first stage of telephone interviews were carried out in November 2013 and consisted of 12 respondents from 9 providers. 30 minute semi structure interviews covered a range of questions covering respondent's perceptions of the BCAT, its impact to date, and its suitability as a selection test for the BPTC.

2.3.3. Sampling process: The original target was to interview Course Directors for all BPTC providers however due to availability and logistical considerations Admissions Tutors were further included in the sample.

2.3.4. The second stage consisted of 17 face-to-face interviews carried out between April and June 2014 with the aim of substantiating the findings from the first the first stage.

2.3.5. The role of respondents consulted varied across institutions and included Professors, Programme Leaders and Admissions Tutors. Staff were approached to

participate based on the advice of the Course Director and were dependent on the availability, size and structure of the BPTC provider.

2.4. BCAT Students who Failed the First Time

- 2.4.1. Qualitative telephone with candidates who sat and failed the BCAT were carried out in order to explore what impact (if any) the test had on their decision to pursue a career at the Bar.
- 2.4.2. The topic guide covered a range of issues including whether student believed the BCAT was a suitable screening tool to gain entry on to the BPTC and to ascertain whether candidates felt they had a fair chance of passing. Each interview lasted approximately 30 minutes and included students from home and overseas.
- 2.4.3. For the 2013/2014 cohort a total of 48 failed the BCAT. It was decided to use a sample size of 44 and 20 respondents was set as an appropriate quota. A total of 35 students were approached to participate in order to account for refusals and those unavailable during the fieldwork period. Respondents were selected randomly to ensure representativeness of the population.

2.5. QLD/GDL Providers

- 2.5.1. Providers of Qualifying Law Degrees and Graduate Diplomas in Law were included in the evaluation because of their direct contact with prospective BPTC students. Representatives were asked a series of questions discussing their perceptions of the BCAT and whether they felt its implementation would improve entry and exit standards of the BPTC.
- 2.5.2. From February to March 2014, 20 semi-structured interviews were conducted with respondents from 14 different institutions. During the recruitment stage, the sampling technique employed had to be adapted due to many senior staff members being unavailable or unwilling to participate.

2.6. Prospective Students

- 2.6.1. A quantitative online survey with students who were in the final year of their Qualifying Law Degree (QDL) or studying for a Graduate Diploma in Law (GDL) was conducted in February and March 2014. Respondents were asked a series of questions exploring their perceptions of the BCAT, whether they felt it was a suitable tool of measurement and if its introduction had any impact decisions about a career at the Bar.
- 2.6.2. Individual survey links were generated and disseminated to contacts within law department and schools across England and Wales in order to abide by data protection regulations. In order to encourage people to respond, students were given the opportunity to enter into a prize draw for completing the survey.
- 2.6.3. In total, links were distributed to 39 colleges and universities throughout February and March 2014. The survey was closed on 28th March 2014 with a total response rate of 353, which was much lower than anticipated.
- 2.6.4. Steps were taken to boost the response rate throughout the fieldwork period, which included sending three email reminders, placing the survey link on the BSB's website and twitter account and changing the communications strategy. Furthermore,

YouthSight were contracted as specialists in youth and student research and in total secured an additional 105 responses.

2.7. BPTC Students

2.7.1. The original scope for the BPTC perceptions online survey was to capture perceptions relating specifically to course content and administration as well as vital profile information, such as equality and diversity information. It was felt that data captured on the BCAT and perceptions of the BPTC would contribute to the other research strands for the impact evaluation.

2.7.2. The survey was administered using Survey Monkey. A link to the survey was sent to the Course Directors for the BPTC at each BPTC Provider site with a request that they circulate the survey to their BPTC students. Participation was voluntary and paper copies were made available where requested. The survey was open for a six week period between May and June 2014 and received a total of 503 responses.

2.8. BCAT and BPTC Performance

2.8.1. As a first step the BCAT data (n=2038) was reviewed; those with multiple sittings had only their final sit score retained (n=2003). As the primary purpose of this analysis was to evaluate the BCAT in relation to how well it predicts BPTC outcomes,² candidates who did not have both BCAT and BPTC outcome data were removed, as well as part-time students. In addition, Kaplan Law School was removed from the dataset, as Kaplan no longer offers the BPTC Course, and the intention was to have an analysis which could be repeated across years to monitor the continuing performance of the BCAT. This provided a sample of n=1109.

2.8.2. The data was reviewed, and 36 candidates were removed due to unreliability of the data. This provided a final full sample of n=1073 (**Sample A**). This sample is used for analysis independent of BPTC outcomes. For BPTC final overall grade analysis, 6 further candidates were removed due to anomalies over missing BPTC grade data. BPTC final overall grade analysis was conducted on a sample of n=1067 (**Sample B**). For the BPTC overall score analysis, candidates were removed if they had any modular data missing as missing data would skew the overall BPTC score, resulting in a total dataset of n=998 (**Sample C**).³

2.8.3. Anything stated as statistically significant has been statistically tested and has a p-value of less than 0.05, which is a standard significance level for social research.⁴

2.9. Data analysis and Quality Assurance

2.9.1. Quantitative data captured was analysed using SPSS statistical analysis software. Descriptive and bivariate analysis was carried out for the impact evaluation and bivariate and multivariate analysis for the performance strand. All datasets were quality assured and triangulated. All qualitative data was systemically cleaned and coded.

² A report entitled 'BCAT performance distribution analysis' (2013) provides distribution and group differences analysis of the full 2013 BCAT cohort.

³ Full details of the quality assurance and data cleaning undertaken is detailed in Appendix B.

⁴ A summary of the statistical analysis undertaken as part of the Performance Evaluation is included in this report. Full details of the analysis undertaken is detailed in 'BCAT Performance Evaluation 2013/2014' by Work Psychology Group.

2.10. Limitations

2.10.1. When drawing inferences from the various data streams it is important to bear the following considerations in mind:

- The online survey with QDL/GDL students received a low response rate. This could be partially explained by the inconsistent roll out of the survey and lack of a communications strategy. It can also be argued that despite the rationale provided, targeting students who had no intention of pursuing a career at the Bar resulted in disengagement.
- In addition to various internal evaluations, the survey was being undertaken at the same time as the National Student Survey (NSS).
- The results of the survey are not generalisable and were not expected to provide a representative sample but can be triangulated by other data streams.
- The BPTC Perceptions Survey was a research tool used to capture the opinions of BPTC students and their experiences on the course and not specifically on the impact of the BCAT. Although a response rate of 32% (2014) and 29% (2013) of BPTC students was achieved, responses may not be generalisable to the whole student cohort.
- Recruitment of BCAT candidates who failed first time proved problematic which could be explained by the sensitive situation and subject issue.
- Only a small number of tutors were willing to be interviewed and their views do not represent all BPTC providers. The time and interval between interviews could explain the lack engagement from providers.
- Although the views of the most senior staff within BPTC providers have been sought, it is possible their views are not representative of all staff within BPTC providers.
- With the exception of the BPTC perceptions survey, no feasibility study or formal piloting was carried out for any of the impact evaluation data collection strands. Issues surrounding data collection methods, sampling techniques and recruitment processes were only registered during and after fieldwork had been conducted. The suitability and representativeness of each data stream is therefore attached with its own caveat.
- Due to coding methodology and transcript handling issues the second phase of GDL interviews could not be used.
- Three interviews were omitted from the first phase of GDL interviews due to quality and validity concerns.
- For the majority of the characteristics (protected and non-protected) related to group differences there was missing data for a proportion of the candidates. This should be therefore taken into consideration when interpreting group difference results as by not including these individuals, findings may be either over or under estimated.

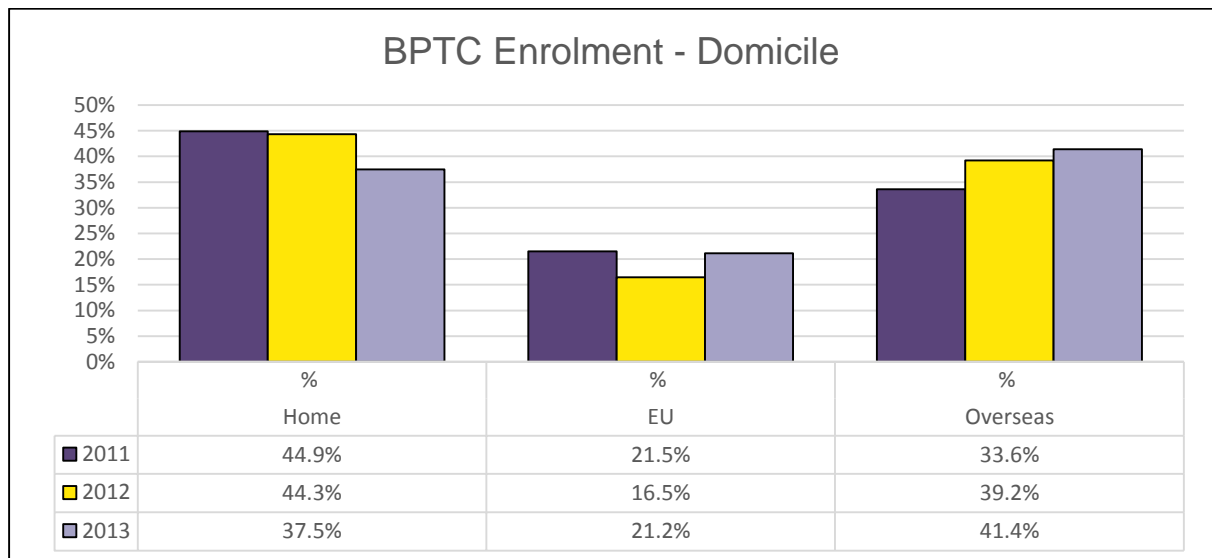
Impact Evaluation –Student Profile

3.1. Impact on student profile

3.1.1. In order to determine any impact of the introduction of the BCAT on the profile of the student cohort (i.e. the makeup of the population in terms of gender, ethnicity, and other protected characteristics) statistical analysis was carried out on data from BPTC providers on student enrolments.

3.1.2. Data on student domicile is shown in figure 1. The differences between years are statistically significant. However, the trends shown are matched by overall trends in postgraduate recruitment across higher education,⁵ where numbers of overseas students on postgraduate courses have been rising over the past few years, while the numbers of home students have been falling.

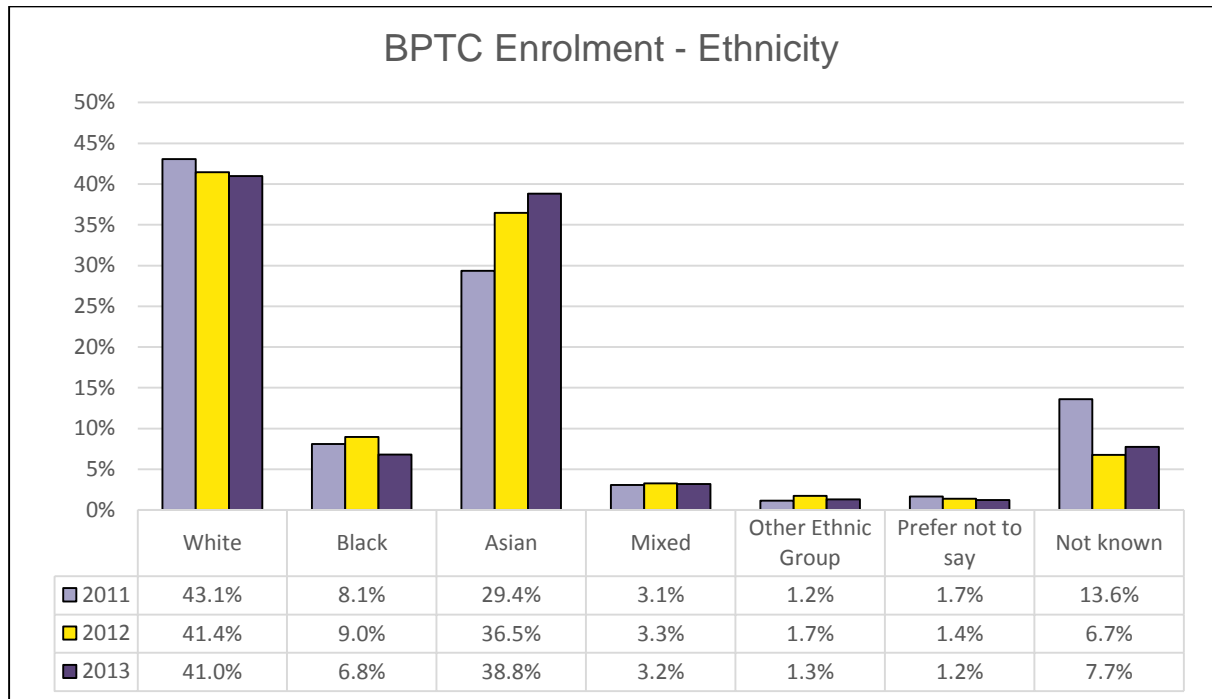
Figure 1 – BPTC Enrolment by Domicile



3.1.3. Data on student ethnicity is shown in figure 2. The ethnicity categories analysed combine the subcategories set out by the Legal Services Board. The differences between years are statistically significant. One noteworthy observation is the 10% increase in Asian students enrolling on the BPTC over the past three years. This could be explained by the rising number of overseas students over the same period, as the majority of students of Asian ethnicity on the BPTC are overseas students. Data on ethnicity cannot be accurately compared with overall higher education ethnicity trends, as the Higher Education Statistics Agency do not publicly publish data on the ethnicity of non-UK domiciled students.

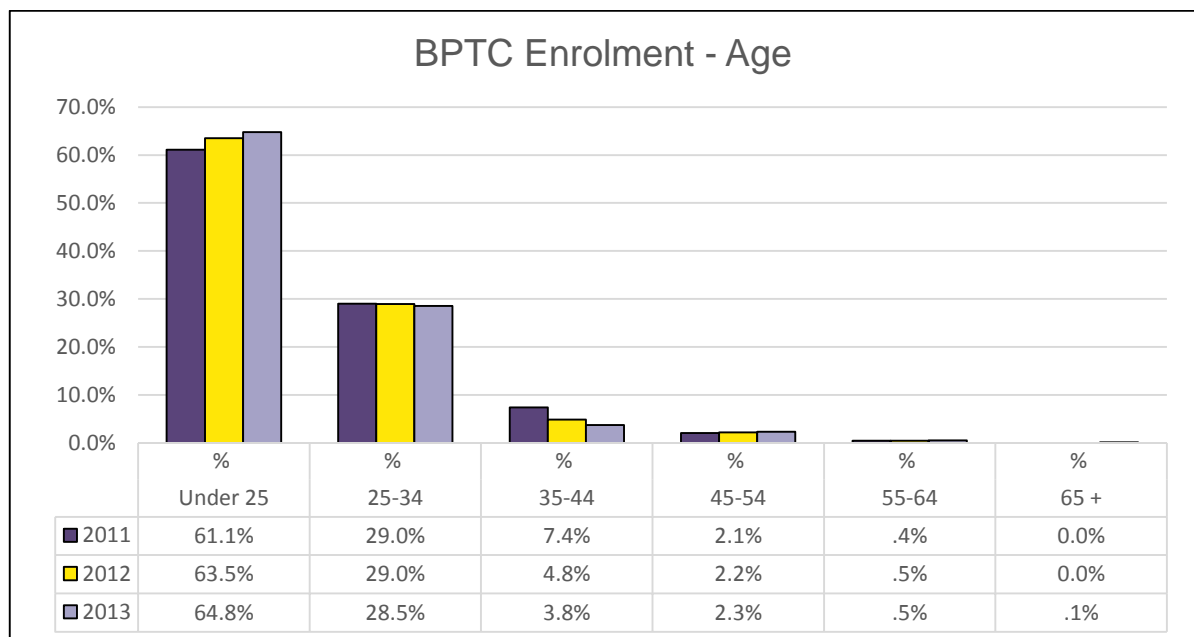
⁵ HE student enrolments by mode of study, sex, level of study and domicile 2009/10 to 2013/14 (HESA)

Figure 2 – BPTC Enrolment by Ethnicity



3.1.4. Data on the age of BPTC students is shown in Figure 3. Analysis of the data indicates statistically significant differences across years. However, changes in the age profile of students need to be viewed in context of general trends in Higher Education, where numbers and proportions of students from higher age bands (over 25 and over 30) have shown marked decline in recent years⁶.

Figure 3 – BPTC Enrolment by Age



⁶ Analysis of trends in higher education applications, admissions, and enrolments (Independent Commission on Fees, August 2014)

3.1.5. No statistically significant changes across years were observed for enrolments by Gender or Disability.

3.1.6. Review of failure rates on the BCAT (see Table 1) indicates that BME candidates have higher first time failure rates than White candidates, and Overseas students have a higher failure rate than Home and EU students.

Table 1 – First Time BCAT Failure Rates by Ethnicity and Domicile

Ethnicity / Domicile	Fail
White	0.4%
Asian	2.8%
Black	3.8%
Mixed	1.4%
Other	2.4%
Prefer not to say/Missing	3.2%
UK	1.2%
EU	1.4%
Overseas	3.0%

3.1.7. Evaluation of the qualitative interviews was also undertaken to examine the extent to which BPTC providers and BCAT students felt the test would have an impact on the accessibility of the BPTC course.

3.1.8. The majority of BPTC providers (eight out of 10 interviews) interviewed felt that the introduction of the BCAT could have an impact on the accessibility of the course. The most common issue cited was the cost of the test, mentioned in four of the interviews. Other potentially discriminatory effects of the test mentioned were a potential gender bias of the test (two interviews) and the comparative scarcity of test centres overseas impacting on overseas students (two interviews).

3.1.9. While none of the BCAT students interviewed specifically indicated that they felt the BCAT would have a discriminatory effect, over half (9 out of 17) highlighted the cost of the test as an issue, and two highlighted issues with the limited availability of test centres, mirroring similar concerns raised among some of the BPTC providers.

Key Findings

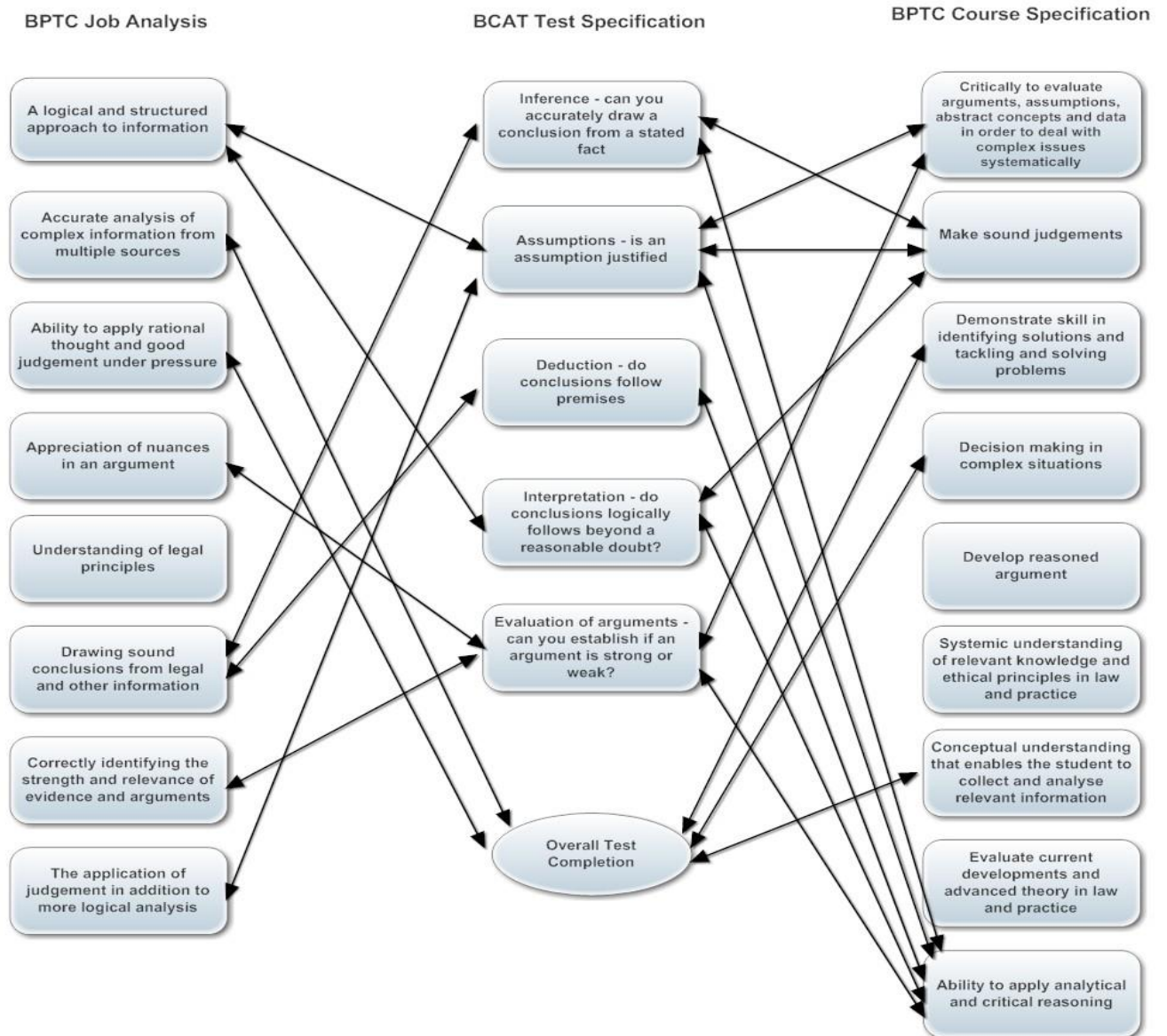
- Over the past three years there have been some noteworthy changes to the profile of the BPTC student cohort. This could be explained by larger market trends and it is too early to tell whether the introduction of the BCAT has had any impact on the profile of students so far.
- Early indications suggest a disproportionate number of Overseas and BME students failing the BCAT first time. This will need to be monitored as it could have an impact on future diversity trends.

Impact Evaluation –Entry and Exit Standards

4.1. Alignment of the BCAT and BPTC

- 4.1.1. In 2009, a job analysis was conducted on behalf of the BSB to identify the core cognitive requirements for BPTC. In 2013 the outputs from this work were independently evaluated by Work Psychology Group. After completing the independent evaluation of the initial job analysis, WPG went on to conduct a content review to map the content of the BCAT against the cognitive requirements of the BPTC (i.e. the outcomes of the initial job analysis) and against the skills outlined in the BPTC handbook by identifying links between the sets of data.
- 4.1.2. As the figure 4 illustrates, the findings from this review indicated that the BCAT demonstrates good alignment and is a suitable test to be used in this context. The boxes on the left of the figure 4 represent the outcomes of the job analysis, the boxes in the centre represent the BCAT test specification, and the boxes on the right represent the BPTC Course Specification Requirements. All five segments of the test specification map onto the outcomes of both the BPTC Job Analysis and BPTC Course Specification.

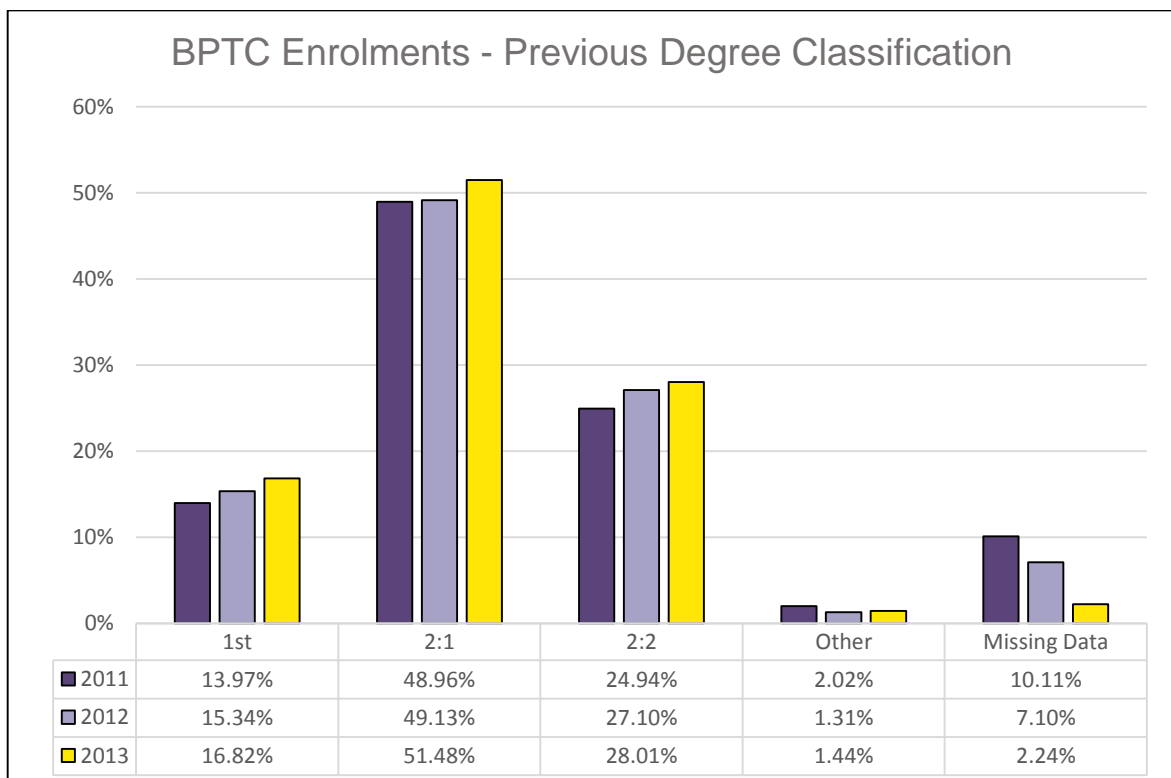
Figure 4 – Alignment of BCAT Test & BPTC



4.2. Entry Standards

- 4.2.1. In order to evaluate the impact the impact of the BCAT test on the standard of students on the course, quantitative analysis of the profile of BPTC students before and after the introduction of the BCAT has been carried out. There are two available indicators relating to the previous educational achievement of students enrolling on the BPTC course – the previous degree class and the previous degree institution of students are collected by BPTC providers, enabling the use of these two indicators to evaluate any changes in the educational achievement of the BPTC student profile.
- 4.2.2. For the purposes of this analysis, university attended has been coded into three groups that are standard measures of the quality of the degree institution – Oxbridge, other Russell Group, and other. However, as the Russell Group expanded in 2013, other Russell Group is coded by whether the University is currently a member of the Russell Group for all the years of data analysed in order to ensure consistency. For degree class, the classifications of 1st, 2:1, 2:2, and Other (covering all other degree classifications) are used.
- 4.2.3. Data from 2011, 2012, and 2013 are included for this analysis in order to provide an indication of the extent to which changes in educational attainment are likely to be as a result of the BCAT or normal annual variations in the student profile that are unrelated to the introduction of the BCAT as an additional entry requirement for the BPTC.

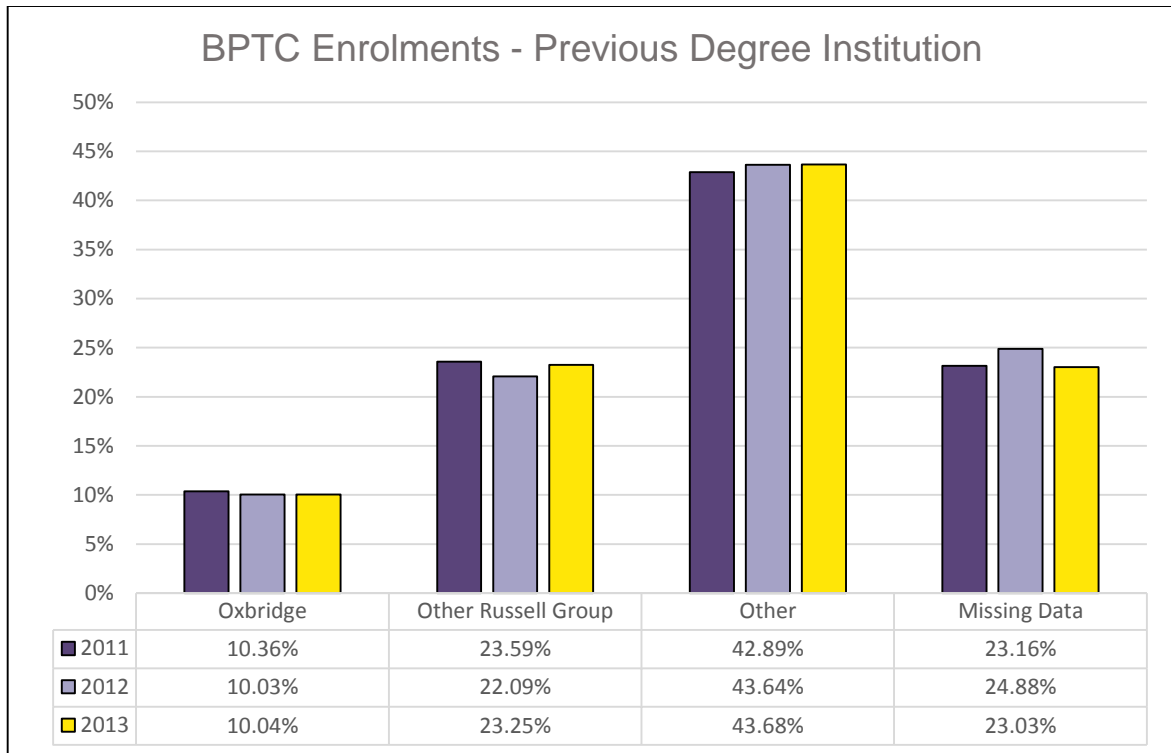
Figure 5 – BPTC Enrolments by Previous Degree Classification



- 4.2.4. Figure 5 shows the proportions of enrolments by previous degree classification for 2011, 2012 and 2013. There are variations year on year in terms of the proportions of students with 1st, 2:1 and 2:2 degrees, but any increases need to be viewed in relation to the increased levels of reporting by BPTC providers, and the resulting

reduction in missing data. As a result, the changes across years in the dataset are not statistically significant.

Figure 6 – BPTC Enrolments by Previous Degree Institution



4.2.5. Figure 6 shows the proportions of enrolments by previous degree institution for 2011, 2012 and 2013. Worth noting is the high proportion of missing data, due to individual cases alongside the fact that several BPTC providers do not currently retain records of student’s previous degree institution following admission. As a result caution should be exercised before drawing and definitive conclusions from this dataset. However, analysis indicates that the differences by degree institution between years are not statistically significant.

4.3. Exit Standards

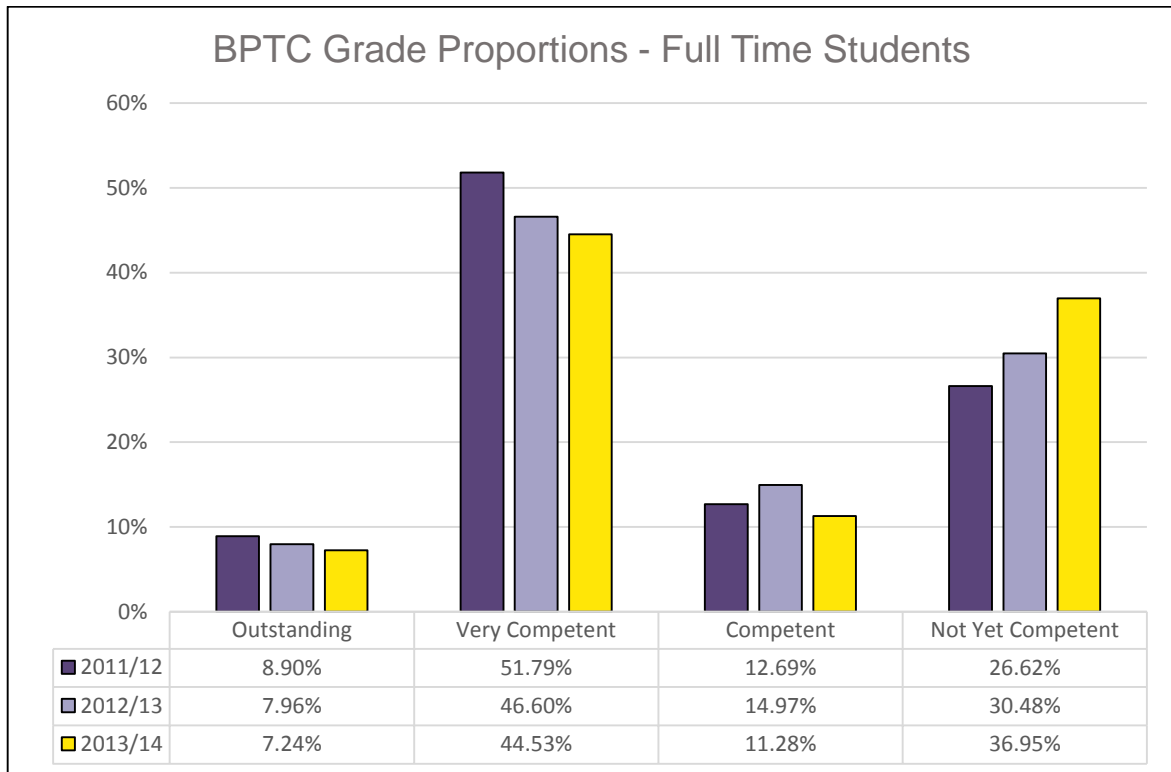
4.3.1. In order to analyse any changes in final grades received by BPTC students that could be attributable to the introduction of the BCAT, a restricted sample was used. Only full time students were included in the analysis and returning students – i.e. students who did not pass the BPTC in previous years but were retaking – were also excluded from the analysis (not excluding these students would have meant including students who had not been required to take the BCAT in the 2013/14 cohort). Finally, for the 2013/14 cohort, any students who could not be confirmed to have sat the BCAT (either due to missing data or students who had deferred their place from a previous year) were excluded. This ensures that the comparison is between samples that are matched across years, and that all the students in the 2013/14 sample analysed sat the BCAT⁷.

4.3.2. Figure 7 shows the proportion of students receiving each grade across years. Analysis reveals statistically significant differences in the proportions receiving each

⁷ For the purposes of this analysis, ‘Not Yet Competent’ also includes students who have failed, and students who have withdrawn from the course

grade across each cohort. The overall trend reveals falling proportions of students receiving 'Very Competent' and 'Outstanding' grades, and increasing proportions of students failing the course. Although current trends indicating falling pass rates could be attributable to a number of factors unrelated to the introduction of the BCAT, the evidence does not provide any indication that the introduction of the BCAT has improved exit standards for the BPTC.

Figure 7 – BPTC Grade Proportions – Full Time Students



4.4. Routing Decisions

4.4.1. It was also valuable to explore the impact (if any) the BCAT has had on students who sat the BCAT first time and failed. In light of this, telephone interviews were carried out with students that had failed the BCAT on first sitting to understand the impact the test had on their chosen career path.

4.4.2. In total, 17 students who failed the BCAT first time were interviewed. Only three of these students had not re-sat and passed the BCAT at the time of interview, and of those three students two had not changed their plans to obtain a place on the course, or their aspiration to become a barrister. Nine of the students interviewed were already on the BPTC course, and a further seven were in the process of reapplying at the time of interview.

4.4.3. However, while only one of the students interviewed was not either on or applying to the BPTC, five interviewees felt that taking the BCAT helped to highlight areas for development and thus helped in preparation for the course.

4.4.4. A majority of the students interviewed (10 out of 17) felt the BCAT was a useful indicator of the skills required on the BPTC course.

It is quite expensive to go on to the course. The BCAT will enable you to think whether you're skills are sufficient enough.

BCAT Applicant 7 – Currently on BPTC Course

4.4.5. In contrast, six interviewees felt that the BCAT had little relation to the law and thus was not a suitable test to filter potential BPTC students, and six students felt that the BCAT added nothing to existing qualification requirements.

They [the BSB] can introduce an exam which is related to advocacy or which is particularly related to law, rather than assessing their critical thinking through the BCAT exam. When you see the content of the BPTC, then you see that the BCAT was a waste of your money and of your time.

BCAT Applicant 3, Currently on BPTC Course

4.4.6. Mirroring comments by some BPTC Providers (see paragraph 5.3.6), five students stated that the BCAT ensured students would gain confidence that they had the required skills for the BPTC course as a result of passing the test.

If one can go through this test successfully, it's highly likely they will be able to cope with the study materials for the BPTC course.

BCAT Applicant 2, has not retaken BCAT

4.4.7. Evidence from the interviews with candidates who had failed the BCAT suggests that failing the test has little influence on student's intentions to obtain a BPTC place. While the majority of students interviewed felt the BCAT was a useful indicator of the skills required, a substantial minority felt that the test was inappropriate as an entry requirement, either viewing it as being superfluous once existing entry requirements were considered or due to its lack of alignment with the requirements of the course or the profession.

Key Findings

- Independent analysis had shown that the five areas of the BCAT test are aligned with the skills required on the BPTC course specification requirements and the outcomes of the job analysis, and thus that the BCAT test demonstrates good alignment and is a suitable test to be used in this context.
- Analysis of data on enrolments onto the BPTC in terms of the degree class held and previous degree institution (grouped as Oxbridge, Other Russell Group and other) of students do not reveal any statistically significant change across years. As a result, the available quantitative data does not provide any indication that the introduction of the BCAT has had a measurable impact on the entry quality of BPTC students.
- There has not been an increase in the pass rates on the BPTC since the introduction of the BCAT as an entry requirement. In contrast, when comparable samples are analysed, pass rates on the BPTC declined between 2012/13 and 2013/14, as did the proportion of students receiving the higher grades (Outstanding and Very Competent), and the differences between years are statistically significant. As a result, the available data does not provide any indication that the introduction of the BCAT has had a positive impact on the exit quality of BPTC students.
- There is little evidence from interviews with students who failed the BCAT first time that the introduction of the BCAT is influencing their career / routing decisions, with the vast majority of students interviewed (16 out of 17) having re-sat (and passed)

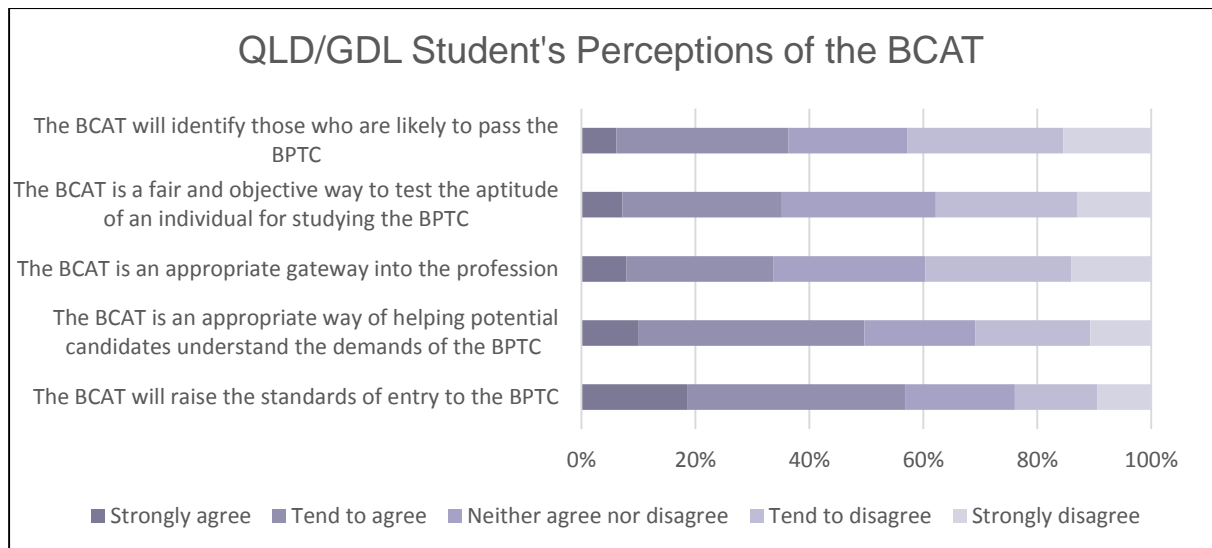
the BCAT or planning to do so, and only one student interviewed reconsidering their intention to enrol on the BPTC.

Perceptions - Effective Tool for Selection

5.1. Prospective BPTC Students

5.1.1. The survey of QLD/GDL students asked students their level of agreement with five statements covering the value of the BCAT (Figure 8). Their responses indicate a fairly even split between students who agree with the statements and those who disagree for the first three statements. In contrast, a majority of respondents (56.91%) agree or strongly agree with the statement that the BCAT will 'raise standards of entry to the BPTC', and a plurality of respondents (49.68%) agree that the BCAT 'is an appropriate way of helping potential candidates understand the demands of the BPTC'.

Figure 8 – QLD/GDL Student's Perceptions of the BCAT



5.1.2. Survey respondents who were aware of the BCAT were asked to state whether its introduction has had any influence over their decision to apply to the BPTC. Of those currently considering a career at the Bar, the majority (63.3%) stated that it had no influence over their decision to apply or not and 31.6% that it made them more wary about applying to the BPTC than they would have been if it had not been an entry requirement.

5.1.3. Of respondents both currently considering a career at the Bar and responding that they were more wary about applying for the course as a result of the introduction of the BCAT, the most common reasons given were the cost of the BCAT (32.3%) and the fact that it was an additional hurdle in an already complicated process (32.3%). Only 16.1% indicated that they were concerned over their ability to pass the BCAT.

5.1.4. This evidence suggests the BCAT may be having a limited influence on prospective students' initial decisions over whether to apply to the BPTC or not, although this is

more likely to be as a result of the cost of the test or the fact it is an additional hurdle rather than concern over their ability to pass the test.

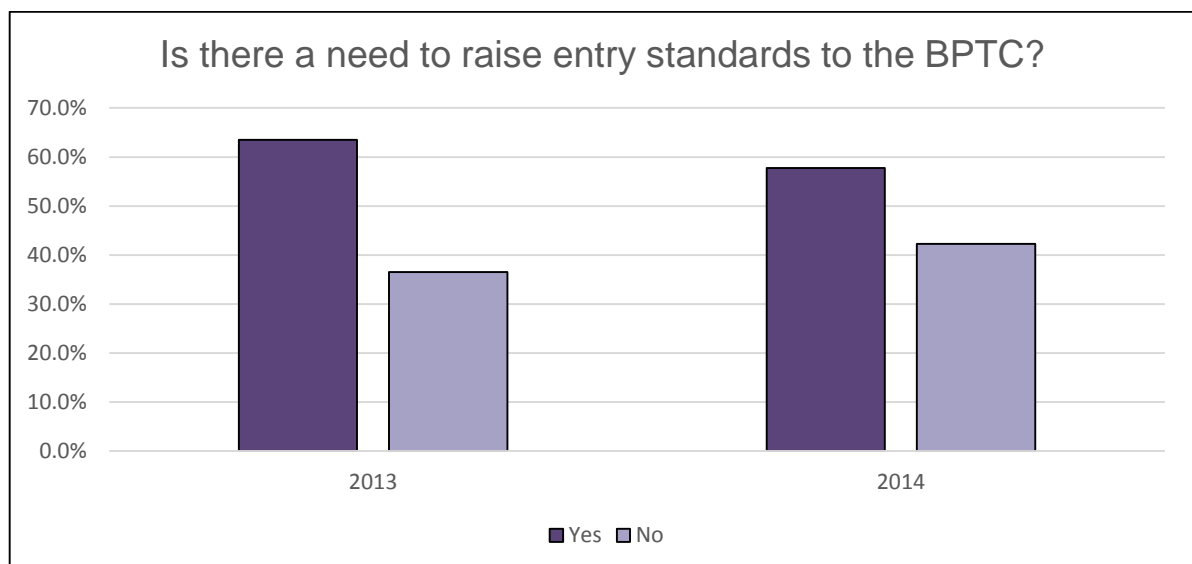
5.2. BPTC Students

5.2.1. The BSB uses a range of research tools to capture data on an ongoing basis to support its monitoring and regulatory objectives. The original scope for the BPTC perceptions survey was to capture perceptions relating specifically to course content and administration as well as vital profile information, such as equality and diversity data. The BPTC Perceptions Survey was run in 2013 and 2014, thus capturing data from both the 2012-13 and 2013-14 cohort of students on the BPTC course. This enables both the results from the 2013/2014 BPTC perceptions survey to be analysed in order to investigate the BPTC’s perceived fitness for purpose, as well as the comparison of survey results across the 2012-13 and 2013-14 cohorts to investigate any impact of the BCAT on student’s perceptions of their experience and learning environment on the course.

5.2.2. When asked whether there was a need to raise standards of entry to the BPTC, the majority of responders in both the 2013 and 2014 survey agreed, at 63.5% and 57.7% respectively (Figure 9). Any change in satisfaction with the entry standards for the course needs to be viewed in the context of other changes to admissions procedures. Some providers indicated in the BPTC interviews that they had changed their own admissions procedures over recent years, either accepting less students or introducing other filters to ensure higher quality students (paragraph 5.3.5).

5.2.3. It is important to highlight the disparity in responses between specific groups within the total population. While 73.8% of UK students and 73.7% of EU students answered that there was a need to raise the standard of entry requirements, only 39% of international students answered the same.

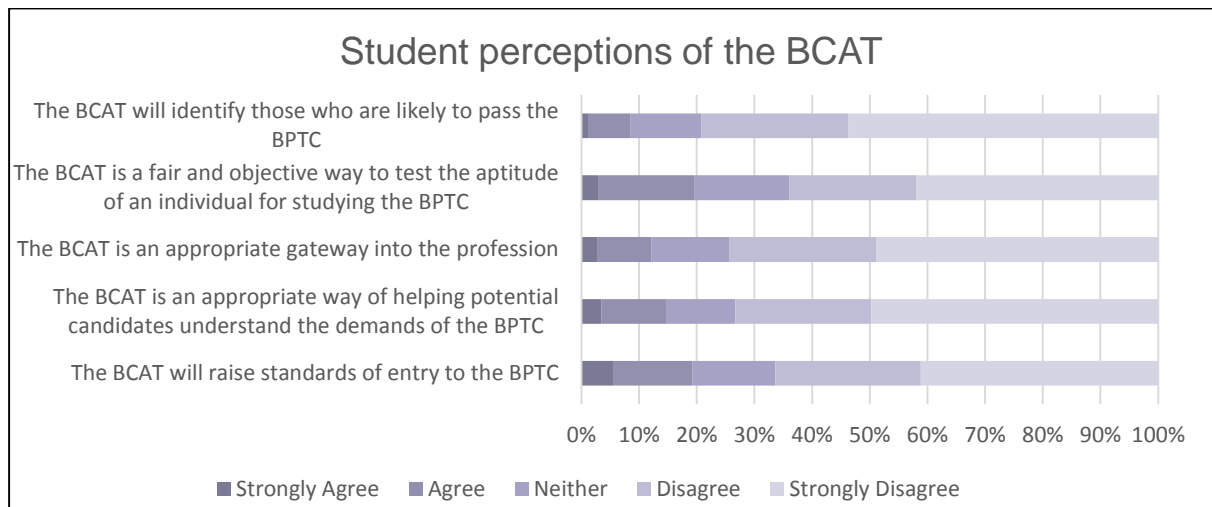
Figure 9 – Need to raise entry standards to the BPTC?



5.2.4. Through the 2014 BPTC Perceptions Survey students currently on the course were asked about their perceptions of the BCAT test in more detail. Figure 10 illustrates the responses to five statements regarding the value of the BCAT⁸.

5.2.5. Among survey respondents, the majority disagreed with all five statements. Less than a fifth of current BPTC students responding to the survey felt the test has the potential to meet its main objective ‘to raise standards of entry to the BPTC’ while close to two thirds (66.4%) disagreed. An even larger majority of respondents disagreed with the statement that the BCAT could identify those who were likely to pass the course – less than one in twelve (8.4%) of students agreed with this statement, and nearly four fifths disagreed (79.3%).

Figure 10 – Student perceptions of the BCAT



5.2.6. Respondent’s views on whether the BCAT was ‘a fair and objective way to test the aptitude of an individual studying for the BPTC’ also revealed high levels of disagreement, with 19.6% agreeing or strongly agreeing and 63.9% disagreeing or strongly disagreeing.

5.2.7. The evidence from the survey indicates that large majorities of respondents do not perceive the BCAT as an appropriate tool to achieve its objectives - that it will not identify those who are able to pass the BPTC course, and that it will not raise standards of entry – after having sat the test and started the course as part of a cohort where the BCAT is a mandatory entry requirement. This suggests that as it stands the test is not seen by students as being well suited to achieve its objectives, particularly when viewed in the context of the majority of survey respondents supporting the need to raise standards on the course (see paragraph 5.2.2).

5.2.8. In particular, the fact that the majority of BPTC students disagree with the statement that the BCAT is a fair and objective way to test aptitude for the course is a source of concern, given that changes to the required pass mark may help ensure the BCAT is better able to filter students but will not address the focus and structure of the test itself.

⁸ Between 7.8% and 8% of respondents did not respond to each of these 5 questions – these respondents have been excluded from the tables and statistics

5.2.9. The perceptions of BPTC students who have actually sat the BCAT are in marked contrast to prospective BPTC students (see paragraph 5.1.1) as large majorities disagree with each of the five statements. This evidence suggests that students that have sat the BCAT are much less likely to be positive about its ability to achieve its objectives than those who have not (and thus are less aware of what the test or the BPTC course involves).

5.3. BPTC Providers

5.3.1. The key findings from the analysis of the provider interviews were their belief that the introduction of the BCAT had – as yet - had no impact. All providers interviewed stressed that the BCAT had had no impact on either the numbers applying for the course or the quality of the 2013/14 student cohort.

5.3.2. Nine of the ten providers stated that the introduction of the BCAT had had no substantive impact on their own procedures, other than being an additional administrative burden (raised by 2 providers). However, one exception to this was raised across all providers – that there had been an additional burden to themselves due to issues with the BSB's email notification system, which had sent emails to providers for all students that had passed the BCAT regardless of whether the student had applied to their institution or not.

5.3.3. The vast majority of providers interviewed stressed that the ease of the test was an issue. Comments included that the test was too easy to filter out poor students (9 out of 10 providers); that as far as they were aware everyone had passed the BCAT (eight out of ten providers); and that the test was too easy to achieve the stated objectives of the BCAT (6 out of ten providers).

I don't think I know anyone that failed that test, even though we were rejecting people because they were far too weak academically to ever pass the BPTC, they were still passing that test and I think it was pointless

BPTC Provider 5, Course Director

5.3.4. An issue raised in the majority of interviews was that the BCAT had no value over and above provider's own admission procedures, raised in seven out of the ten interviews. These interviewees felt that their own admissions processes already filtered out the weakest students, and that as they felt the BCAT was easier to pass than their own applications process, it had little added value.

Given as I say that the bar is set so very low and people like me, already on the ground were weeding out what I think [are] the very weak candidates. I don't think that it is going to have a massive impact on providers

BPTC Provider 10, Course Director

5.3.5. Two providers mentioned that they had recently introduced more stringent entry requirements on their own initiative in order to ensure higher quality students.

We've got better quality students because we've chopped our numbers down by choice. We usually go for 120, we've decided to go for 75, so we've been able to take the better students anyway

BPTC Provider 3, Course Manager

5.3.6. Four of the providers felt that the test could give candidates a misleading view of their own ability, in that passing the BCAT implied the candidate had the ability to pass the BPTC course. In two interviews respondents stated that applicants who they had not offered places to had questioned the decision based on their passing the BCAT.

We had students who we had rejected because we didn't think they were good enough coming back to us saying, 'I've passed the BCAT now, would you reconsider?'

BPTC Provider 7, Course Director

5.3.7. However, despite the limited impact of the BCAT to date, all the providers interviewed were supportive of the need to raise standards on the BPTC course. Providers highlighted a range of reasons to ensure higher quality students on the course, such as the overall difficulty of the course (4 interviews) the competitiveness of the profession (3 interviews), the cost of the course (3 interviews) and the impact on the overall course experience as a result of students with low ability (3 interviews) or poor language skills (3 interviews).

5.3.8. Seven interviewees explicitly stated their support for the introduction of the BCAT as a screening tool for poor quality students who could otherwise gain a place on the course.

As with a number of these things the theory is good. If you can give somebody a piece of information that enables them to make a more informed choice before they spend £12K, 13K, 14K on a course, then I think the theory is good

BPTC Provider 1, Course Director

5.3.9. The evidence from the BPTC provider interviews suggests that while there is considerable support among providers for raising standards on the BPTC course, the majority of providers interviewed feel that the BPTC is not currently having this effect, with no impact on their own admissions procedures, no perceived improvement in the quality of students on the course, and a widespread perception that the test is far too easy to filter course applicants as it currently stands.

Key Findings

- A majority of prospective BPTC students (students on QLD or GDL courses) surveyed agreed that the BCAT test has the potential to raise standards of entry to the BPTC, and just under half (49.68%) agreed that 'the BCAT is an appropriate way of helping potential candidates understand the demands of the BPTC'. Prospective student's survey responses also suggested the BCAT may be having a limited influence on prospective students' initial decisions over whether to apply to the BPTC due to the cost of the test and the fact it is an additional hurdle in a complex process.
- In both 2013 and 2014, the majority of students on the BPTC who responded to the Perceptions Survey felt that there is a need to raise the standards of entry to the BPTC. However, large majorities of survey respondents felt that the BCAT did not have the potential 'to raise standards of entry to the BPTC', and less than one in 12 agreed that the BCAT 'would identify those likely to pass the BPTC'.

- BPTC provider staff interviewed indicated that their entry criteria had not altered specifically because of the introduction of the BCAT and that the introduction of the BCAT has not had any noticeable impact on the standard of students on the course.
- The majority of BPTC providers interviewed felt the BCAT was too easy to have any impact on standards, and felt that the BCAT was not an effective tool to improve standards beyond existing admissions and/or selection procedures. However, all interviewees were supportive of the raising of the standards of students on the BPTC.

Performance Evaluation

6.1. Validity of Test

- 6.1.1. The performance evaluation provides an assessment of the validity of the BCAT as a selection test, and in particular explores the relationship between BCAT and BPTC outcomes⁹.
- 6.1.2. The original sample consisted of all 2013/14 BPTC students for whom there was matched BCAT data (n=1188). Summary statistics covering the makeup of the sample and BCAT scores by provider are included in Tables 2 and 3, for comparison with the restricted sample used for the analysis. For reasons detailed in section 2.8, Kaplan Law School was excluded from the sample. A full process of data cleaning and quality assurance was then undertaken, which is fully detailed in Appendix B. This resulted in a final full sample of n=1073.

Table 2 – Number of Candidates by Provider (Unrestricted Sample)

BPTC Provider	Frequency	Percent
BPP-Leeds	38	3.2
BPP-London	232	19.5
BPP-Manchester	53	4.5
Cardiff	67	5.6
City	291	24.5
Kaplan	71	6.0
MMU	56	4.7
Newcastle	62	5.2
Nottingham	59	5.0
UoL-Birmingham	82	6.9
UoL-London	118	9.9
UWE	59	5.0

Table 3 - BCAT Score by Provider (Unrestricted Sample)

BPTC Provider	N	Range	Min	Max	Mean
Kaplan	71	30	39	69	55.39
BPP-London	232	32	37	69	53.19
City	291	33	37	70	53.14
Nottingham	59	19	43	62	52.93
MMU	56	23	43	66	52.84
BPP-Leeds	38	26	37	63	52.18
BPP-Manchester	53	33	38	71	51.98
UoL-London	118	30	37	67	51.31
UWE	59	20	42	62	51.07
UoL-Birmingham	82	24	37	61	50.39
Cardiff	67	27	39	66	50.36
Newcastle	62	22	42	64	49.68

⁹ Prior to analysis, a process of data cleaning and removal of outliers was conducted. Full details of this process can be found in Appendix B. In particular it is important to note the samples used in the different stages of the analyses.

6.1.3. Table 4 outlines the number and frequency of candidates by Provider in the final sample used for the Performance Evaluation. The majority of candidates (273, 25.4%) came from City and the lowest number of candidates (37, 3.4%) came from BPP Leeds.

Table 4 – Number of Candidates by Provider

	Frequency	Percent
BPP-Leeds	37	3.4
BPP-London	225	21.0
BPP-Manchester	49	4.6
Cardiff	66	6.2
City	273	25.4
MMU	54	5.0
Newcastle	61	5.7
Nottingham	58	5.4
UoL-Birmingham	77	7.2
UoL-London	114	10.6
UWE	59	5.5

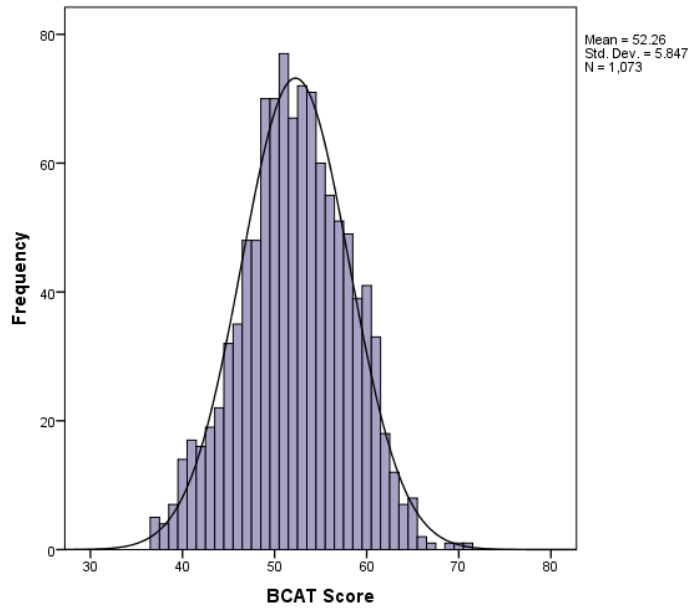
6.1.4. Analysis by whether a candidate sat the BPTC once or whether they had to re-sit one or more modules ('Attempt') was undertaken. 546 (50.9%) candidates were classified as 'first attempt' and 527 (49.1%) candidates were classified as 'second attempt'.

6.1.5. Analysis of BCAT descriptive statistics was carried out on Sample A (n=1073). Table 5 provides the descriptive statistics for the BCAT. The mean score for the BCAT is 52.26. Figure 11 provides a histogram of the data; this shows that the data broadly follows a normal distribution and appears to be differentiating between candidates.

Table 5 – BCAT Descriptive Statistics

	N	Range	Minimum	Maximum	Mean
BCAT Score	1073	34	37	71	52.26

Figure 11 – BCAT Score distribution



6.1.6. BCAT score was analysed by BPTC attempt (first/second). Those who only sat the BPTC once (n=546), had a higher mean BCAT score (54.20) than those who has a second attempt at the BPTC (50.26, n=527). Statistical testing showed this difference to be significant.

6.1.7. BCAT score was also analysed by Provider and Table 6 provides a summary of the statistics. City had the highest mean BCAT score (53.34) closely followed by BPP London (53.33). Newcastle had the lowest BCAT score (49.64), closely followed by Cardiff (50.26). Statistical tests revealed significant differences between providers, with BPP London and City scoring significantly higher than Cardiff, Newcastle and UoL Birmingham.

Table 6 – BCAT Score by Provider

BPTC Provider	N	Range	Minimum	Maximum	Mean
City	273	33	37	70	53.34
BPP-London	225	32	37	69	53.33
Nottingham	58	19	43	62	52.91
MMU	54	23	43	66	52.8
BPP-Leeds	37	26	37	63	52.46
BPP-Manchester	49	33	38	71	52.35
UoL-London	114	30	37	67	51.31
UWE	59	20	42	62	50.98
UoL-Birmingham	77	24	37	61	50.49
Cardiff	66	27	39	66	50.26
Newcastle	61	22	42	64	49.64

6.1.8. Reliability and item level scoring and analysis of the BCAT is undertaken by the supplier (Pearson Talent Lens) and is scored using Item Response Theory (IRT). The overall test reliability is good and in line with expectations for a selection test of this nature. The mean score increased slightly in 2014 from 39.3 to 39.9, but this increase is negligible. Item level analysis indicates a good fit with the measurement model

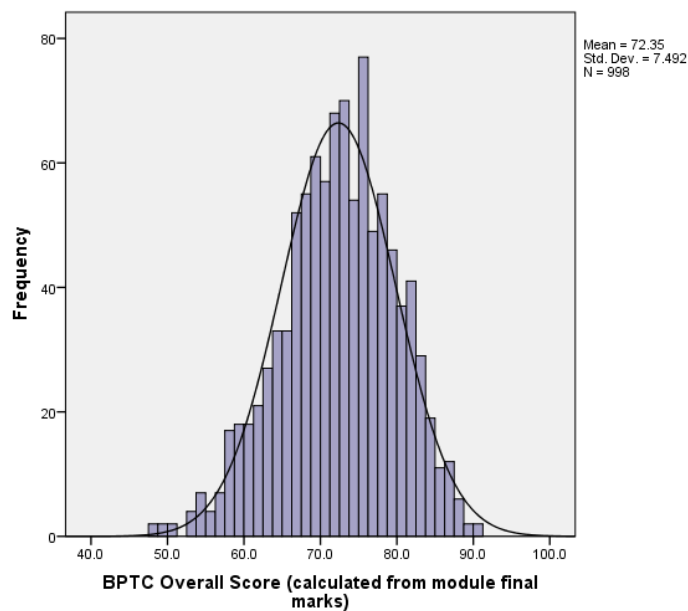
employed (IRT) and the individual items are generally of good quality and are able to differentiate between candidates. The mean difficulty of the test has remained consistent. Overall, there is nothing of concern in relation to the internal psychometric properties of the test itself.

6.1.9. Analysis of BPTC overall score was carried out on Sample C (n=998). Table 7 provides the descriptive statistics for the BPTC overall score. The mean BPTC overall score is 72.35. Figure 12 provides a histogram of the data; this shows that the data broadly follows a normal distribution and appears to be differentiating between candidates.

Table 7: BPTC Overall Score Descriptive Statistics

	N	Range	Minimum	Maximum	Mean
BPTC Overall Score	998	42.5	48.7	91.2	72.35

Figure 12 – Histogram of BPTC Overall Score



6.1.10. BPTC overall score was analysed by BPTC attempt (first/second). Those who only sat the BPTC once (n=505), had a higher mean BPTC overall score (76.22) than those who has a second attempt at the BPTC (68.39, n=493). Statistical testing showed this difference to be significant.

6.1.11. Analysis of BPTC final overall grade descriptive statistics was carried out on Sample B (n=1067); see Appendix B for further details.

6.1.12. The highest proportion of BPTC final overall grade was Very Competent (468, 43.9%) and the lowest proportion of BPTC final overall grade was Outstanding (79, 7.4%), see Table 8.

Table 8 – BPTC Final Overall Grade

	Frequency	Percent
Outstanding	79	7.4
Very Competent	468	43.9
Competent	128	12.0
Not Yet Competent	392	36.7

6.1.13. When the data was split by BPTC attempt, for first attempt candidates, only 81 candidates (15.0%) received Not Yet Competent and did not attempt any re-sits (Table 9). The majority received a Very Competent (357, 66.1%). For second attempt candidates, 311 (59.0%) candidates still received a Not Yet Competent, and only 1 (0.2%) received an Outstanding on their second attempt.

Table 9: BPTC Final Overall Grade by Attempt

		Frequency	Percent
First attempt	Outstanding	78	14.4
	Very Competent	357	66.1
	Competent	24	4.4
	Not Yet Competent	81	15
Second attempt	Outstanding	1	0.2
	Very Competent	111	21.1
	Competent	104	19.7
	Not Yet Competent	311	59

Key Findings

- The psychometric properties of the BCAT reveal it to be a reliable test that is able to differentiate between candidates.
- Candidate who only sat the BPTC once, had higher BCAT scores and BPTC overall scores than those who had to re-sit one or more modules on the BPTC.
- There were differences in BCAT scores between the Providers, with City having the highest mean BCAT score and Newcastle having the lowest mean BCAT score.
- The highest proportion of BPTC final overall grade was Not Yet Competent (392, 36.7%) and the lowest proportion of BPTC final overall grade was Outstanding (79, 7.4%). There were differences in the BPTC final overall grade obtained by individuals from different Providers.

6.2. BCAT Group Differences

6.2.1. Selection tests aim to not unfairly discriminate or show adverse impact against any particular group and it is important that this is monitored as part of the evaluation. All

protected and non-protected characteristics¹⁰ are analysed here to identify if there are any significant differences in BCAT scores for the identified groups. This analysis was conducted on Sample A (n=1073).¹¹

6.2.2. For the majority of the characteristics (protected and non-protected) related to group differences there was missing data for a proportion of the candidates. Prior to any group difference analysis, analysis was conducted to see if there was bias in the missing results for the protected characteristics that had high number of missing responses. The analysis indicated that there was significant differences in BCAT score for whether an individual had a missing response for the following variables; Ethnicity, State or Fee Pay School, Caring Responsibilities (children) and Religion. This should be therefore taken into consideration when interpreting group difference results as by not including these individuals, findings may be either over or under estimated.

6.2.3. All protected and non-protected characteristics were analysed. Age, Disability, Caring Responsibilities (Children), State or Fee paying school, and Sexual Orientation do not exhibit any significant differences. Caring responsibilities (other) did exhibit a significant difference – however, as the numbers in the caring category are small this results should be interpreted with caution.

- **Gender:** Males (52.70, n=499), obtained a higher mean BCAT score than Females (51.87, n=570). This difference was statistically significant, reflecting a very small effect size. 4 (0.4%) candidates did not provide data in relation to gender.
- **Language:** Those that stated that English was their first language (52.50, n=913), obtained a higher mean BCAT score than those that stated that English was not their first language (50.91, n=160). This difference was statistically significant, reflecting a small effect size.
- **Law degree/GDL:** Those that stated that they hold a GDL obtained a higher mean BCAT score (55.30, n=231) than those that hold a Law degree (51.42, n=841). This difference was statistically significant, reflecting a medium effect size. 1 (0.1%) candidate did not provide data in relation to degree type.
- **Parental Degree:** Those that stated that their parent(s) held a degree obtained a higher mean BCAT score (52.70, n=639) than those that stated that neither of their parents held a degree (51.23, n=347). This difference was statistically significant, reflecting a small effect. 87 (8.1%) candidates did not provide data in relation to parental degree.
- **Ethnicity:** Table 10 below provides the mean BCAT scores by Ethnicity. Data was not available for 87 (8.1%) candidates. Statistical analysis showed there were significant differences in the BCAT scores obtained by individuals from different ethnic backgrounds. Analysis indicated that candidates from a White ethnic background and a Mixed ethnic background scored significantly higher than those from an Asian, Black or Other background.

¹⁰ All group data is obtained from BCAT records with the exception of Disability and Degree Classification, which use BPTC data. Disability data had high levels of missing data in the BCAT records, and Degree Classification was not available.

¹¹ This analysis is not completed on the full BCAT cohort (n=2003) as data preparation methodology for this report dictated that only matched data was to be included. A report entitled 'BCAT performance distribution analysis' (2013) provides distribution and group differences analysis of the full 2013 BCAT cohort

Table 10 – BCAT Score by Ethnicity

	N	Mean	SD	Minimum	Maximum
White	413	54.91	5.70	37	71
Asian	438	50.02	4.85	37	65
Black	66	48.74	5.24	39	60
Mixed	45	53.31	4.90	40	65
Other	24	48.50	4.60	37	56

6.2.4. Ethnicity was also re-coded into a dichotomous variable¹². Those from a White ethnic background obtained a higher mean BCAT score (54.91, n=413) than those from a BME background (50.07, n=573). This difference was statistically significant, reflecting a large effect.

6.2.5. **Religion:** Table 11 provides the mean BCAT scores by Religion. Data was not available for 123 (11.5%) candidates. Analysis showed there were significant differences in the BCAT scores obtained by individuals from different religions. Statistical analysis indicated where the significant differences lay. Candidates who reported their religion as No religion or belief scored significantly higher than those who reported their religion as Buddhist, Christian, Hindu, Muslim and Sikh. Candidates who reported their religion as Agnostic scored significantly higher than those who reported their religion as Buddhist, Hindu, Muslim and Sikh. Candidates who reported their religion as Christian scored significantly higher than those who reported their religion as Muslim. Numbers in the Jewish and 'Other' category are too small to include in interpretation.

Table 11 – BCAT Score by Religion

Religion	N	Mean	Minimum	Maximum
No religion or belief	192	54.43	37	67
Agnostic	51	54.9	41	65
Buddhist	68	50.24	38	60
Christian (all denominations)	366	52.41	39	71
Hindu	55	50.38	44	64
Jewish	5	58.8	53	61
Muslim	190	49.06	37	63
Sikh	13	49.46	40	57
Other	10	55.2	46	66

6.2.6. **Nationality** – Table 12 provides the mean BCAT scores by Nationality. Analysis indicated there were statistically significant differences in the BCAT scores obtained by individuals from different nationalities, with Home and EU candidates both scoring significantly higher than Overseas/Non-EU candidates.

¹² A dichotomous variable is a variable with two possible values.

Table 12 – BCAT Score by Nationality

	N	Mean	SD	Minimum	Maximum
Home	390	53.48	6.22	37	70
EU	205	54.53	6.10	37	71
Overseas/Non-EU	478	50.29	4.70	37	65

6.2.7. Degree Classification and Institution: Statistical analysis showed there were significant differences in the BCAT scores obtained by individuals who hold different degree classifications. The analysis indicated that candidates who hold a 1st degree score significantly higher on the BCAT than those who hold a 2.1 or a 2.2, and those who hold a 2.1 score significantly higher than those candidates who hold a 2.2. Numbers with the 3rd category or 'Other' were too small to interpret. Data on degree classification was not available for 11 (1.0%) candidates. Table 13 below provides the mean BCAT scores by Degree Institution. Statistical analysis indicated that there were significant differences between combinations of all groups, with those attending Oxbridge having significantly higher BCAT scores than those from Russell Group Institutions (excluding Oxbridge) and Other institutions, and those from Russell Group Institutions having significantly higher BCAT scores than those from Other institutions. Data on Degree Institution was not available for 196 (18.3%) candidates.

Table 13 – BCAT Score by Degree Institution

Degree Institution	N	Mean	Minimum	Maximum
Oxbridge	101	58.81	48	70
Russell Group	310	53.73	40	71
Other	466	50.66	37	69

6.2.8. Linear regression¹³ was conducted to examine whether the significant protected characteristics predicted BCAT score. The significant predictors that had multiple categories were recoded into dichotomous variables.¹⁴ Only five of the variables were included in the final model - Degree Classification (1st/2.1 or 2.2/3rd), Ethnicity (White or BME), Nationality (Home/EU or Overseas), Parental Degree, and Law degree or GDL - as including additional variables did not significantly improve model validity. An inspection of individual predictors revealed that all five variables were significant predictors of BCAT score with Ethnicity providing the biggest unique contribution, and Nationality providing the lowest unique contribution. Parent(s) having a degree, being from a White ethnic background, holding a GDL, holding a 1st/1.2 degree and Nationality classed as 'Home/EU' were all associated with a higher BCAT score.

6.2.9. A second multiple regression was run to further understand the relationship between Ethnicity and BCAT score. Degree Classification, Nationality, Parental Degree and Law degree or GDL were entered into model one which explained 16.0% of the variance.¹⁵ This was revealed to be statistically significant. Adding Ethnicity into the second model explained an additional 7.5% of the variance which was also statistically significant. This indicates that Ethnicity continues to significantly predict BCAT score when the other variables are controlled for i.e. the observed effect of

¹³ Regression analysis is a method of statistical analysis that examines the relationship between an outcome variable and one or more explanatory variables. Regression analysis reveals both the size of any predictive relationship and its statistical significance.

¹⁴ This was not possible for Religion, so it could not be included in the model.

¹⁵ Variance is a measurement of the spread between numbers in a data set. The greater the proportion of the variance explained, the better a statistical model predicts the observed data.

Ethnicity on BCAT score still exists, independent of the effects of other predictive variables.

6.2.10. The findings in relation to Ethnicity in particular are not surprising. In the 2011 pilot, differences of 0.75 standard deviation in BCAT scores between White candidates and BME candidates was found, which is slightly less than found in this present study (.83). Differences of this order are likely to lead to differences in success rates for the groups. This result is typical of findings in other selection tests in other contexts where difference of one standard deviation or more are common (Roth et al, 2001, Wakeford et al, 2015).

6.2.11. The other significant predictors are related to educational background and socio-economic status (Degree Classification, Parental Degree, Law/GDL degree). These should be considered in light of widening participation agendas. Nationality is also likely to be a function of level/quality of educational qualifications, rather than, for example, language which was not a significant predictor in the regression equation.

6.2.12. A DIF (Differential Item Functioning) analysis¹⁶ was also undertaken on individual test items. The number of items flagged via DIF was fewer than would be expected by chance. After consultation with a psychometrician, broadly speaking, these results do not provide any particular concern about the fairness of the test, however it is important that DIF continues to be monitored.

Key Findings

- Significant difference in BCAT score were found for 10 of the categories analysed. These were Gender, Language, Parental Degree, Caring Responsibilities (Other), Law degree/GDL, Ethnicity, Religion, Nationality, Degree Classification and Degree Institution.
- Regression analysis identified that Degree Classification (1st/2.1 or 2.2/3rd), Ethnicity (White or BME), Nationality (Home/EU or Overseas), Parental Degree and Law or GDL degree all predicted BCAT score.
- Ethnicity was the biggest predictor of BCAT score, and the effect of Ethnicity on BCAT score still exists, independent of the effects of the other predictive variables.
- Although differences for different protected characteristic groups were identified at the item level, there is no particular cause for concern.

6.3. Predicting BPTC Outcomes

6.3.1. This analysis provides evidence relating to how well the BCAT scores predict the BPTC overall score and BPTC final overall grade. A good relationship between test scores and course outcomes is critical to using the test to identify people unlikely to pass the course.

6.3.2. A correlation analysis was undertaken between BCAT score and BPTC overall score using sample C (n=998). A correlation is a statistic which provides an estimate of the size of the relationship between two variables. The results show that the two variables are significantly positively correlated (0.546) indicating a strong relationship

¹⁶ DIF analysis is a procedure used to determine if test items are fair and appropriate for assessing the ability of various demographic groups.

between the BCAT and BPTC overall score, with those who scored highly on the BCAT also tending to have a higher BPTC overall score. A correlation of 0.3 or above is desirable in using a test for selection.

- 6.3.3. In order to use the BCAT score to predict outcomes, linear regression was conducted to examine whether BCAT score predicted BPTC overall score. The overall model showed that BCAT score explained 29.8% of the variance in BPTC score, which was statistically significant, with higher scores on the BCAT associated with higher scores on the BPTC. The BPTC overall score is predicted to rise by about half a standard deviation for every standard deviation rise in the BCAT test score.
- 6.3.4. Multiple regression was conducted to examine whether adding BPTC Attempt (first or second attempt) as a variable provided a better fit for the model. The model revealed that Attempt and BCAT score are both significant predictors of BPTC score, with BCAT score providing the biggest unique contribution. Sitting the BPTC only once is associated with higher scores on the BPTC.
- 6.3.5. To investigate this further, the level of prediction of the BCAT score on BPTC overall score, while controlling for the effects of BPTC Attempt was analysed. This enables one to best isolate the true relationship between BCAT score and BPTC overall score. Attempt was entered into model one which explained 27.4% of the variance, and was statistically significant. Adding BCAT score into the second model explained an additional 14.7% of the variance which was also statistically significant. This indicates that the BCAT continues to significantly predict BPTC overall score when Attempt is controlled for, but Attempt does have a significant and unique contribution to BPTC overall scores.
- 6.3.6. **Predicting BPTC Module Scores:** Analysis on the BPTC module scores was conducted on Sample A (n=1073). Correlational analysis and regression analysis revealed statistically significant correlations between BCAT score and all module scores, and that BCAT score was a significant predictor of all module scores.
- 6.3.7. **Predicting BPTC Overall Grade:** Analysis of BPTC final overall grade was conducted on Sample B (n=1067). The descriptive statistics of BCAT score, split by BPTC final overall grade were examined. Table 14 below shows that those that received an Outstanding grade had the highest mean BCAT score (58.68), and those who received a Not Yet Competent had the lowest mean BCAT score (49.10).

Table 14 – Descriptive statistics of BCAT score, split by BPTC Final Overall Grade

BPTC Overall Final Grade	N	Range	Min	Max	Mean
Outstanding	79	25	45	70	58.68
Very Competent	468	29	38	67	54.15
Competent	128	23	40	63	51.12
Not Yet Competent	392	34	37	71	49.1

- 6.3.8. Statistical analysis showed that there were significant differences in the BCAT scores obtained by individuals receiving different BPTC final overall grades, with significant differences in BCAT scores between all combinations of BPTC final overall grades.

6.3.9. Statistical tests indicated that there is a significant association between BCAT Score (binned)¹⁷ and BPTC final overall grade, with a medium effect size. This indicates that BCAT score (binned) had a significant effect on an individual's BPTC final overall grade. In particular:

- **Outstanding:** Individuals were significantly more likely to obtain a grade of Outstanding if they obtained a BCAT score of 58 or more, and significantly less likely if they were in the BCAT score ranges of less than 47, 48 to 51, or 52 to 54.
- **Very Competent:** Individuals were significantly more likely to obtain a grade of Very Competent if they were in the BCAT score ranges of 55 to 57, or 58 or more, and significantly less likely if they were in the ranges of 47 or less, or 48 to 51.
- **Competent:** Individuals were significantly more likely to obtain a grade of Competent if they had a BCAT score of 48 to 51, and significantly less likely if they had a BCAT score of 58 or more.
- **Not Yet Competent:** Individuals were significantly more likely to obtain a grade of Not Yet Competent if they had a BCAT score of 47 or less, or 48 to 51, and significantly less likely if they obtained a BCAT score of 55 to 57, or 58 or more.

6.3.10. While there is some overlap of BCAT scores between the grades, there is a clear relationship between the BCAT scores and outcome grade with higher BCAT scores obtaining generally higher grades. Very Competent had the largest variance in BCAT scores, followed by Not Yet Competent, Competent, and finally Outstanding.

6.3.11. A multinomial logistic regression¹⁸ was used to examine the prediction of BCAT score upon BPTC final overall grade. The results show that BCAT score significantly predicts BPTC final overall grade. In particular, BCAT score significantly predicts whether someone will achieve an Outstanding vs. Not Yet Competent grade and a Very Competent vs. Not Yet Competent grade, but not a Competent vs. Not Yet Competent grade, with stronger prediction seen for Outstanding compared to Very Competent.

- **Outstanding vs. Not Yet Competent:** for every increase in BCAT score by one point, someone is 1.48 times more likely to obtain a grade of Outstanding rather than NYC.
- **Very Competent vs. Not Yet Competent:** for every increase in BCAT score by one point, someone is 1.21 times more likely to obtain a grade of VC rather than NYC.

Key Findings

- There is a significant positive correlation between the BCAT and BPTC overall score. Those who scored highly on the BCAT also tended to have a higher BPTC overall score.
- Regression analysis identified that the BCAT significantly predicts BPTC overall score, and significantly predicts BPTC final overall grade. Individuals with higher BCAT scores generally obtain higher BPTC scores and overall grades.
- Whether you re-sit the BPTC also significantly predicts BPTC overall score, with those who sit the BPTC only once having higher BPTC overall scores. However, the BCAT predicts BPTC overall score over and above 'attempt'.

6.4. Differential Validity

¹⁷ To examine the relationship between BCAT score and BPTC final overall grade, BCAT score was split into five bands, each encompassing approximately 20% of the sample.

¹⁸ Multinomial logistic regressions were used in a number of the analyses. They should be interpreted with caution because when a large number of categories are present, there can be large numbers of cases with zero frequencies.

- 6.4.1. Differential validity identifies whether the predictive relationships identified between the BCAT and BPTC outcomes is the same for all protected characteristics groups. However, only those groups that have a significant relationship with BPTC outcomes are included in the analysis.
- 6.4.2. For this analysis, variables were re-coded into dichotomous variables where possible - Degree Institution (Russell Group or Non-Russell Group), Degree Classification (1st/2:1 or 2.2/3rd), Nationality (Home/EU or Overseas) and Ethnicity (White or BME). This was not possible for two variables, Religion and Sexual Orientation.
- 6.4.3. **BPTC Overall Score:** Analysis was conducted on Sample C (n=998). Statistical tests were conducted for BPTC overall score and all recorded student characteristics to identify which may be significant predictors. Testing showed a significant difference in BPTC score for Disability, State or Fee pay School, Language, Law degree or GDL, White or BME, Nationality, Degree Classification, Degree Institution (Russell Group or Non-Russell Group), Religion and Sexual Orientation.
- **Disability:** Those who declared they had a disability obtained a higher mean BPTC overall score (75.73, n=47) than those who declared no disability (72.17, n=946). Data on disability was not available for 5 (0.5%) candidates.
 - **State or Fee Pay Schools:** Those from a fee paying school obtained a higher mean BPTC overall score (72.70, n=525) than those from a state school (71.71, n=410). Data was not available for 63 (6.3%) candidates.
 - **Language:** Those who have English as their first language obtained a higher mean BPTC overall score (73.04, n=849) than those who do not have English as their first language (68.43, n=149).
 - **Law degree or GDL:** Those holding a GDL obtained a higher mean BPTC overall score (76.57, n=224) than those with a Law degree (71.12, n=773). Data was not available for 1 (0.1%) candidate.
 - **Ethnicity (White or BME):** Those candidates who classified themselves as White obtained a higher mean BPTC overall score (76.28, n=396) than those who classified themselves as BME (69.08, n=523). Data was not available for 79 (7.9%) candidates.
 - **Nationality (Home/EU or Overseas):** Those from Home or the EU obtained a higher mean BPTC overall score (74.79, n=564) than those from Overseas (69.18, n=434).
 - **Degree Classification (1st/2.1 or 2.2/3rd):** Those with a 1st or 2.1 degree classification obtained a higher mean BPTC overall score (74.48, n=692) than those with a 2.2 or 3rd degree (66.96, n=272). Data was not available for 34 (3.4%) candidates.
 - **Degree Institution (Russell Group or Non-Russell Group):** Those from a Russell Group Institutions obtained a higher mean BPTC overall score (76.19, n=393) than those from a non-Russell Group Institution (69.31, n=426). Data was not available for 179 (17.9%) candidates.
 - **Religion:** Analysis showed there were statistically significant differences in the BPTC overall scores obtained by individuals from different religions. Table 15 below provides the mean BPTC overall scores by Religion. Statistical tests were examined to determine where significant differences lay. Data was not available for 112 (11.2%) candidates.
 - Candidates who reported their religion as No religion or belief scored significantly higher than those who reported their religion as Buddhist, Christian, Hindu, Muslim and Sikh.
 - Candidates who reported their religion as Agnostic scored significantly higher than those who reported their religion as Hindu, Muslim and Sikh.
 - Candidates who reported their religion as Buddhist scored significantly higher than those who reported their religion as Muslim.

- Candidates who reported their religion as Christian scored significantly higher than those who reported their religion as Hindu and Muslim.

Table 15 – BPTC Overall Score by Religion

	N	Mean	Minimum	Maximum
No religion or belief	181	76.22	57.2	91.2
Agnostic	51	74.71	53.3	90.7
Buddhist	66	70.86	55.5	83.8
Christian (all denominations)	350	72.53	49.1	89.6
Hindu	53	67.88	54.4	84.3
Jewish	5	82.19	76.1	87.1
Muslim	159	67.45	48.7	81.5
Sikh	12	67.69	58.3	76.2
Other	9	74.81	61	86

6.4.4. Regression analysis was run to examine the impact of the protected and non-protected characteristics on the predictive relationship between the BCAT and BPTC overall score. Only five of the variables were included in the final model (BCAT score, Degree Classification, Degree Institution, Ethnicity (White or BME), and Law degree or GDL) as including further variables did not significantly improve model validity. An inspection of individual predictors revealed that all variables were significant predictors of BPTC overall score with BCAT score providing the biggest unique contribution and Law degree or GDL providing the lowest unique contribution. A higher BCAT score, higher degree classification, achieving your degree at a Russell Group institution, being classified as White and holding a GDL were all associated with a higher BPTC overall score.

6.4.5. **BPTC Final Overall Grade:** Analysis by BPTC final overall grade was conducted on Sample B (n=1067). Statistical tests were carried out to identify which of the protected characteristics were significant predictors of BPTC final overall grade. These indicated that Age (Under or Over 25), Ethnicity (White or BME), Language, Degree Institution (Russell Group or Non-Russell Group), Degree classification (1st/2:1 v 2:2/3rd), Law Degree/GDL, Nationality (Home/EU or Overseas), and Religion were significantly associated with BPTC final overall grade. Gender, Parental Degree, State or Fee Paying School, Caring responsibilities - Children, Caring responsibilities - Other, and Sexual Orientation were all non-significant.

- **Age:** significant, with a small effect size. Over 25s were more likely than Under 25s to obtain an Outstanding grade. Data was not available for 42 (3.9%) candidates.
- **Ethnicity (White or BME):** significant, with a medium effect size. White individuals were more likely than BME individuals to obtain a grade of Outstanding or Very Competent, and less likely to obtain a grade of Competent or Not Yet Competent. The opposite pattern of results was seen for BME individuals. Data was not available for 86 (8.1%) candidates.
- **Language:** significant, with a small effect size. Those for whom English was not their first language were less likely to obtain a final grade of Outstanding or Very Competent, and more likely to obtain a final grade of Not Yet Competent.
- **First Degree Institution (Russell Group or Non-Russell Group):** significant, with a medium effect size. Those who attended a Russell Group University were more likely to obtain a grade of Outstanding or Very Competent, and less likely to obtain a grade of Competent or Not Yet Competent than individuals who attended a Non-Russell Group University. The opposite pattern of results was seen for those who attended a Non-Russell Group University. Data was not available for 195 (18.2%) candidates.

- **First Degree Classification (1st/2:1 or 2:2/3rd):** significant, with a medium effect size. Those who obtained a 1st or 2:1 were more likely than those who obtained a 2:2 or 3rd, to obtain a final grade of Outstanding or Very Competent, and less likely to obtain a final grade of Not Yet Competent. The opposite pattern of results was seen for those who obtained a 2:2 or 3rd. Data was not available for 35 (3.2%) candidates.
- **Law Degree or GDL:** significant, with a medium effect size. Those who had a GDL were more likely to obtain a final grade of Outstanding or Very Competent, and less likely to obtain a grade of Competent or Not Yet Competent. Those who had a Law Degree were less likely to obtain a final grade of Outstanding, and more likely to obtain a final grade of Not Yet Competent. Data was not available for 1 (0.1%) candidates.
- **Nationality (Home/EU or Overseas):** significant, with a medium effect size. Individuals who were Home or EU were more likely to obtain a final grade of Outstanding or Very Competent than Overseas students, and less likely to obtain a final grade of Competent or Not Yet Competent. The opposite pattern of results was seen for Overseas students.
- **Disability (Yes or No):** significant, with a small effect size. Individuals who reported having a disability were more likely to obtain a final grade of Outstanding than those who did not report having a disability. Data was not available for 6 (0.6%) candidates.
- **Religion (n=945):** significant, with a small effect size. Hindu or Muslim individuals were more likely to obtain a Not Yet Competent grade, and individuals with no religion or belief were more likely to receive an Outstanding or Very Competent grade.

6.4.6. A multinomial logistic regression was run to identify whether there was a change in the predictive relationship between BCAT score and BPTC final overall grade for any of the significant protected characteristic predictors. Age, Disability and Language were removed from this analysis as they did not significantly improve model validity.

- **Outstanding vs. NYC:** Individuals who are White (3.73 times), have a GDL (4.76 times), are Home/EU (16.42 times), and attended a Russell Group University (28.86 times) are more likely to achieve an Outstanding grade.
- **Very Competent vs. NYC:** Individuals who are White (2.61 times), have a GDL (2.5 times), and attended a Russell Group University (4.24 times) are more likely to achieve a Very Competent grade. Nationality was no longer significant.
- **Competent vs. NYC:** None of the protected characteristic significantly predicted whether someone would obtain a result of Competent over NYC.

6.4.7. A second multinomial logistic regression was run to examine the prediction of BCAT score upon BPTC Final Overall Grade, when the significant protected characteristics are added into the model. BCAT score significantly predicted the outcomes of Outstanding, Very Competent and Competent over Not Yet Competent, and the protected characteristic variables' prediction decreased when BCAT was added into the regression.

Key Findings

- Statistically significant differences in BPTC overall score were found for 10 of the categories analysed. These were Disability, State or Fee pay School, Language, Law degree or GDL, White or BME, Nationality, Degree Classification, Degree Institution (Russell Group or Non-Russell Group), Religion and Sexual Orientation.
- Regression analysis showed that a higher BCAT score, higher degree classification, achieving your degree at a Russell Group institution, being classified as White, and holding a GDL were all associated with a higher BPTC overall score.

- Regression analysis identified that there is an improvement in prediction of the BPTC overall score when Degree Classification, Degree Institution, Ethnicity and Law degree or GDL are included alongside the BCAT score. However, the effect of BCAT on BPTC overall score still exists, independent of the effects of these variables, and BCAT score is still the best predictor of BPTC overall scores.
- Further analysis showed that individuals who are White, have a GDL, are Home/EU, and attended a Russell Group University are more likely to achieve an Outstanding or Very Competent grade than a Not Yet Competent grade.

6.5. Incremental Validity

6.5.1. Section 6.4 above outlined that both Degree Institution (Russell Group or Non-Russell Group) and Degree Classification (1st/2.1 or 2.2/3rd) showed significant differences in BPTC overall score and BPTC final grade, with those classified as obtaining their first degree from a Russell Group Institution and those obtaining a 1st or 2.1 degree having significantly higher BPTC outcomes, than those obtaining their first degree from a Non-Russell Group Institution and those obtaining a 2.2 or a 3rd respectively.

6.5.2. Statistical tests showed that First Degree Institution and Classification were significantly associated, with a small effect size. Those who obtained a 1st or 2:1 were significantly more likely than those who obtained a 2:2 or 3rd to have attended a Russell Group Institution, and significantly less likely to have attended a non-Russell Group Institution. The opposite pattern was found for those who obtained a 2:2 or 3rd.¹⁹

6.5.3. **BPTC Overall Score:** This analysis was carried out on the Sample C (n=998). A multiple regression was run to examine the incremental validity of BCAT score over educational variables in predicting BPTC overall score. The analysis indicated that BCAT score has significant incremental validity over other educational variables. An inspection of individual predictors revealed that all variables (Degree Institution, Degree Classification, and BCAT Score) were significant predictors of BPTC overall score with BCAT score providing the biggest unique contribution and Degree Institution providing the lowest unique contribution. A higher BCAT score, higher degree classification and achieving your degree at a Russell Group Institution were all associated with a higher BPTC overall score. While the BCAT is the strongest predictor, including educational variables in selection to the BPTC together with the BCAT will provide better prediction than the BCAT alone.

6.5.4. **BPTC Overall Grade:** This analysis was carried out on Sample B (n=1067). A multinomial logistic regression was run to determine the incremental validity of BCAT score above and beyond Degree Institution.²⁰ The analysis indicated that Degree Institution significantly predicted BPTC final overall grade, but that BCAT score was predictive above and beyond Degree Institution.

6.5.5. BCAT score was also predictive in determining outcomes of Outstanding and Very Competent over Not Yet Competent, but not for Competent over Not Yet Competent.

¹⁹ Although a significant relationship exists between the two variables, the linear regression assumption of multicollinearity was not violated

²⁰ First Degree Classification (1st and 2:1, 2:2 and 3rd) could not be entered into the regression because it resulted in too many cases with zero frequencies.

- **Outstanding vs. Not Yet Competent:** individuals attending a Russell Group University were 26.14 times more likely to obtain a grade of Outstanding over Not Yet Competent. With BCAT score in the model, the prediction reduced to 13.20 times more likely. With each increase in BCAT score by one, individuals were 1.44 times more likely to obtain a grade of Outstanding vs. Not Yet Competent.
- **Very Competent vs. Not Yet Competent:** individuals attending a Russell Group University were 4.97 times more likely to obtain a grade of Very Competent over Not Yet Competent. With BCAT score in the model, the prediction reduced to 3.35 times more likely. With each increase in BCAT score by one, individuals were 1.19 times more likely to obtain a grade of Very Competent vs. Not Yet Competent.
- **Competent vs. Not Yet Competent:** individuals attending a Russell Group University were not significantly more likely to obtain a grade of Competent over Not Yet Competent, and BCAT score was also not a significant predictor for Competent vs. Not Yet Competent.

Key Findings

- A higher BCAT score, higher degree classification, and achieving your degree at a Russell Group Institution were all associated with a higher BPTC overall score.
- While the BCAT is the strongest predictor, including educational variables as part of selection to the BPTC together with the BCAT will provide better prediction than the BCAT alone.
- Degree Institution also significantly predicted BPTC final overall grade, however the BCAT score is predictive above and beyond Degree Institution in predicting BPTC Final Overall Grade.

6.6. Cut Score Analysis

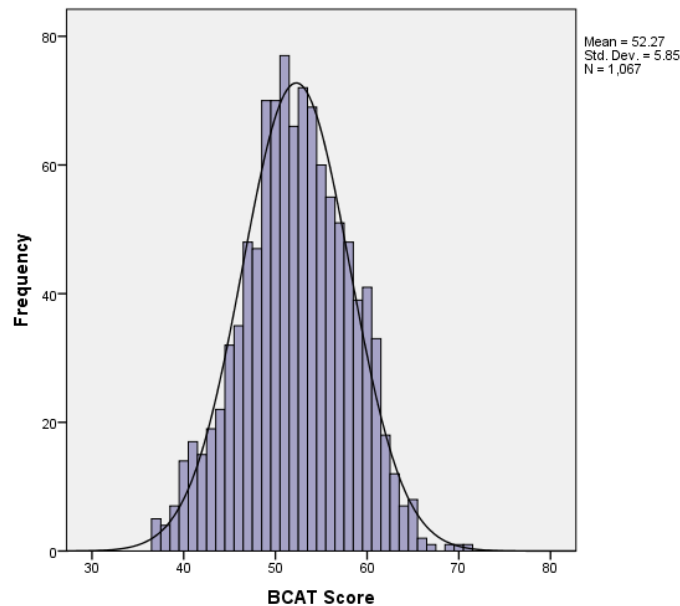
- 6.6.1. This analysis aims to identify other potential cut scores²¹, using both distribution analysis and the validation evidence. The current results show that the test is an effective predictor of performance and thus it is feasible to use the validation evidence to help identify a potential cut score, based on current data. Potential identified cut scores are then modelled on the current data to identify the impact of these cut scores on pass/failure rates on the BPTC, including adverse impact.
- 6.6.2. The analysis was conducted on Sample B (n=1067). Some issues may be that many individuals sat the BCAT after they had been offered a place on the BPTC; as such individuals do not have to obtain the highest possible BCAT score they can, but rather just pass it to gain their place because selection was based on other methods. Therefore motivation may not have been as high as if the BCAT score (other than filtering out a few low performers) had been used within selection.
- 6.6.3. Based on initial pilot analysis prior to the test being used operationally, a cut score of 37 was set for the BCAT. In the pilot sample, this was 2.06 SDs below the mean of 50.92. For the 2013 sample, a cut score of 37 falls 2.61 SDs below the mean of 52.27. The total pass rate for all sittings in 2013 was 97.6%. Of the 2003 first sit candidates, 41 (2.1%) failed the test. 31 of these failed candidates took the test a second time, with 6 (24%) failing the second sit. 4 of these failed candidates took the test a third

²¹ The cut score is the mark required to pass the BCAT Test.

time, with 1 (25%) failing the third sit. When only final sit data is examined (n=2003)²² for the 2013 BCAT data, the cut score of 37 resulted in 13 people failing the BCAT (a pass rate of 99.4%).

6.6.4. Figure 13 shows the distribution of BCAT scores within the sample used for the current analysis (n=1067). The BCAT scores were normally distributed.

Figure 13 – Histogram of distribution of BCAT scores



6.6.5. **Identifying potential cut scores from BPTC overall grade:** One approach to determining a cut score is based on identifying the minimum BCAT score associated with desirable outcome grades i.e. direct inspection of the BCAT scores. The desirable outcome grade could be set at a marginal pass (Competent) or at a good pass level (Very Competent). While Competent represents an adequate level to pass the course and go on to practice it could be regarded as more desirable to aim for students to pass at the 'Very Competent' level even though some will pass at the lower grade. The following analysis is based on setting the level of the test to be consistent with an aim of students attaining a Very Competent or above outcome, unless otherwise stated.

6.6.6. As can be seen from Section 6.4, there are a wide range of BCAT scores associated with each BPTC final overall grade, with the largest range being associated with Not Yet Competent and the largest variance associated with Very Competent. To reduce the likelihood of basing cut scores on outliers, the 5th and 95th percentile scores were calculated for each grade and were used as boundaries for the grade categories (see Table 16). The minimum BCAT score associated with a grade of Very Competent is 38, while the 5th percentile score is 43.45, or 43 when rounded to a whole number. Therefore, 43 could be a potential cut score for selecting those individuals who are more likely to perform well on the BPTC.

²² 'Final sit' uses a single BCAT score for each candidate, representing the final BCAT score they obtained following any resits.

Table 16 –BCAT score by BPTC Final Overall Grade

BPTC Final Overall Grade	O	VC	C	NYC
N	79	468	128	392
Mean	58.68	54.15	51.12	49.1
Minimum	45	38	40	37
5th Percentile	51	43.45	42	41
95th Percentile	65	62	58.55	58
Maximum	70	67	63	71

6.6.7. **Identifying potential cut scores from Overall Score:** Another approach to identifying a potential cut score is to use the BPTC overall score. If a desired minimum BPTC overall score can be identified, the prediction equation within the regression analysis can be used to identify the BCAT score which is associated with that BPTC overall score. However, it is important to note that this will not be exact and there will be many factors other than ability that will influence performance on the BPTC.

6.6.8. Again, to remove the possibility of potential outliers the 5th and 95th percentiles of BPTC overall score were calculated and used as grade boundaries. Table 17 provides the descriptive statistics of BPTC overall score by BPTC final overall grade. The minimum BPTC score associated with a grade of Very Competent is 68.7 and the 5th percentile score is 71.2. The minimum BPTC overall score associated with a grade of Competent is 64.8 and the 5th percentile score is 66.5.

Table 17 –BPTC Overall Score by BPTC Final Overall Grade (N=993²³)

BPTC Final Overall Grade	O	VC	C	NYC	Total
N	75	461	123	334	993
Mean	84.79	76.44	70.14	64.73	72.35
Minimum	79.6	68.7	64.8	48.7	48.7
5 th Percentile	81.3	71.2	66.5	54.7	
95 th Percentile	89.3	82.3	75.6	73.6	
Maximum	91.2	84.3	81	77.8	91.2

6.6.9. The BCAT score associated with a BPTC overall score of 71.2 is 50.85, calculated using the results of a linear regression. This BCAT score is close to the mean within the sample, being within 1 standard deviation of the mean (0.24 SD). The BCAT score associated with a BPTC overall score of 66.5 is 44.18 which is 1.38 SD from the mean.

6.6.10. When interpreting predicted BPTC overall scores, one must consider the standard error of estimate (SEE); this is the typical difference between the predicted score and the actual score achieved. The standard error of estimate in this case is 6.3 (from the regression equation). This means for any candidate there is a 67% chance that their actual BPTC score will lie between one SEE above the predicted score and one SEE below. There is a 96% probability that the actual BPTC score will be within 2 SEE of the predicted score.

6.6.11. **Modelling Cut Scores:** The analysis above has identified potential cut scores of 43 (from direct inspection) and 51 (from regression). However, the latter score falls

²³ The N here is different because it reflects those who have complete data for both BPTC Final Overall Grade and BPTC Final Overall Score, which was 993 people.

well within 1 standard deviation of the mean. Taking into consideration the error with predicting BPTC overall scores from BCAT scores, it is advised that a slightly more conservative 'top end' cut score option is explored.

6.6.12. Taking into consideration the above, and distance from the mean in standard deviations, BCAT scores of 38, 39, 40, 43 and 46 are identified as potential cut scores. 38, 39 and 40 are all 2 or more SD below the mean so could be viewed as reasonable cut scores. 43 was identified through reviewing BPTC final overall grades and 46 was identified as a conservative cut score based on predictions from the regression equation (i.e. a cut score that falls between 5th percentile of Very Competent and Competent, but is over 1 SD from the mean).

6.6.13. Table 18 shows the predicted BPTC overall scores from the potential cut scores including the 96% confidence interval for the predicted scores. This shows that a potential cut score of 46 has a predicted BPTC overall score of 67.78. This sits above the 5th percentile score achieved by those who obtained a Competent grade and just below the minimum score achieved by those with a Very Competent grade. A potential cut score of 43 has a predicted BPTC overall score of 65.67 which sits within 1 mark of the 5th percentile score achieved by those who obtained a Competent grade.

Table 18 – Predicted BPTC Final Scores from BCAT potential cut scores

Cut Score	Predicted BPTC Final Score	96% confidence interval
37	61.44	48.8 - 74.0
38	62.14	49.5 – 74.7
39	62.85	50.3 – 75.5
40	63.55	51.0 – 76.2
43	65.67	53.1 – 78.3
46	67.78	55.2 – 80.4

6.6.14. Table 19 shows the impact of applying these potential cut scores to the current sample (N=1067). The table shows the numbers and percentages of individuals who would pass the BCAT, pass the BPTC, pass above Competent, and fail the course based on BPTC final overall grades. The bottom row shows that by selecting the best 87% of the sample based on their BCAT score (Cut score 46) the total percentage of the population failing can be reduced from 36.74% down to 33.37%. Alternative results for lower (less selective) cut scores are also shown.

Table 19 – Impact of potential cut scores on BPTC Final Overall Grades (N=1067)

Outcome	Pass BCAT		Pass Course		Pass above C		Fail Course	
	N	%	N	%	N	%	N	%
37	1067	100.00	675	63.26	547	51.27	392	36.74
38	1062	99.53	675	63.56	547	51.51	387	36.44

39	1058	99.16	674	63.71	546	51.61	384	36.29
40	1051	98.50	672	63.94	544	51.76	379	36.06
43	1005	94.19	652	64.88	532	52.94	353	35.12
46	932	87.35	621	66.63	507	54.40	311	33.37

6.6.15. Table 20 shows a breakdown of the impact of the different potential cut scores on the individual BPTC final overall grade outcomes within the final BPTC sample (n=1067). For the most selective cut score (46), this would have resulted in 12.65% of trainees not being accepted onto the course. 40 (29.6%) of these students that would not have been accepted onto the course would have passed the course with a grade of Very Competent or Outstanding (false negatives); this is 3.7% of the total population. The number of candidates failing would reduce from 392 to 311; a reduction in failure rate of 21%. At the other extreme, increasing the cut score to just 38 would result in only 0.47% of trainees not being accepted onto the course, and none of these achieved above a NYC grade.

Table 20 – Predicted test success rates at each grade, for the potential cut scores

Cut Score	Grade	Fail BCAT		Pass BCAT		Total
		N	%	N	%	
38	O	0	0.00	79	100.00	79
	VC	0	0.00	468	100.00	468
	C	0	0.00	128	100.00	128
	NYC	5	1.28	387	98.72	392
	Total	5	0.47	1062	99.53	1067
39	O	0	0.00	79	100.00	79
	VC	1	0.21	467	99.79	468
	C	0	0.00	128	100.00	128
	NYC	8	2.04	384	97.96	392
	Total	9	0.84	1058	99.16	1067
40	O	0	0.00	79	100.00	79
	VC	3	0.64	465	99.36	468
	C	0	0.00	128	100.00	128
	NYC	13	3.32	379	96.68	392
	Total	16	1.50	1051	98.50	1067
43	O	0	0.00	79	100.00	79
	VC	15	3.21	453	96.79	468
	C	8	6.25	120	93.75	128
	NYC	39	9.95	353	90.05	392
	Total	62	5.81	1005	94.19	1067
46	O	1	1.27	78	98.73	79
	VC	39	8.33	429	91.67	468
	C	14	10.94	114	89.06	128
	NYC	81	20.66	311	79.34	392
	Total	135	12.65	932	87.35	1067

6.6.16. The impact of the intermediate cut scores (39, 40, 43) which would have resulted in 0.84%, 1.50% and 5.81% of the students respectively being unable to take the course. They reduce the failure rate marginally (2.0%, 3.3%, and 9.9% respectively) and lower the impact on those with the best course outcomes (Very Competent or Outstanding) with 0.09%, 0.28% and 1.4% false negatives within the total population respectively.

6.6.17. **Adverse Impact Analysis:** One of the key criteria when examining the cut score is the adverse impact on different groups. An adverse impact analysis was undertaken for four potential cut scores²⁴ (38, 40, 43, and 46²⁵) for each of the protected characteristics²⁶. Please note that for this analysis, each group is represented as a dichotomous variable.

6.6.18. The relative selection ratio for groups is the ratio of the pass rate for the group with the lower success rate to that with the higher pass rate. Where this value is below 0.8 the selection fails the 'four fifths rule' and is considered to have significant adverse impact. The implication if this is the case in a real selection process is that people from the lower scoring group have less than 80% of the chance of people from the higher scoring group of being offered a place to study. It should be noted, that differences in test scores will always exist between two groups, but unless this difference (i.e. the adverse impact) is deemed as significant, this is not a cause for concern, but of course should continue to be monitored.

6.6.19. The results show that there was no significant adverse impact across any of the protected characteristics included in the analysis. Ethnicity, Degree Institution and Degree Classification showed slightly more adverse impact as the cut score increased, however the selection ratios were well within acceptable parameters.

6.6.20. **Summary of Cut Score Analysis:** Using both distribution statistics and outcome data, five potential cut scores were identified. The current results show that the test is an effective predictor of performance for current students and thus prediction from BPTC overall scores was examined, which suggested a cut score of up to 51. Direct inspection of the test scores associated with a Very Competent grade outcome suggested a cut score of 43. Cut scores in the range 38 to 46 were examined taking into consideration the distribution of the data.

6.6.21. The cut scores respective impact on the failure rate of the BPTC and the false negatives (i.e. excluding those who would then have gone on to achieve a Very Competent or above grade) were examined. Only a score of 46 provided a marked reduction in students who go on to fail the course (21%) without creating an enormous barrier for applicants or excluding many students who had good (Very Competent or Outstanding) course outcomes (only 3.7% false positives).

6.6.22. It should be noted that the impact of the cut score is probabilistic and there will always be some incorrect decisions. The prediction from the test will not be perfect and although these results show there will be an improvement in outcomes if a higher cut score was used, this will exclude some students who would have done well on the course. Of course this will be true of any selection rule e.g. there will be some people with a third class degree who might have done well on the course.

Key Findings

- The current cut score is set at 37; this resulted in a 97.6% pass rate in 2013 for all sittings of the BCAT, and a 99.4% pass rate when only final sit data was examined (representing 13 students who were unable to pass the BCAT after resits were taken into account).

²⁴ The current cut score of 37 was not examined because all individuals in the sample had passed the BCAT.

²⁵ 39 was not examined because of the likely similarity with 38 and 40

²⁶ Religion could not be included in the analysis because it could not be recoded dichotomously.

Alternative cut scores were identified based on the predictive relationship between the BCAT and BPTC outcomes as well as through the distribution of the data.

- The most conservative cut score (38) showed minimal impact with 0.47% of trainees not being accepted onto the course, and none of these achieved above a NYC grade.
- The most selective cut score (46) provided a marked reduction in students who go on to fail the course (21%) without creating an enormous barrier for applicants or excluding many students who had good (Very Competent or Outstanding) course outcomes.
- The impact of cut scores is probabilistic and there will always be incorrect decisions, however the evaluation has provided good evidence that the cut score could be increased. The decision as to the actual cut score chosen will need to take into consideration factors outside of this evaluation, including financial and political drivers.

Conclusions and Implications

7.1. Overview

- 7.1.1. The Impact Evaluation suggests that the introduction of the BCAT has not had any significant impact on the profile of students on the BPTC, with changes to the student profile in line with general trends across Higher Education. In addition, the evidence suggests that the BCAT has had no significant impact on entry standards for the course, and that exit standards have declined, although this could be due to a number of factors unrelated to the BCAT. Further, the evidence suggests the BCAT is not seen as an effective tool for improving standards by either BPTC students or BPTC providers.
- 7.1.2. The Performance Evaluation has provided good early evidence of the predictive validity of the BCAT with the BCAT predicting BPTC outcomes (both scores and grades) overall and across all Providers. In addition, the BCAT has significant predictive power over and above Degree Institution and Degree Classification obtained. The BCAT in itself is also deemed to be a reliable measure, and previous role analysis has demonstrated its content validity (Ashworth, 2013). As such, the BCAT can be considered a useful, robust and practical tool as part of establishing a national standard for entry to the BPTC.
- 7.1.3. It was found that the BCAT did show significant differences in relation to ethnicity, with White candidates scoring significantly higher than BME candidates. This held true for the predictive relationship between the BCAT and BPTC outcomes, with ethnicity continuing to be a significant predictor of BPTC scores when all other variables were controlled for. This is in line with findings from the pilot.

7.2. Implications

- 7.2.1. **Use of the BCAT:** One of the key aims of this evaluation was to review the existing cut score and identify whether a different cut score could be implemented. The cut score is currently very conservative (based on the piloting of the BCAT in 2011) and in 2013 only 2.4% of those that sat the BCAT (for all sittings) did not pass. The evidence from this evaluation has demonstrated that a higher cut score could be employed and that this would serve to reduce the failure rate on the BPTC. Continued monitoring and evaluation of the BCAT and its relationship with BPTC outcomes would provide greater evidence and understanding as to the optimum cut score for the test and as such it is recommended that evaluation of the BCAT and its relationship with the BPTC continues in subsequent years.
- 7.2.2. It is understood that Providers do not tend to use the BCAT score within their selection processes, rather that candidates are simply required to pass the BCAT. With the evidence that the score candidates' receive on the BCAT is predictive of not only BPTC overall score, but grade, one implication is that advice to Providers is reviewed in relation to how they use the BCAT as part of their selection processes. For example, bandings could be provided to Providers to assist them in making decisions in tie-break situations, or the BCAT score could be placed on a standardised scale and combined with outputs from their other selection methods (consideration would need to be given in relation to the relative weighting of the different assessment methods and the variability of processes between Providers).
- 7.2.3. With any selection test, it is advised that the item content is refreshed on a regular basis. Not only does this assist with issues relating to security and over exposure of

items, but it can help future proof test by ensuring that the content remains relevant and face valid.

- 7.2.4. **Group Differences:** The findings in relation to group differences should be carefully considered. Whilst not an unusual finding (Wakeford et al, 2015), it is important that effort is placed to mitigate the risks of adverse impact. Whilst it is unlikely that these effects will be able to be reduced in this particular test (although reviewing item content in relation to DIF analysis is a positive step), the impact of this can be minimised through the inclusion of other selection methods that show less adverse impact (see paragraph 7.2.11). Selection methods such as Situational Judgement Tests (STJs) that assess behavioural attributes have been found to evidence fewer group differences, including for ethnicity (Lievens et al, 2008, Whetzel et al, 2008) than cognitive ability tests. Continued monitoring at a test and item level can help support any future developments. Finally, learning from other settings and sectors can assist BSB to further understand how to deal with and manage this risk of potential adverse impact.
- 7.2.5. **Perceptions of the BCAT:** Candidates' and stakeholders' perceptions of fairness, feasibility, and reasonableness of selection processes are important for recruitment, ethical, and legal reasons (Gilliland, 1993). The impact evaluation of the BCAT provided some useful information as to how the BCAT is perceived. It was found that less than a fifth of current BPTC students responding to the survey felt the BCAT test has the potential to meet its main objective *'to raise standards of entry to the BPTC'* although half of prospective QLD/GDL students taking part in this evaluation agreed that the BCAT test has the potential to meet its main objective. Feedback from Providers tended to be mixed, although some of this may be due to the perception of what the BCAT was measuring.
- 7.2.6. Candidate and stakeholder perceptions are often related to the clarity and amount of information available about the test, and favourable reactions also tend to increase over time (Patterson et al. 2011). Sharing the evaluation findings in relation to the validity and effectiveness of the BCAT will help increase candidate and stakeholders perception over time. However, in general, although ability tests such as these often exhibit high criterion-related validity, candidate reactions are often classified as medium to low (Arnold et al, 2010), probably due to the lack of face validity or perceived job relatedness and it is therefore unlikely that perceptions in relation to the BCAT will ever be extremely favourable. In contrast, other selection tests (such as Situational Judgement Tests often have favourable candidate reactions (Klassen et al, 2014, Koczwara et al, 2012).
- 7.2.7. **Breadth of Criteria Tested:** Of particular note is the relatively narrow nature of what the BCAT is assessing. The BCAT is a measure of cognitive ability and in particular has been mapped to the cognitive demands and requirements of the BPTC. However, cognitive ability is only one part of the spectrum of knowledge, skills and abilities likely to be required to be successful not only on the BPTC, but further down the career pathway. Evidence from other sectors has demonstrated that attributes other than cognitive ability (such as communication skills, team working and perspective taking) are significant predictors of performance in training (Patterson et al, 2013), and can also provide incremental validity over measures of cognitive ability and tests of knowledge (Koczwara et al, 2012). These important criteria can be assessed in computer based settings to accommodate large volumes (i.e. at a sifting stage) and can be done so effectively on a national scale.
- 7.2.8. **Systematic Role Analysis:** Prior to the introduction of the BCAT, a small scale role analysis was conducted in 2009, focusing on the cognitive requirements of the role. A

review of this role analysis by WPG in 2013 (Ashworth, 2013) concluded that the overall methodology undertaken for the job analysis was in alignment with best practice role analysis methodology. It employed multi-methods, included a diverse range of individuals and appeared to take a triangulation approach. However, this role analysis *only focussed on the cognitive requirements of the role*. A full scale, systematic and future-focussed role analysis would assist in establishing the important skills, behaviours and attributes required to be successful in the role.

- 7.2.9. A best practice selection process starts by conducting a role analysis; a systematic analysis of the relevant knowledge, skills and abilities associated with performance in the target role. An in-depth role analysis is the cornerstone to produce an effective selection process as it identifies the appropriate competency framework and selection criteria for a particular role. This enables accurate identification of the key areas to be targeted at selection, and instils fairness by ensuring that all candidates applying for the same role are assessed only against one standard set of criteria that are directly relevant to the target role (Arnold et al., 2010). In addition to fairness, research evidence shows that conducting a job analysis is important for an organisation to defend its human resource management practices against legal challenge (Gutman, 2001).
- 7.2.10. In this particular context, a role analysis would help identify those attributes that are essential in the role and would help guide any future choice of selection methods. It would also help future proof selection by identifying any emerging criteria. With any selection process, it is important to consider the potential changing nature of the profession. Where there is the possibility of regulatory changes, consideration should be given to ensuring that selection into the profession is future orientated and that the trainees of today are able to meet the demands of tomorrow. The role of the regulator here is therefore essential to both identify the essential criteria required, but also to set the appropriate standards.
- 7.2.11. **Complementary Selection Methods:** One widely used assessment method for assessing professional attributes outside of cognitive ability is Situational Judgement Tests (SJTs). SJTs are designed to assess individuals' judgement regarding situations encountered in the workplace. Candidates are presented with a set of hypothetical work-based scenarios and asked to make judgements about possible responses. Candidates' responses are evaluated against a pre-determined scoring key to provide a picture of their situational judgement in that particular context. The evidence for using SJTs in selection is extensive. Large international meta-analytic studies show that SJTs can predict performance within the workplace and have substantial added value over IQ tests and personality measures in selection (McDaniel et al, 2001; Lievens, et al, 2005). Of particular note is the emerging evidence in relation to the use of SJTs and widening access (Sackett et al, 2009; Whetzel et al 2008).
- 7.2.12. It is important to highlight that it is not recommended that any other measure should be used to *replace* the BCAT, but rather that there are other selection methods that would be *complementary* to the BCAT. If any new selection method was to be introduced, it would need to be ensured that it complemented the Providers' existing admissions and/or selection processes. Feedback from the Impact Evaluation found that providers did not view the BCAT as an effective screening tool as it was not perceived to be going beyond providers' existing admissions and/or selection procedures. It is also important to consider how the BCAT (or any other potential selection method) integrates with the wider selection process being used.
- 7.2.13. **Summary:** Designing a robust selection process is a complex and continual task. It should be acknowledged that the role requirements, selection criteria, context for

implementation and stakeholder acceptance may change over time and it is important for evaluation and development to take place on an ongoing basis. The evaluation has highlighted a number of implications that are outlined above, however these are related to continual improvements and efforts to future proof the process. A phased approach to improvements is advised and next steps should seek to understand and prioritise any future activities.

Appendix A

1. The BSB and the Bar Professional Training Course

- 1.1. The Bar Standards Board (BSB) regulates barristers called to the Bar in England and Wales. Their mission is to regulate the Bar so as to promote high standards of practice and safeguard clients and the public interest. The BSB is responsible for:
 - Setting the education and training requirements for becoming a barrister;
 - Setting continuing training requirements to ensure that barristers' skills are maintained throughout their careers;
 - Setting standards of conduct for barristers;
 - Monitoring the service provided by barristers to assure quality; and
 - Handling complaints against barristers and taking disciplinary or other action where appropriate.
 - Legal education and training
- 1.2. In order to qualify as a practising barrister in England and Wales, individuals must complete the following:
 - A qualifying law degree (QLD), or an undergraduate degree in another subject followed by the Graduate Diploma in Law (GDL);
 - The Bar Professional Training Course (BPTC); and
 - A pupillage, consisting of practical training in chambers or employment under a pupillage supervisor.
- 1.3. The BPTC is the vocational training course which students must pass in order to enter the final stage of their training. The primary aim of the BPTC is to prepare students for pupillage at the Bar of England and Wales and to enable students to acquire the skills required for pupillage at the Bar.
- 1.4. From 2011-2014 the percentage of students per academic year who failed the BPTC increased from 27% to 39%.
- 1.5. Given the cost of the BPTC course (ranging between £12,500 to over £18,000 in addition to living expenses) the BSB felt that there was a duty to ensure that only those who had a realistic chance of passing the BPTC were admitted on to the course.
- 1.6. In addition, the structure of the course involves collaborative and group learning and concerns had been raised that the presence of students without the necessary aptitude to succeed on the BPTC (particularly those with poor English language skills) impacts on the learning experience of other students on the course. In light of the financial investment required, the BSB has a duty of care to ensure the quality of learning for all students on the BPTC is as high as possible.

1.7. The decision to use an aptitude test was based on the recommendations of Neuberger Report²⁷ and the Wood Review²⁸. The aim was to use a fair aptitude test which measured critical thinking and analytical skills so that those without the prerequisite skills for a career at the Bar would not undertake the BPTC. Through introducing a further entry requirement for the BPTC, it was predicted that this would both improve the performance of those studying the BPTC and prevent those who do not have the prerequisite skills to succeed on the BPTC or at the Bar from undertaking the course.

Appendix B

1 Data Cleaning

- 1.1 General data cleaning was undertaken, including identifying impossible scores within the data.
- 1.2 Data cleaning and imputation was required for the grades section; there were a number of inconsistencies and anomalies between modules grades and overall grades that were dealt with in-line with guidance provided. These were:
 - If had second sit module grades (4's), but no second sit final overall grade (only first sit final overall grade = 4), then 4 manually entered as second sit overall grade
 - If had no overall grades, but 4's in first sit modules only, then 4 entered in first sit overall grade
 - If had no overall grades, but 4's in first and second sit modules then 4's manually entered into both first and second sit overall grades
 - If had a second sit overall grade, but no first sit overall grade, manually entered 4 into first sit overall grade
 - If had only first sit module scores and grades, but a 4 in both first and second sit overall grades; manually removed second overall grade
 - If had only first sit module scores and grades, but only second sit overall grade; manually changed to first sit
- 1.3 No manual data imputation or cleaning was undertaken for any other variables.
- 1.4 BCAT Reference duplicates were identified, discussed with BSB, and matched correctly or deleted if they could not be matched.
- 1.5 35 cases (31 people) had two or three BCAT scores in the data (i.e. sat it more than once that year). For each person their final BCAT score was retained and the earlier sits were removed from the analysis.
- 1.6 21 separate duplicates were identified, where individuals has two sets of BPTC data and only one had BCAT data. All except six were subsequently matched to the correct BCAT Reference. The six were removed from the analysis.
- 1.7 Of the 2003 individuals with final sit BCAT scores (i.e. those who sat multiple times in the same year only had their final score included), 99.4% passed the BCAT, with only 13 individuals failing.

2 Restriction of range

²⁷ See <http://cms.barcouncil.rroom.net/assets/documents/FinalReportNeuberger.pdf>; to read the full report.

²⁸ Please see https://www.barstandardsboard.org.uk/media/1353435/bvc_report_final_with_annexes_as_on_website.pdf; to read the full report.

3.1 Restriction of range corrections were not deemed applicable in this instance. After discussions with BSB, it was noted that many individuals only complete the BCAT after receiving a place on the course, so the BCAT is not selecting individuals out directly (besides from a very small number who failed), and therefore the 'unrestricted' sample is itself restricted. There were minimal differences in the spread of scores between the 'unrestricted' (i.e. everyone who sat the BCAT) and 'restricted' (i.e. everyone with BPTC data) samples, with the small difference reflecting a small number of outlying scores. Calculating corrections on the current data would likely yield minimal changes in the scores and could even lead to spurious corrections. Therefore, restriction of range corrections were not run.

3 Creation of variables

3.1 BPTC overall score was calculated by taking their final score (first or re-sit) and calculating final overall score using the appropriate weighting.

3.2 To identify if an individual was first or second sit for analysis; both their scores and grades were looked at for each module. If they had scores or grades in a second sit module, as well as first sit for that module, they were classified as having re-sat that module. However, if they only had second sit data, they were classified as first sit for that particular module. A candidate was classified as overall second sit if they had any second sit module data.

3.3 A variable created to identify if first or second sit (based on above).

3.4 A final overall grade calculated (whether first or second sit).

4 Removal of outliers/missing analysis

1.1 The full data set consists of 1109 candidates. Review of the data showed that there was a proportion of candidates missing 1 or more module scores within the 12 modules (98, 8.8%), and missing 1 or more module grades within the 10 modules (79, 7.1%). Correlations were run between BCAT score and total scoring missing to see if there was a relationship. This showed that the lower BCAT score a candidate has, the greater number of missing module data they are likely to have (spearman $r = .258 < .001$).

1.2 Candidates were excluded if they had more than half of the modular data missing for scores and grades as the data was judged to not be reliable. This removed 33 candidates. In addition, a further three candidates were removed due to concerns with the reliability of their data²⁹. This dataset of 1073 (**Sample A**) is the final dataset that was used for overall sample frequencies, descriptive statistics of BCAT score, including BCAT demographic analysis.

1.3 Analysis was conducted to see if there was any pattern for these 36 candidates in relation to their place of training. The highest proportion (16, 5.5%) came from City, but BPP Manchester had the highest percentage of its candidates in this group (7.5%, 4).

1.4 Analysis was also conducted by BCAT score to identify whether those excluded due to unreliability of data had a significantly different score to those included in the analysis. T tests showed that there was a significant difference between the excluded and included individuals ($t = -2.58, p < .05$) with excluded individuals scoring significantly lower (49.72, $n = 36$) than included individuals (52.26, $n = 1073$). Although in relation to creating a usable and reliable dataset the

²⁹ 001287, 000141, 002112

removal of these individuals is appropriate, it should be noted that those removed are at the lower end of the BCAT scoring distribution.

- 1.5 For BPTC final overall grade analysis, 6 further candidates were removed for final overall grade analysis only, following advice from BSB³⁰. These were candidates who only had first sit modular data (score and grade), and had a 4 overall first grade attempt, but a higher final overall grade second attempt, indicating that they had re-sat some modules but the data had not been provided. Thus BPTC final overall grade analysis was conducted on a sample of n=1067 (**Sample B**).
- 1.6 For the BPTC overall score analysis, candidates were removed if they had any modular data missing (n=110), as missing module data would skew the overall module score. These included 35 of the previously identified individuals to be removed, so an additional 75 individuals were removed from the dataset. The total dataset following this was n=998 (**Sample C**).
- 1.7 Analysis was conducted to see if there was any pattern for these 111 people in relation to their place of training. Analysis was conducted by Provider. The highest proportion (33, 14.3%) came from BPP London, but Newcastle had the highest percentage of its candidates in this group (24.2%, 15).
- 1.8 Analysis was also conducted by BCAT score to identify whether those excluded due to missing module scores had a significantly different score to those included in the analysis. T tests (t=-4.96, p<.01) showed that there was a significant difference between the excluded and included individuals and excluded individuals scoring significantly lower (49.60, n=111) than included individuals (52.47, n=998). Although in relation to creating a usable and reliable variable (i.e. the overall module score) the removal of these individuals is appropriate, it should be noted that those removed are at the lower end of the BCAT scoring distribution.

³⁰ 000611, 000713, 001132, 001314, 001736, 001891

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