Investigating the predictive validity of the Lancaster DClinPsy written shortlisting test on subsequent trainee performance

Final Report to the Clearing House

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Contents

Executive summary

This report details the evaluation of a written test to help select candidates to join the Lancaster University Doctorate in Clinical Psychology. Initially, in 2005, the test was used, in conjunction with an interview and presentation, to select candidates after the Clearing House application form-based shortlisting process was carried out. However, from 2006 onwards, it was used instead of the application form to shortlist candidates for interview. The written test consists of a series of five abstracts, created by the course but based on credible research evidence, from which candidates have to answer a question in a 250 word essay. Candidates also have to answer a number of statistical or methodological questions which are pitched at undergraduate level. The test is carried out online and the candidates with the top 66 marks are invited to sit a second test (same format but with different content) at the university under exam conditions. If candidates' marks across the two tests are relatively consistent then they are invited for interview.

The first section of this report looks at the relationship between performance on the test and the data from the Clearing House application form. In particular we were interested to assess whether any variables from the application form correlated with performance on the test. If a certain group of variables did predict a significant proportion of the variance then aspects of the application form could be used to shortlist. This would obviously then be more cost-effective than running and marking a written test for so many applicants. The results indicated that no variables consistently predicted performance on the written task across year groups and that even where significant variance was predicted, it was only very low (<20%). We concluded that performance on the written test cannot be predicted with any degree of confidence by a set of variables from the Clearing House form. This suggests that the written test is assessing candidates on an aspect of their ability which is not explored on the application form.

The second section of the report looks at the relationship between the written test and candidates' scores during the interview and presentation. Across all three year groups for which data is available, the results indicated that the written test did not correlate with performance at interview or presentation. Again we conclude that the written test is assessing candidates on aspects of their ability not revealed during the interview and presentation stages.

The third section reveals the associations between the written test and the academic assignments candidates produce while on the course. For the 2005 intake, for whom we have the most extensive data, notable correlations across all but one of the seven assignments emerged. While not all these correlations were statistically significant due to the small *N*, all were in the predicted direction (i.e. higher scores on written test, higher scores on course assignments). Interestingly the written test was more predictive of marks on the written assignments than the interview or the presentation scores. Indeed the presentation scores were generally negatively correlated (i.e. higher presentation scores, lower scores on course assignments). For the 2006 intake, for whom we have less data, the written test is again predictive of most of the academic assignments although the presentation has increased its predictive utility.

The fourth section assesses the relationship between aspects of the application form and the academic assignments candidates produce while on the course. No significant consistent

variables were found between variables on the application form and performance on the course. This again suggests that the application form data has little predictive utility in terms of academic performance.

The fifth section attempts to assess the effect of the written test on the number and type of applications to the Lancaster course. The introduction of the test does seem to coincide with a fall in the number and proportion of applications to Lancaster. While we have no way of knowing whether the two are related, we need to consider this as a possibility. In terms of differences in age and gender, we found no meaningful differences on either of these two variables in either the applicants to Lancaster or successful candidates over the last five years.

The final section of the report assesses feedback from all applicants to Lancaster, whether successful or otherwise, on their experience of the written test. While this data is difficult to summarise, it does seem that while the written test is not particularly popular, its general purpose is accepted as valid. A number of the innovations the course has developed in terms of its availability and presentation online were positively endorsed. It is important to note that, although low, some applicants do report help in doing the task in its online version, emphasising the fact that a re-test under exam conditions is important. The qualitative feedback from applicants was, again, very diverse. It seems that the nature of a written test is a controversial one with a minority of applicants expressing extremely hostile views.

In conclusion, this report has indicated that the written test has been an extremely useful addition to Lancaster's selection procedure. Its success means that we will continue for the foreseeable future with this method of shortlisting. However, we also accept that in terms of its image, we need to be aware of the anxieties it evokes. We also need to be aware of some applicants' rejection of the written test's utility and think creatively as to how we might address this. Our evaluation has also indicated that much care needs to be taken in the implementation of a test to make sure it is accessible and as secure against misuse as possible. In terms of workload, the administration of such a test has huge resource implications at the admissions stage. However, it is hoped that such an investment will result in our improved ability to select the best potential clinicians that we can.

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Introduction

Introduction

Although the low attrition rates in clinical psychology training courses (0 – 1.1% : www.qaa.ac.uk) would suggest that courses are selecting trainees who are essentially fit for purpose, little evidence suggests that the best potential clinicians are being selected. Indeed, there is a lack of evidence on the validity of selection processes in clinical psychology training (Phillips, Hatton & Gray, 2004; Roth & Leiper, 1995), although calls have been made for more research to be conducted in this area. For example Phillips et al. (2004) argue that "research investigating the predictive validity of applicant data for later training and post-qualification performance would be required to determine the extent to which shortlisting and selection criteria are evidence based" (p.123).

Although many courses are now making use of validated selection tools, changes in selection processes are almost entirely focused on the post-shortlisting part of the process. The large numbers of applicants has led to a traditional reliance on information supplied on the Clearing House application forms, including the academic and clinical references. Training courses tend to outline minimum entry requirements which are typically; a 2(i) degree or better, a minimum of six to twelve months' relevant experience, graduate basis for registration with the BPS and European Union citizenship. These minimum entry requirements enable a first phase screening process to take place. Following this phase a closer analysis of the application form takes place, with most courses assigning candidates scores along various criteria. These criteria are not always explicitly outlined by courses but courses seem to try to quantify applicants in similar areas. For example, candidates can be rated on qualifications, motivation, realism, experience and references.

The above process has the potential to reject suitable candidates due to the reliance on traditional predictors of academic potential. Although historically an upper second degree was harder to achieve (Roth, 1998), recent years have shown an increase in the number awarded with approximately 50% of candidates awarded a 2(i) and 33% a 2(ii) (Newstead, 1996). Furthermore, the Dearing Report (1997) highlighted the fact that the proportion of 2(i) degrees awarded is similar in every university, regardless of their entry standards, a result which suggests that there has been a move away from national standards for degree classes. Although it is acknowledged that some measure of academic ability is necessary when considering entrance to a doctoral course, previous academic performance, while predictive of future academic performance, has not been consistently correlated with clinical skills or post qualification performance (Ferguson, James, O'Heir & Sanders, 2003; Jones, 1991). Degree-level education and post-graduate education, however, remain strongly predictive of being short-listed (Phillips et al., 2004). Other potential biases in the short-listing process have been demonstrated. The fact that receiving post-16 education at school is strongly predictive of being short-listed suggests that selectors value 'traditional' academic routes rather than those accessing further education as mature students and/or through access courses (Phillips et al., 2004). The same research demonstrated that receiving your experience related reference from a clinical psychologist increased the likelihood of a candidate being short-listed. This suggests that the opinions of other professionals are not accorded the same gravitas as the opinions of clinical psychologists. The fact that references are given any weighting at all in the selections process goes against all the available evidence (Ferguson et al., 2002; Ferguson et al., 2003; Parry, Mathers, Stevens, Parsons, Lilford, Spurgeon & Thomas, 2006; Phillips et al., 2004).

At Lancaster, our own attempts to improve our admissions system began when we discovered a strong negative association between assessed clinical competence and performance at interview and a similar relationship between the rating of academic ability at short-listing and trainees' achievement in their research. For the 2005 intake, we decided to adopt a competency based selection process in which shortlisted candidates were asked to attend an interview, make a presentation and sit a written task. Each part of the procedure was designed to assess a range of competencies and values which had previously been identifies through a job analysis process (Phillips et al., 2001).

The following year (for the 2006 intake) we adapted our selection process further and introduced the written task as a replacement to the traditional method of shortlisting in which two individuals (staff members and local clinicians) rated each candidate in four categories; research experience, clinical experience, academic achievement and potential for training. For the 2006 intake, all candidates with GBR and EU citizenship were given the opportunity to sit the task, with those with the top 72 scores subsequently invited to interview. We have used the written task as a method of shortlisting in all subsequent years (2007, 2008).

The written task, adapted from a task designed by the University of Surrey, and completed on a computer asked the candidate:

- To read five abstracts (devised by the course but based on credible research).
- To synthesise these abstracts into a 250-word summary which answered a specific question.
- To answer a number of short questions based on the methodological and/or statistical analysis used in the abstracts. These questions varied in difficulty but would all form part of the undergraduate psychology curriculum.
- To complete all aspects within an hour.

Rating of the written task includes indices of expressive clarity, the ability to select the relevant information to answer the question, coherent structuring of information and ability to provide an appropriate level of analysis. The synthesis section comprises three quarters of the total score and the methodological questions a quarter.

Given the novelty of this method of shortlisting, it was appropriate that it was comprehensively assessed. Consequently this report considers the six main questions of the subsequent research project, partially funded by the Clearing House:

1) Which variables from the Clearing House application form are predictive of performance on the written task?
2) Is the written task predictive of performance at interview or presentation?
3) Is the written task predictive of academic performance during clinical training?
4) Which application form variables are predictive of performance in clinical training?
5) Has the introduction of the written task affected applications to the course?
6) How do applicants perceive the written task?

Method

Participants

For the first two research questions there were three groups of participants; the candidates who sat the written task in 2005, 2006 and 2007. In 2005, 69 candidates sat the written task when they attended an interview. However, as the written task total score was not normally distributed the three lowest candidates' scores were removed from all analyses in order to

achieve normal distribution and parametric analysis where possible. In 2006, 290 of the 323 eligible candidates sat the written task and in 2007 there were 220 candidates who sat the written task. For further demographic information please see Tables 1-3.

Table 1: Demographic information for 2005 applicants (*N*=66)

Variable	Mean (*SD*) or Number (%)
Gender	
Male	12 (8.2%)
Female	54 (81.8%)
Age	28 (6.30)
A-Levels points attained	13.06 (3.84)
Psychology A-Level	
Yes	28 (42.4%)
No	38 (57.6%)
Maths A-level	
Yes	9 (13.6%)
No	57 (86.4%)
Paid roles as Psychology Assistant	1.79 (1.09)
Degree classification	
1st	13 (20%)
2i	48 (73.8%)
2ii	4 (6.2%)

Table 2: Demographic information for 2006 applicants (*N*=290)

Variable	Mean (*SD*) or Number (%)
Gender	
Male	38 (13.1%)
Female	252 (86.9%)
Age	27.22 (5.50)
A-Levels points attained	11.89 (4.81)
Psychology A-Level	
Yes	142 (49%)
No	148 (51%)
Maths A-level	
Yes	57 (19.7)
No	233 (80.3)
Paid roles as Psychology Assistant	2.92 (0.59)
Degree classification	
1st	33 (11.4%)
2i	206 (71.3%)
2ii	47 (16.3%)
3rd	1 (0.3%)
pass	2 (0.7%)

Table 3: Demographic information for 2007 applicants (*N*=220)

Variable	Mean (*SD*) or Number (%)
Gender	
Male	32 (14.5%)
Female	188 (85.5%)
Age	27.33(5.6)
A-Levels points attained	11.89 (4.71)
Psychology A-Level	
Yes	128 (58.2%)
No	92 (41.8%)
Maths A-level	
Yes	49 (22.3%)
No	171 (77.7%)
Paid roles as Psychology Assistant	1.10 (1.04)
Degree classification	
1st	30 (13.6)
2i	154 (70%)
2ii	33 (15%)
pass	3 (1.4%)

For the third and fourth questions the participants were the 24 trainees who made up the 2005 cohort and the 21 trainees who made up the 2006 cohort. In 2005, 79.2% of the cohort were

female and the average age of the participants when they sat the written task was 26.08. All the participants in the 2006 cohort were female and the average age when they sat the written task was 25.81 years. Further demographic details are shown in Tables 4 and 5.

Table 4: Demographic information for 2005 cohort (N=24)

Variable	Mean (*SD*) or Number (%)
Gender	
Male	5 (20.8%)
Female	19 (79.2%)
Age	26.08 (2.78)
A-Level points attained	12.48 (4.32)
Psychology A-Level	
Yes	16 (66.7%)
No	8 (33.3%)
Maths A-level	
Yes	2 (8.3%)
No	22 (91.7%)
Paid roles as Psychology Assistant	1.88 (1.12)
Degree classification	
1st	4 (16.7%)
2i	19 (79.2%)
2ii	1 (4.2%)

Table 5: Demographic information for 2006 cohort (N=21)

Variable	Mean (*SD*) or Number (%)
Age	25.81(4.11)
A-Level points attained	14.31 (5.24)
Psychology A-Level	
Yes	14 (66.7%)
No	7 (33.3%)
Maths A-level	
Yes	5 (23.8%)
No	16 (76.2%)
Paid roles as Psychology Assistant	1.48 (1.08)
Degree classification	
1st	3 (14.3%)
2i	17 (81%)
2ii	1 (4.8%)

Details of participants for the final two parts of the study are detailed under the corresponding sections of this report.

Procedure

Ethical approval was granted for the various projects from the ethical committee at Lancaster University's Institute for Health Research on the basis that all data would be entered anonymously and stored securely.

Section 1

Application form variables and the written task

Predictive Ability of Clearing House Application form on Written Task performance

Introduction

Part one of this study aimed to consider whether there were any variables from the Clearing House application form which were predictive of performance on the written task. If this was the case then these specific variables could be used to substitute the written task when shortlisting, possibly saving the course the resources involved in setting up and marking the task.

Method

Participants

There were three groups of participants; the 69 candidates who sat the written task in 2005, the 290 candidates who sat the task in 2006 and the 220 candidates who sat the test in 2007. As the written task total score for the 69 candidates in the 2005 intake was not normally distributed the three lowest candidates' scores were removed from all analyses in order to achieve normal distribution and parametric analysis where possible. Further demographic information is detailed in the introduction to this report (pp. 3-4)

Design

In order to assess whether the data from the 2006 candidates' application forms were predictive of performance on the written task, this analysis investigated the bivariate relationship between various aspects of the application form and the binary variable, whether they were invited for interview or not. This was repeated for the 2007 candidates.

In 2005 the written task was not used as a shortlisting tool (instead it was used to help select candidates for course entry) therefore the bivariate relationship between the various aspects of the application form and the binary variable whether they were offered a place on the course or not was investigated.

Measures

Data from the 2005, 2006 and 2007 application forms were entered into SPSS. All the data entered was that which could be objectively assessed from information found on the form and in the written references; applicants' narratives were excluded from the database. Alongside these data, candidates' scores from their written task were also entered into SPSS (see appendix 2).

Analysis

For each of the year groups of candidates, the distribution of the potential predictive variables was assessed. Given that many of the variables were not normally distributed and attempts at transformation were not successful, the type of analysis was changed from multiple linear regression to logistic regression. Consequently the dependent variable, the total scores on the written task, was converted into the binary variable whether they were invited for interview or not. For the 2005 intake the binary variable was whether they were offered a place on the course or not as only those invited for

interview sat the written task[1]. The Spearman correlation between all possible predictor variables and the dependent variable was calculated and all those that were significant at $p<.05$ were then entered into the regression.

Results

2005 Intake

As seen in Table 6, the Spearman correlation of the predictor variables and dependent variable - whether or not the participant was offered a place on the course - shows that five variables were significant at $p<.05$. The results show a negative relationship between the age of the applicant and whether they were offered a place in that the younger the applicant, the more likely they were to be offered a place. It also indicated that those with a psychology A-Level were more likely to be offered a place than those without and similarly those who applied for Clinical Psychology courses only in the North West were more likely to be offered a place than those who applied for courses on a more national basis. A positive relationship between whether the candidate was offered a place and the number of referees who were clinical psychologists was observed. The higher the number of referees who were clinical psychologists, the more likely the participant was to be offered a place. The number of days a participant had been absent from work in the last year, as indicated in their clinical reference, was also correlated with whether the trainee was offered a place on the course. The fewer days a trainee was absent, the more likely they were to be offered a place on the course. These five variables were then entered into a logistic regression.

A logistic regression analysis was performed, with categorisation of whether or not the candidate was offered a place on the course as the dependent variable and age, psychology A-level, geographical location of courses applied to, referees who were psychologists and days absent last year (clinical reference) as predictor variables. A total of 64 cases were analysed and the full model was significantly reliable (χ_2=30.94, df=7, $p<.0005$). This model accounted for between 39.3% and 52.4% of the variance, with 80% of the applicants not offered a place and 78.1% of the applicants offered a place successfully predicted. Overall 79% of predictions were accurate.

Of the variables entered into the regression only one was a significant independent of whether the applicant was offered a place on the course or not: the number of referees who were clinical psychologists. However the age of the participant was borderline significant ($p<.06$).

[1] As the written task was not used as a shortlisting tool in 2005 it is noted that the binary variable chosen does not map directly onto performance on the written task as the score formed only part of the decision to offer an applicant a place. However, as a binary variable was required for the analysis this variable provided the most suitable for the data available.

Table 6: Correlations between the variable offered a place on the course or not and possible predictors from the application form for the 2005 intake

	Number of complete years since BPS accreditation	Age when sat written task	Gender	Geographic distribution of courses	Number of referees who clinical Psychologists	A-Levels attained	Psychology A-Level	Maths A-Level	Class of degree	Place of degree	Masters	PHD	Other qualifications	Paid roles as Psychology Assistant	Paid roles as research assistant	Other relevant paid roles	Unpaid roles as Psychology assistant	Unpaid roles as research assistant	Other relevant unpaid roles	Research publications
Categorisation of whether offered a place on the course or not	-.058	-.248*	.014	.281*	.261*	.016	.342**	-.145	.204	.146	-.120	-.005	-.087	.143	-.056	-.055	-.210	-0.58	.134	.021

	Academic reference (AR)-number references written	AR-comparison with other applicants	AR-how known applicant	AR-length known applicant	AR-how well known applicant	AR-overall rating of academic performance	AR-quality of written work	AR- capacity to work independently	AR-research competence	AR-overall judgement to compete DClinPsy	Clinical reference (CR)-number references written	CR-comparison with other applicants	CR-how known applicant	CR-length known applicant	CR-how well known applicant	CR-employ applicant again	CR-days absent form work	CR- ability to form positive alliances with clients	CR-ability to form positive relationships with colleagues	CR-overall judgement to compete DClinPsy
Categorisation of whether offered a place on the course or not	.048	.169	-.096	.028	-.059	-.118	-.118	-.180	-.198	-.056	.105	.102	-.039	.130	.070	†	.304*	-.121	†	.195

* p <.05; **p<.01

† Not calculable

2006 Intake

A similar analysis was carried out for the 2006 intake. As seen in Table 7, the Spearman correlation of the predictor variables and dependent variable - whether or not the participant was called for interview - shows that eight variables were significant at $p<.05$. The results show a negative relationship between the age of the applicant and whether they were called for interview in that the younger the applicant, the more likely they were to be selected for interview. It also indicated that those with a psychology A-level were more likely to be interviewed than those without and the more A-level points an applicant had attained also positively correlated with whether they were called back for interview. A positive relationship between the place of degree and also the class of degree and whether they were called for interview was also observed, showing that the applicants who attended a more traditional university rather than a college or old Polytechnic were more likely to be invited back for interview as were those who attained a higher class of degree. The only part of the clinical reference shown to be positively correlated with whether or not the applicant was called for interview was the comparison between other Clearing House references written by the referee. The correlation showed that the higher the applicant was rated against other applicants by the referee the more likely they were to be offered an interview. Several variables related significantly to the academic reference. Applicants who were rated higher for research competence by their academic referee as well as applicants who were rated highly on their overall ability to complete a Doctorate in Clinical Psychology scored highly in the written task and therefore were invited back for interview. These eight variables were then entered into a logistic regression.

A logistic regression analysis was performed, with categorisation of whether or not the candidate was called for interview as the dependent variable and age, A-Levels achieved, psychology A-level, class of degree, place of degree, research competence (Academic reference), overall ability to complete DClinPsy (AR) and clinical referee's comparison with other applicants as predictor variables. A total of 290 cases were analysed and the full model was significantly reliable (χ_2=24.31, df=8, $p<.002$). This model accounted for between 15.5% and 21.3% of the variance, with 84.8% of the not invited for interview applicants successfully predicted. However, only 44.2% of the predictions for applicants called for interview were accurate. Overall 70.1% of predictions were accurate.

None of the variables entered into the regression could, independently, reliably predict whether the applicant was called for interview or not. However, five of the variables were borderline significant: A-Levels achieved, psychology A-Level, place of degree, overall ability to complete DClinPsy (Academic reference) (all significant at $p<.06$); and research competence on Academic reference ($p<.1$).

Table 7: Correlations between possible predictors from the application form and the variable whether invited for interview or not for the 2006 intake

	Number of complete years since BPS accreditation	Age when sat written task	Gender	Nationality	Geographic distribution of courses	Number of referees who clinical Psychologists	A-Levels attained	Psychology A-Level	Maths A-Level	Class of degree	Place of degree	Masters	PHD	Other qualifications	Paid roles as Psychology Assistant	Paid roles as research assistant	Other relevant paid roles	Unpaid roles as Psychology assistant	Unpaid roles as research assistant	Other relevant unpaid roles	Research publications
Categorisation of whether called for interview or not	-.041	-.155**	.037	.069	.090	.051	.302**	.156**	.104	.119*	.298**	-.044	.027	-.022	.053	-.045	-.044	.072	-.010	.029	.090

	Academic reference (AR)-number references written	AR-comparison with other applicants	AR-how known applicant	AR-length known applicant	AR-how well known applicant	AR-overall rating of academic performance	AR-quality of written work	AR- capacity to work independently	AR-research competence	AR-overall judgement to compete DClinPsy	Clinical reference (CR)-number references written	CR-comparison with other applicants	CR-how known applicant	CR-length known applicant	CR-how well known applicant	CR-employ applicant again	CR-days absent form work	CR- ability to form positive alliances with clients	CR-ability to form positive relationships with colleagues	CR-overall judgement to compete DClinPsy
Categorisation of whether called for interview or not	-.008	.044	.039	-0.52	-.022	.149†	.044	.079	.126*	.201**	.057	.156*	.028	-.086	.009	-.005	-.081	-.005	-.005	.074

* $p < .05$; **$p < .01$; † $p < .07$

2007 Intake

In relation to the 2007 intake, the Spearman's correlation between the dependent variable and whether or not the participant was invited to attend an interview and the predictor variables can be seen in Table 8. The correlation showed that five variables were significant at $p<.05$. Candidates who had a Masters degree at the time of application were more likely to be invited for interview than those who did not. The results also show a positive relationship between the number of paid roles as a research assistant and whether they were called back for interview. The more roles they had as a research assistant the more likely they were to be invited back. This was also the case for other relevant, unpaid roles; the more roles they had held the more likely they were to be invited for interview. The only variable taken from the academic reference that was observed to be significant was the research competence of the candidates. The higher the referee rated their research competence the more likely they were to be invited back for interview. They were also more likely to be invited back for interview if the clinical referee had rated their ability to form positive alliances with clients highly. These five significant variables were entered into a logistic regression.

A logistic regression analysis was performed, with categorisation of whether or not the candidate was invited to attend an interview as the dependent variable and masters, paid roles as research assistant, other relevant unpaid roles, research competence (Academic reference) and ability to form positive alliances with clients (clinical reference) as predictor variables. A total of 209 cases were analysed and the full model was significantly reliable (χ_2=12.48, df=5, $p<.03$). Although significant, this model only accounted for between 5.8% and 8.2% of the variance, with 95.9% of the applicants not invited for interview successfully predicted. However the model was only able to reliably predict 10.9% of the applicants offered a place successfully predicted. Overall 69.9% of predictions were accurate.

Of the variables entered into the regression, two were able to predict reliably whether the applicant was invited to attend an interview or not: if the applicant had a masters and the number of other relevant unpaid roles the participant had noted on their application form (both significant at $p<.05$).

Table 8: Correlations between possible predictors from the application form and the variable whether invited for interview or not for the 2007 intake

	Number of complete years since BPS accreditation	Age when sat written task	Nationality	Geographic distribution of courses	Number of referees who clinical Psychologists	A-Levels attained	Psychology A-Level	Maths A-Level	Class of degree	Place of degree	Masters	PHD	Other qualifications	Paid roles as Psychology Assistant	Paid roles as research assistant	Other relevant paid roles	Unpaid roles as Psychology assistant	Unpaid roles as research assistant	Other relevant unpaid roles	Research publications
Categorisation of whether called for interview or not	.027	-.100	.081	-.012	-.023	0.84	.009	.051	.040	.105	.153*	-.027	.055	.042	.132*	-.099	.022	.024	.136*	-.039

	Academic reference (AR)-number references written	AR-comparison with other applicants	AR-how known applicant	AR-length known applicant	AR-how well known applicant	AR-overall rating of academic performance	AR-quality of written work	AR- capacity to work independently	AR-research competence	AR-overall judgment to compete DClinPsy	Clinical reference (CR)-number references written	CR-comparison with other applicants	CR-how known applicant	CR-length known applicant	CR-how well known applicant	CR-employ applicant again	CR-days absent form work	CR- ability to form positive alliances with clients	CR-ability to form positive relationships with colleagues	CR-overall judgement to compete DClinPsy
Total score WT	.070	.123	-.027	.059	.090	.111	.109	.089	.131*	.074	.052	-.035	.101	-.093	-.041	-.010	-.018	-.136*	-.044	-.055

* $p < .05$; **$p < .01$

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Discussion

Part one of this study aimed to consider whether any variables from the Clearing House application were predictive of performance on the written task. The obvious aim of this calculation was to see whether aspects of the application form, which is currently filled in by all applicants, could be used in logarithmic form to substitute for the written test. Obviously if this were the case, then the written test could be usefully substituted by already available data. Across the three year groups no variable or consistent groups of variables from the application form were shown to be constantly significant or predictive. Even when the whole model (usually consisting of between five and eight predictors) was significant, the cumulative variance explained tended to be low. Consequently, the analysis detailed in this report shows that performance on the written task cannot be predicted with a high degree of confidence from any aspect of the Clearing House application form. This suggests that the written task is assessing candidates on an aspect of their ability that is not explored on the application form.

Section 2

Performance on the written task, interview and presentation

Predictive ability of the written task and performance at interview and presentation

Introduction

This part of the study investigated whether trainees who performed well at the written task also performed well at the interview and presentation.

Method

Participants

The participants consisted of all applicants who sat the written test in 2005, 2006 and 2007. Demographic information is provided in details in the introduction to this report.

Measure

Candidates' scores from their written tasks were entered into SPSS alongside their scores for presentation, interview and individual competencies, which were scored across the interview sections (see appendix 1).

Analysis

Once the variables for the second part of the study for the 2005 cohort were confirmed as normally distributed, they were entered into a parametric test to investigate significant correlations and therefore highlight any associations between the written task score and the total presentation and interview scores. For the 2006 and 2007 intakes, relationships between the written task and the scores for specific competencies for the interview and presentation were also investigated and as these variables were not normally distributed, and could not be transformed, all the variables were analysed using non-parametric tests.

Results

2005 Intake

As seen in Table 9 below, the Pearson's correlation for the second part of the study highlighted that there were no significant associations between the total score for the written task and the total score for the presentation and interview.

Table 9: Correlations between total score for written task and total score for interview and presentation

	Interview	Presentation
Written task total score	.034	.023

2006 Intake

The Spearman's correlation in Table 10 shows that there was no significant relationship between the total scores on the written task and the total score attained at interview or presentation. It also shows that there was no significant relationship between the total score on the written task and the seven competencies scored at interview and presentation.

Table 10: Correlations between total score for written task and total score on interview and presentation, and scores for competencies for the 2006 intake

			Competencies						
	Total score for Interview	Total score for presentation	Values	Professional behaviour	Self management	Communic-ation	Standard setting	Analysis	Relevant knowledge and skills
Written task total score	-.081	.-.034	-.117	-.052	.037	-.088	.049	-.048	.048

2007 Intake

The Spearman's correlation shown below in Table 11 reveals that there are no associations between the total score on the written task and the total scores at presentation and at interview. Nor are there any significant associations between the total score on the written task and the total scores for the seven competences scored during interview week

Table 11: Correlations between total score for written task and total score on interview and presentation, and scores for competencies for the 2007 intake

			Competencies						
	Total score for Interview	Total score for presentation	Values	Professional behaviour	Self management	Communic-ation	Standard setting	Analysis	Reflection
Written task total score	-.160	.082	-.078	-.112	-.036	.017	.096	-.050	-.180

Discussion

The aim of the second part of the study was to investigate whether performance on the written task correlated with performance at the interview or presentation. Across all three year groups the results indicated that the written task did not correlate with performance at interview week, nor did it correlate with how candidates scored for each of the competencies rated at interview week. Again this is consistence with the view that that the written task is testing candidates on an aspect of their ability not traditionally revealed during an interview or presentation.

Section 3

The written task and academic performance

Predictive ability of the written task and performance during clinical training

Introduction

This part of the study investigated the relationship between trainees' performance on the written task and their academic success during training.

Method

Participants

There were two groups of participants for this part of the study, the 24 trainees who made up the 2005 intake and the 21 trainees in the 2006 intake. Further demographic details are available in the introduction to this report (p.5).

Measure

The scores of the 2005 cohort of trainees on the written task, interview and presentation were entered into SPSS alongside the marks attained in the assessed work completed on the Lancaster Doctorate. These seven assignments (Child Report of Clinical Activity (RCA), Adult RCA, Older Adult RCA, Learning Disabilities RCA, Critical Review, Professional Issues Essay and Service Related Project) were marked by examiners according to a strict set of guidelines and scores could be attained on scale of 0-100. This was repeated for the 2006 intake and the assignments they had completed on the course so far.

In 2007 we replaced the Report of Clinical Activity with the Placement Presentation and Report (PPR). The introduction of this new assignment meant the marks for the first completed assignment, now the critical review, was not available for the 2007 intake at the time of writing this report.

Analysis

Once the distribution of variables was confirmed to be normal the variables were entered into a parametric test to test for significant correlations in order to highlight any associations between the written task scores and assignment marks of the trainees.

Results

2005 Intake

The Pearson's correlation shown in Table 12 shows that the written task total score is positively associated with the assignment scores for the adult report of clinical activity (RCA) and also, though at a lower significance level, the child RCA, critical review and professional issues essay scores. The higher the participant scored in the written task, the higher the score they attained in these course assignments. The correlation between the written test and the Service Related Project (SRP: a research project) and also the learning disabilities RCA was not significant but does show a small to medium effect size in the predicted direction. The relatively small *N* does mean that only medium to large effects will be statistically significant. Although the interview total score was also associated with the mark for the adult RCA it was not significantly associated with any of the other assignments. The presentation score was not significantly associated with any of the assignment marks and any relationship was negative, with a higher score on the presentation associated with a lower score on the assignments.

Table 12: Correlations between Total score on Written Task, Interview and Presentation and assignment marks (N=24)

	Child RCA	Critical Review	Adult RCA	Older Adult RCA	SRP	Professional Issues Essay	Learning Disabilities RCA
Written Task total score	.396†	.378††	.416*	-.022	.232	.401†	.287
Interview Total score	.040	-.069	.405*	-.065	-.127	.142	.002
Presentation Total Score	-.344	-0.17	-.280	-.123	-.195	-.146	-.207

*p<.01, † p<.06, †† p<.07

The assignments recorded in Table 12 are presented in the chronological order in which the trainees submitted them. Although the older adult RCA and the SRP were not significantly associated with the written task score the Professional Issues Essay showed a significant association. This suggests that the length of time after the trainee sat the written task does not affect the associations between the written task score and assignment scores.

2006 Intake

The Pearson's correlation between 2006 applicants' scores on the written task, interview and presentation and marks attained on the six academic assignments submitted so far is shown in Table 13. A positive association is shown between the total score on the written task and the critical review score. The higher the participant scored on the written task the higher mark they attained on the critical review. The child RCA, Older Adult and SRP scores showed no significant relationship with the written task score. Although the correlations between the written test and the adult RCA and professional issues ssay were not significant they do show a medium effect size in the same direction. As noted previously the relatively small N does mean that only medium to large effects will be statistically significant. Neither the total score for the interview nor the total score for the presentation were significantly associated with any of the assignment marks.

Table 13: Correlations between the total score on written task, interview and presentation and assignment marks for 2006 intake

	Child RCA[a]	Critical Review[a]	Adult RCA[b]	Older Adult RCA[a]	SRP[c]	PIE[c]
Written Task Total	.049	.495*	.358†	.291	.068	.383†
Interview Total	-.018	.024	-.096	.032	-.220	.292
Presentation Total	.359††	.076	.216	.296	.077	.264

* p <.05; † p<.12; ††; p<.13

[a] N=20
[b] N=21
[c] N=18

Discussion

The aim of the thirs part of the study was to determine whether written task performance can predict performance in clinical training. This is arguably the most important test of the written exercise as it looks at its predictive utility. The results of the analysis indicated that written task performance was largely predictive of future academic performance on the training course. This was most evident for the 2005 cohort, for whom we have all seven assignment marks. For both the 2005 and 2006 intake the assignment scores were observed to have more significant associations with the total score in the written task than the total scores for interview and presentation. Again this was most evident for the 2005 cohort for whom performance in the presentation was negatively associated with performance on the written task. The analysis contained in this report indicates that the written task may be a more reliable way of predicting academic performance on the course than traditional selection methods.

It remains to be seen whether the written test can predict indices of more clinically-judged competencies. To assist this, the Lancaster course has changed its assessment of clinical competence from the completion of Reports of Clinical Activity (RCAs) to more clinically relevant means (the Placement Presentation and Report). We will then be able to judge whether the written task can predict this, in additional to academic performance.

Section four

Application form and academic performance

Predictive ability of application form variables and performance in clinical training

Introduction

This part of the study investigated the predictive ability of the application form variables and performance in clinical training.

Method

Participants

As with part three of the study the participants were the 24 trainees who made up the 2005 intake and the 21 trainees in the 2006 intake. Further demographic details are available in the introduction to this report (p.5).

Design

In order to assess whether any variables on the application form were predictive of performance in clinical training the relationship between the various aspects of the application form and the participants' assignment marks was investigated.

Measures

Data from the application forms of the 2005 and 2006 intake were entered into SPSS. All the data used could be objectively assessed from information found on the form and in the written references; any scoring of applicants' narratives was excluded from the database. Alongside this data trainees' scores from the written task and marks attained in the assessed work completed so far on the Lancaster DClinPsy were also entered into SPSS (see appendix 2). These seven assignments were marked by examiners according to a strict set of guidelines and were marked on a scale of 0-100.

Analysis

For this part of the study, as many of the variables from the application form were not normally distributed, and could not be transformed, all the variables were entered into a non-parametric test to test for significant correlations between variables on the application form and marks on academic assignments.

Results

2005 Intake

In terms of the relationship between application form variables and assignment marks, as seen in Table 14, the Spearman correlation show that 11 variables were significant at $p<.05$ across the seven assignments. The results show a negative relationship between the number of paid roles as a research assistant and the mark attained on the SRP; a similar negative relationship is also seen between the critical review mark attained and the number of other relevant paid jobs noted on the application form. The more roles a trainee had held the lower the score achieved in the assignment. The results also indicated that the more research publications an applicant had the higher they scored on the child RCA. The gender of the applicant also showed a significant relationship with the learning

disabilities RCA, female applicants scoring higher than male. The more references the academic referee had written for the Clearing House, the higher the score achieved on the critical review, and how well the referee knew the applicant was also found to be positively correlated with the learning disabilities RCA mark. The better the referee knew the applicant the higher the mark achieved. The results also indicate that the higher the academic referee scored both the applicant's capacity to work independently and their research competency, the lower the applicant scored on the child RCA. The more references written by the clinical referee and the fewer days the applicant had been absent from work in the past two years the higher the mark attained on the professional issues essay and critical review respectively. However, no variables showed a significant correlation across more than one assignment.

Table 14: Correlations between variables on the application form and marks achieved in academic assignments by the 2005 intake

	Number of complete years since BPS accreditation	Age when sat written task	Gender	Geographic distribution of courses	Number of referees who clinical Psychologists	A-Levels attained	Psychology A-Level	Maths A-Level	Class of degree	Place of degree	Masters	PHD	Other qualifications	Paid roles as Psychology Assistant	Paid roles as research assistant	Other relevant paid roles	Unpaid roles as Psychology assistant	Unpaid roles as research assistant	Other relevant unpaid roles	Research publications
Child RCA	.189	.201	-.104	-.055	.180	-.125	-.070	-.186	-.270	-.009	-.089	.257	.166	-.257	-.044	.332	.045	.204	-.357	.452*
Critical Review	.024	-.149	-.224	-.158	.028	.039	.116	.340	-.137	.257	.224	-.136	-.253	.352	.157	-.418*	-.348	-.075	.188	.100
Adult RCA	-.017	-.102	.067	.164	.009	.073	-.122	-.197	-.142	.205	.335	.121	-.120	-.274	.096	.177	.257	-.261	-.016	.041
Older Adult RCA	-.134	-.013	.104	.194	.273	.159	.160	-.229	.043	.107	.253	-.227	.146	.157	-.090	-.307	.166	.193	.071	-.016
SRP	.043	-.174	.045	.103	-.171	.032	-.153	.305	.166	.021	.082	.211	-.199	-.275	-.433*	.251	.211	-/196	-.380	.192
PIE	.193	.075	.253	.212	.210	.421	.102	.044	-.149	.384	.163	-.030	-.020	-.090	.105	-.084	-.272	.034	.197	.373
LD RCA	-.281	-.205	.431*	-.054	-.064	.258	-.032	-.196	.245	.077	-.282	.226	-.246	.084	.223	-.401	.226	.196	-.014	.214

	Academic reference (AR)-number references written	AR-comparison with other applicants	AR-how known applicant	AR-length known applicant	AR-how well known applicant	AR-overall rating of academic performance	AR-quality of written work	AR- capacity to work independently	AR-research competence	AR-overall judgement to compete DClinPsy	Clinical reference (CR)-number references written	CR-comparison with other applicants	CR-how known applicant	CR-length known applicant	CR-how well known applicant	CR-employ applicant again	CR-days absent form work	CR- ability to form positive alliances with clients	CR-ability to form positive relationships with colleagues	CR-overall judgement to compete DClinPsy
Child RCA	.139	.083	.265	-.064	.306	-.365	-.286	-.601**	-.509*	-.064	-.103	-.151	.320	.137	-.357	†	.178	-.194	†	.254
Critical Review	.423*	-.168	-.046	.384	.143	.234	.066	-.270	-.340	-.441	.256	-.063	.131	.200	.092	†	-.430*	-.097	†	.303
Adult RCA	-.297	-.260	-.011	.171	-.157	-.596	-.287	.032	-.015	-.130	-.134	.353	-.242	-.193	.210	†	-.025	.210	†	-.010
Older Adult RCA	-.037	-.278	-.259	-.200	-.344	-.092	-.265	-.226	-.451	-.323	.108	.315	.271	.096	.073	†	-.175	-.016	†	.254
SRP	.204	-.259	.002	-.149	.411	.229	-.132	.054	.063	.322	-.114	.061	.074	.406	-.108	†	.039	.145	†	.146
PIE	.031	-.093	-.028	.260	.291	-.091	-.077	-.290	-.214	-.349	.439*	-.100	.449*	.149	.109	†	-.308	-.193	†	.234
LD RCA	.144	-.074	-.208	-.187	.470*	.321	.132	.065	-.110	-.078	.271	-.238	.122	-.174	-.255	†	-.188	-.145	†	.068

* p <.05; **p<.01

† Not calculable

2006 Intake

The Spearman correlation between the variables on the application form and the marks received for the assignments submitted shown in Table 15 shows that nine variables across the six assignments were significant at $p<.05$. Applicants who had completed a maths A-Level or equivalent achieved higher marks on the child RCA than those who did not. The results also indicate a negative relationship between the number of referees who were clinical psychologists and critical review mark. The more referees who were clinical psychologists the lower the mark attained. A negative relationship was seen between whether the applicant applied for courses geographically situated in the North West and the mark attained for the professional issues score. A similar negative relationship was also seen between the length of time the clinical referee had known the applicant and the professional issues essay, the longer the applicant had been known the lower the mark attained. The results also indicated a positive relationship between A-levels attained and number of unpaid psychology assistant roles. The more A-Levels a trainee had attained and the more unpaid roles that they had as psychology assistants, the higher they scored in the older adult RCA. A similar positive relationship was seen between the place the fist degree was attained and the Older Adult RCA. The trainees who attended colleges or old polytechnics scored lower than those who attended old universities. Trainees who did not have a psychology degree achieved a higher mark in the older adult RCA. The results also indicated that the higher the academic referee rated the trainee's quality of written work the lower they scored on the SRP. The Spearman correlation also showed that two variables were significant at $p<0.01$. The higher the academic referee rated the trainee's ability to complete the doctoral training the better they performed in the older adult RCA. A similar positive relationship was shown between the rating of quality of written work by the academic referee and the score on the older adult RCA, the higher the rating the better the mark. There were no variables that showed a significant relationship with the marks achieved on the adult RCA. Only one variable showed a significant association across more than one assignment; the academic referee's rating of quality of written work. However this association was positive with the older adult RCA and negative with the SRP.

Table 15: Correlations between the variables on the application form and the marks attained on the academic assignments submitted so far by the 2006 intake

	Number of complete years since BPS accreditation	Age when sat written task	Gender	Nationality	Geographic distribution of courses	Number of referees who clinical Psychologists	A-Levels attained	Psychology A-Level	Maths A-Level	Class of degree	Place of degree	Masters	PHD	Other qualifications	Paid roles as Psychology Assistant	Paid roles as research assistant	Other relevant paid roles	Unpaid roles as Psychology assistant	Unpaid roles as research assistant	Other relevant unpaid roles	Research publications
Child RCA	-.163	-.192	†	†	.105	-.107	.025	-.218	.472*	.346	.160	†	†	-.341	.251	.379	-.332	.122	-.097	-.131	.379
Critical Review	.039	.124	†	†	-.087	-.522*	.115	-.280	-.055	.157	.195	†	†	-.027	-.269	-.022	.075	.053	-.092	.322	-.022
Adult RCA	.094	-.142	†	†	-.158	-.186	.183	-.401	.000	.359	.067	†	†	.049	-.087	-.074	-.036	-.011	.327	.178	-.074
Older Adult RCA	-.193	-.337	†	†	-.078	.019	.458*	-.483*	.050	.334	.493*	†	†	-.141	-.054	.279	-.232	.499*	.195	.176	.279
SRP	-.002	-.288	†	†	.227	-.090	.090	-.069	-.157	.069	-.249	†	†	.235	-.005	.047	.098	-.362	.087	-.268	.047
PIE	-.102	-.109	†	†	-.581*	-.188	.425	-.156	-.246	-.285	.119	†	†	-.204	-.218	-.329	.273	.029	-.116	.308	-.329

	Academic reference (AR)-number references written	AR-comparison with other applicants	AR-how known applicant	AR-length known applicant	AR-how well known applicant	AR-overall rating of academic performance	AR-quality of written work	AR- capacity to work independently	AR-research competence	AR-overall judgement to compete DClinPsy	Clinical reference (CR)-number	CR-comparison with other applicants	CR-how known applicant	CR-length known applicant	CR-how well known applicant	CR-employ applicant again	CR-days absent form work	CR- ability to form positive alliances with	CR-ability to form positive relationships	CR-overall judgement to compete DClinPsy
Child RCA	-.143	-.167	-.248	-.086	-.126	-.244	.142	.313	.066	.020	-.096	-.403	-.358	.372	.189	†	.246	†	†	.010
Critical Review	-.089	.409	-.116-	-.121	-.050	-.478	.118	.155	.330	.121	-.246	.348	.048	-.109	-.014	†	.353	†	†	-.142
Adult RCA	-.151	.305	-.020	.024	-.035	-.232	.298	.033	.333	-.035	-.195	.049	-.127	.057	.137	†	.292	†	†	.279
Older Adult RCA	-.286	-.194	.109	-.295	.335	-.106	.589**	.455	.359	.703**	-.080	-.045	-.219	.090	.478	†	-.117	†	†	-.090
SRP	.330	.396	-.172	.082	-.261	-.267	-.542*	-.369	-.280	-.228	-.078	.408	.022	-.151	-.292	†	.194	†	†	-.278
PIE	-.345	.309	-.285	-.014	-.179	-.276	.219	.340	.436	.000	.144	.493	-.301	-.595*	-.109	†	-.170	†	†	.362

** $p<.001$; * $p<.05$; † incalculable

Discussion

No significant associations were found between variables on the application form and performance on the course. Although some variables were significant in certain assignments, this was not consistent across the assignments and no variable was significant in both the 2005 and 2006 data. It is likely therefore that these were just spurious correlations with no real significance. The analysis contained in this report indicates that the written task may be a more reliable way of predicting academic performance on the course than traditional selection methods using the application form.

Section 5

Application numbers

Has the introduction of the written task affected applications to the course?

Application numbers

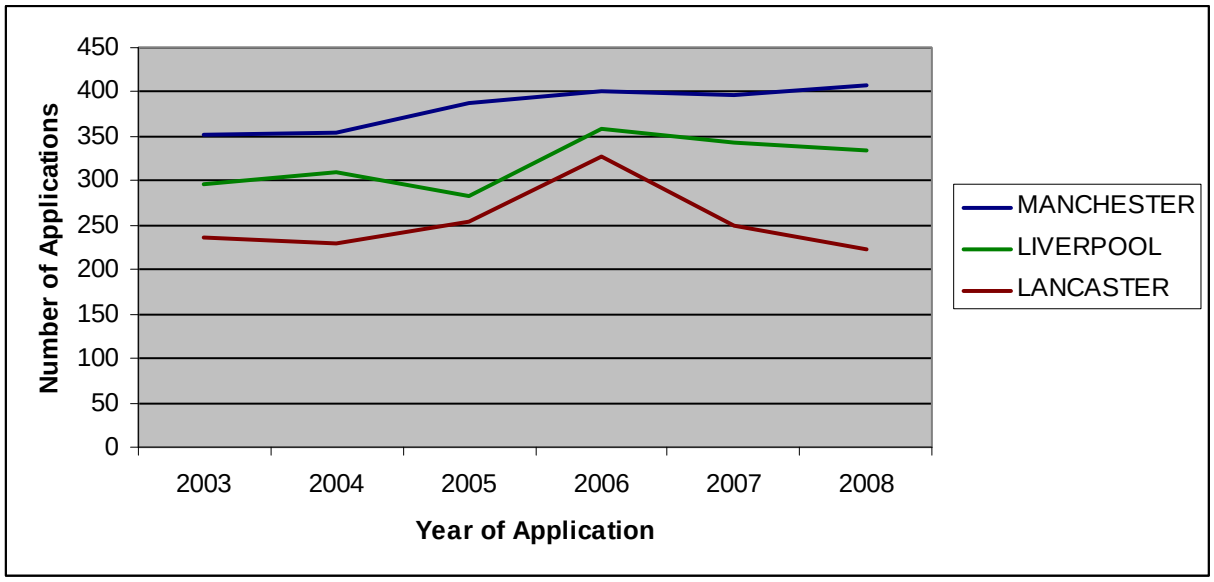
Using the data routinely collected annually by the Clearing House, the study also investigated the effect of the introduction of the written task on applications to the Lancaster course. As shown in Table 16, the applications received by Lancaster have reduced in the last two years following the introduction of the written task. The task was introduced as a shortlisting tool in 2006, although used the previous year as part of the interview process. Although there was no significant change to applications in that first year, a significant reduction in applications is evident in subsequent years.

Table 16: Lancaster applications as a percentage of total applications to Clearing House

Year of application	2003	2004	2005	2006	2007	2008
Total number of applications	7274	7163	7961	9017	8800	8894
Number of applications to Lancaster (%)	237 (3.26)	230 (3.21)	254 (3.19)	328 (3.64)	249 (2.83)	222 (2.5)

Historically the Lancaster course has similar application numbers to the other North West courses, Liverpool and Manchester. Figure 1 shows the decline in applicant numbers for Lancaster in comparison to Liverpool and Manchester.

Figure 1: Applications to North West Courses



We cannot conclude that the reduction in numbers is necessarily connected to the introduction of the written task as a shortlisting tool but it appears a strong possibility. The next final part of this report investigates applicants' perceptions of the written task.

In order to expand on the results indicating a decline in applications, the project also investigated the effect of the introduction of the written task on the demographic variables of applicants including, importantly, whether the type of applicants applying to the Lancaster course has been affected by the introduction of the written task.

A chi-square revealed no significant differences in the gender distribution of those applying in the course across the last five years X^2 (4, N=1283) = 8.516, p=.07. A Chi Square revealed significant differences in the gender of those accepted onto the course over the last five years X^2 (4, N=112) = 11.297, p=.02. However the distribution does not allow any conclusions as to whether the written task caused this change given that its arrival in 2005 coincided with a larger number of successful male candidates.

A one way ANOVA was conducted on the ages of applicants since 2004. There was no significant difference in the ages of applicants across the five years (F(4,1261)=.757, p=.553). Results from a one way ANOVA on the ages of acceptances since 2004 also indicate that there was no significant difference in the ages of applicants accepting a place on the course across the five years (F(4,107)=.518, p=.723).

Reserve lists

Another area related to the admissions process which might have been affected by the introduction of the written task is the course's need to offer places to those on its reserve list. Although, again, the causal relation between the introduction of the written task and the need to recruit from reserve list cannot be assumed, the data does seem to indicate a relationship. For example, in 2003 we had to interview again as all the 20+ candidates on the reserve list decided to accept an offer from another course. In 2004, 12 candidates were offered places from the reserve list and, in 2005, 11 candidates were also offered places from the reserve list. However in 2006, when the task was first used to shortlist, we only offered three places to candidates from the reserve list and in 2007 and 2008 four and three candidates respectively were recruited this way. This supports the view that the written test helps foster a commitment to and investment in the course, which results in more candidates who are offered a place accepting one. In terms of these data, and the data on the proportional dip in applications to Lancaster, it could also be argued that the introduction of the written test means that only those who are keen to come to Lancaster will invest the additional energy into navigating our admissions system.

Section 6

Applicants' perceptions of the written task

Applicants' perceptions of the written task

Introduction

The final part of the study aimed to investigate the applicants' perceptions of the written task. It was hoped that understanding what applicants thought of the task would help us further develop and improve our shortlisting process. Examining the perceptions of applicants may also illuminate whether the changes in application numbers to Lancaster were due to the introduction of the written task.

Method

Participants

The participants for this study were the 244 eligible candidates who were invited to sit the written task in February 2007. Around 220 of these actually sat the written task. The average age of the candidates was 27 and the female:male gender split (%) was 84:16. The study was then repeated with the 211 eligible candidates who were invited to sit the written task in February 2008. Of these 197 actually sat the written task. The average age of candidates was 27 and the female:male gender split (%) was 85:15.

Procedure

Ethical approval was granted from the ethics committee at Lancaster University's Institute for Health Research on the basis that all questionnaires would be anonymous and that data would be stored securely. A further condition of ethical approval was that the questionnaires for the 2008 applicants could only be sent after the entire application process was over.

Measures

A self-completion questionnaire and information sheet (appendices 2 and 3) was sent out to all participants from the 2007 applications in January 2008 and to the 2008 applicants in July 2008. The data returned in these anonymous questionnaires were entered into SPSS. In the second part of the questionnaire participants were asked to rate to what extent they agreed with 20 statements about the written task and Lancaster's shortlisting procedure. The level of agreement to each statement was entered into SPSS on a scale of 0-4. A score of four indicating a strong agreement with the statement.

Analysis

The mean scores from each set of questionnaires were examined and the two sets of results were compared using a Mann-Whitney test.

Results

2007 Applicants

A total of 67 questionnaires were returned by participants, giving a return rate of 27.5%. There were 65 questionnaires returned by people who sat the test. Further demographic information is available in Table 17.

Table 17: Demographic information for returned questionnaires, 2007 Intake (*N*=67)

Variable	Mean (*SD*) or Number (%)
Gender	
Male	9 (13.4%)
Female	58 (86.6%)
Age	27.4 (5.68)
Sat the task	
Yes	64 (95.5%)
No	3 (4.5 %)
Invited back for interview (*N*=63)	
Yes	18 (26.9%)
No	45 (67.2%)
Attended the interview (*N*=18)	
Yes	13 (72.2%)
No	5 (27.8%)
Number of years applied to clinical training	1.67 (0.99)

Although the mean scores for each statement, shown in Table 18, do not indicate a highly positive view of the written task, nor do they present a very negative view. The testing of academic ability is seen as very important to candidates (item 2, *M*=2.93) however the written task was not seen as a particularly useful tool for shortlisting (item 1, *M*=1.73). The majority of participants preferred to sit the task online rather than at the university (item 11, *M*=3.03). With mean scores above one, items 12 and 13 show that a minority of participants found outside help, both in the form of books and other people, useful while sitting the task online.

Table 18: Mean score for each item on the questionnaire for 2007 Intake, range 0-4

Item number and description		Mean Score for each item *N*=65
item1*	The written task is a useful tool for shortlisting candidates	1.73
item2*	Testing academic ability is important in the selection of candidates	2.93
item3*	The written task makes clinical psychology more accessible to those not from traditional psychology backgrounds	1.49
item4*	The written task encouraged me to apply to the Lancaster course	1.63
item5	It was important that previous versions of the test were available to look at before I took the test	3.38
item6	I found the past versions of the written task available on the Lancaster website useful	3.06

item7	I found speaking to people who sat the written task in previous years useful	2.29
item8	I felt prepared when I sat the written task	2.22
item9	The task instructions were easy to follow	2.95
item10	I thought the computer software was easy to use	2.68
item11	I preferred to sit the written task online than at the university	3.03
item12	I thought it was important to have books and references around me as I sat the test	1.69
item13	I thought it was helpful to have people available to help me during the task	1.15
item14	The written task required competencies a trainee clinical psychologist would require at the start of their training	1.95
item15	The written task requires a writing ability suitable for doctoral level study	2.28
item16	The written task requires mathematical skills higher than those which should be expected from a clinical psychology applicant	1.59
item17	The outcome of the written task was fed back quickly	2.78
item18	The results of the written task reflected how I thought I had done	2.37
item19	It was necessary for candidates to re-sit the written task at the university before they attended an interview	2.48
item20	Experiencing the written task has put me off applying to the Lancaster course in the future	2.33

* N=67, Candidates who did not sit the task were asked to end the questionnaire after these four statements.

The qualitative feedback offered by candidates varied substantially, with some participants agreeing with the task and others completely rejecting it. Others were happy with the idea of the task but expressed negative views about various aspects.

> "your application process appears to be more rigorous and fair than other courses (it is certainly more transparent) however it discriminated against those who are not fresh out of university-individuals who may have a great deal of skills and experience"

One main problem expressed by candidates was the lack of formal feedback offered by the course following the shortlisting, with many participants wanting to know their actual score and/or ranking in the test along with constructive feedback in order to improve their performance in future years. However several also accepted that this was difficult given the large numbers applying.

2008 applicants

A total of 73 completed questionnaires were returned by participants, a return rate of 34.4%. Of these 68 had sat the written task. Sixty-six of the participants were female and the average age was 26.4. Of the participants, 15 had been offered a place on the course. Further demographics are shown in table 19.

Table 19: Demographic information for returned questionnaires, 2008 Intake (*N*=73)

Variable	Mean (*SD*) or Number (%)
Gender	
Male	7 (9.6)
Female	66 (90.4)
Age	26.4 (5.49)
Sat the task	
Yes	68 (93.2)
No	5 (6.8)
Invited back for interview (*N*=68)	34 (50)
Yes	34 (50)
No	
Attended the interview (*N*=34)	
Yes	31 (91.2)
No	3 (8.8)
Offered a place on the course (*N*=31)	
Yes	16 (51.6)
No	15 (48.4)
Number of years applied to clinical training	1.86 (1.11)

The mean scores for each statement, shown in Table 20, indicate a generally positive response to the written task. A large number of participants thought testing of academic ability was important in the selection of candidates (item 2, *M*=3.01). There was also an emphasis on the importance of access to previous versions of the written task with items 5 and 6 both having a mean score over 3.4. The questionnaire also indicated that the majority of participants preferred to sit the task online rather than at the university (item 11, *M*=3.06) and

most found the electronic system easy to use (item 10, *M*=2.96) and instructions easy to follow (item 9, *M*=3.10).

Table 20: Mean score for each item on the questionnaire, 2008 Intake. Range 0-4

	Item number and description	Mean Score for each item *N*=73
item1*	The written task is a useful tool for shortlisting candidates	2.44
item2*	Testing academic ability is important in the selection of candidates	3.01
item3*	The written task makes clinical psychology more accessible to those not from traditional psychology backgrounds	2.45
item4*	The written task encouraged me to apply to the Lancaster course	2.08
item5	It was important that previous versions of the test were available to look at before I took the test	3.69
item6	I found the past versions of the written task available on the Lancaster website useful	3.47
item7	I found speaking to people who sat the written task in previous years useful	2.13
item8	I felt prepared when I sat the written task	2.60
item9	The task instructions were easy to follow	3.10
item10	I thought the computer software was easy to use	2.96
item11	I preferred to sit the written task online than at the university	3.06
item12	I thought it was important to have books and references around me as I sat the test	1.59
item13	I thought it was helpful to have people available to help me during the task	1.38
item14	The written task required competencies a trainee clinical psychologist would require at the start of their training	2.54
item15	The written task requires a writing ability	2.35

	suitable for doctoral level study	
item16	The written task requires mathematical skills higher than those which should be expected from a clinical psychology applicant	1.10
item17	The outcome of the written task was fed back quickly	2.93
item18	The results of the written task reflected how I thought I had done	2.25
item19	It was necessary for candidates to re-sit the written task at the university before they attended an interview	2.49
item20	Experiencing the written task has put me off applying to the Lancaster course in the future	1.45

* N=68, Candidates who did not sit the task were asked to end the questionnaire after these four statements.

As with the 2007 questionnaire the lack of formal feedback was raised by many participants as a major issue with the process. Although most participants agreed that judging academic ability was important (M=3.01) the qualitative feedback offered by participants indicated that some participants also seems confused as to why this was not judged using the application forms. Some participants called for the application forms to be used alongside the written task in order to take into account clinical experience and references.

> "The online task leaves out many people who have many other equally important skills required for clinical training…I feel my chance of getting on the Lancaster course is limited as a result of the online test"

The mean scores for each item, for each year group, were entered into a Mann Whitney test which highlighted a significant difference between seven items on the questionnaire. The 2008 (N_2) applicants reflected on the written task more positively than the 2007 (N_1) applicants. For example, a significant difference was recorded between the results from the two groups for item one (U=1673.5, N_1=67, N_2=73, p=.001, two-tailed) and item three (U=1445.0, N_1=67, N_2=73, p<.001, two-tailed).

Furthermore, a significant difference was also found in the results for items five (U=1730.0, N_1=64, N_2=70, p=.008, two-tailed) and six (U=1539, N_1=64, N_2=70, p=.001, two-tailed). This indicated that the 2008 applicants put more importance than the 2007 intake on access to previous versions of the task. The significant difference between the two groups for items 14 (U=1620.5, N_1=64, N_2=69, p=.005, two-tailed) and 16 (U=1693, N_1=64, N_2=70, p=.01, two-tailed) indicated that the 2008 applicants, again, reflected more positively than the 2007 intake on the written task. Indeed, the 2008 applicants agreed more strongly than the 2007

intake that the written task was set at a suitable level in terms of writing ability and mathematical skills. The final question, whether the written task had put them off applying to the Lancaster course in the future, was answered more favourably by the 2008 intake (U=1297.5, N_1=58, N_2=67, p=.001, two-tailed).

Discussion

There was a relatively low return rate for both sets of questionnaires. Although this may have been expected for the 2007 intake, as the addresses held were over a year old, the rate of return was disappointing for the 2008 intake. However, although low, the number of questionnaires returned was high enough to show trends in the data.

We cannot be clear what is behind the more positive response from the 2008 applicants compared to the 2007 applicants, however there are several possible factors. More time has passed since the introduction of the task and candidates may be becoming more accustomed to the idea of sitting a written task, especially as more courses have introduced similar stages to their interview process. The 2008 intake also completed the questionnaire within six months of sitting the task. This may mean that the task was clearer in their minds and, for example, they were more able to remember how useful previous tasks were to them compared to the 2007 applicants who completed the questionnaire nearly a year after they sat the task. Another possible reason for the differences in results may lie in the higher number of returned questionnaires from people who were offered a place on the course in 2008.

Report discussion and conclusions

Report discussion and final conclusions

The analyses and results detailed in this report indicate that the written task is assessing candidates on an aspect of their ability which is not explored on the application form or at interview or presentation. The results from sections three and four also suggest that, compared to the application form, interview and presentation, performance on the written task better predicts academic success during training. While not all the correlations between the written task and academic marks were statistically significant due to the small *N*, all were in the predicted direction (i.e. higher scores on written test, higher scores on course assignments).

In conclusion, this report has indicated that the written test has been an extremely useful addition to Lancaster's selection procedure. However, while on any objective criteria the written task can be considered a useful introduction, its 'image' clearly needs developing. We need to be aware of both the anxieties it evokes and some applicants' rejection of the written test's utility. Consequently, we need to think creatively and proactively how we might address this. Our evaluation has also indicated that much care needs to be taken in the implementation of a test to make sure it is accessible and as secure against misuse as possible. In terms of workload, the administration of such a test has huge resource implications at the admissions stage. However, it is hoped that such an investment will result in our improved ability to select the best potential clinicians that we can.

Further study

Although this project has formally ended, the course will continue to look at the written task to see whether it can predict academic performance in future cohorts. This is especially relevant for the new Placement Presentation and Report, in order to see whether it can predict performance in this new clinically relevant assessment.

Recommendations

As detailed in this report we have found the written task to be predictive of future academic success and its success means that we will continue for the foreseeable future with this method of shortlisting. However there are a number of caveats for any course wishing to introduce a similar task:

1. The task needs to be technically supported. Lancaster employs a .03 WTE technical support person. Providing the test online requires additional support to be put in place. A designated 'call centre' was available for the time of the online task so candidates could call with any problems, which could then be logged and fixed by a technical advisor.
2. As each candidate's essay is marked individually, this is also resource-intensive. Three members of staff worked for around two days on the marking.
3. The short time frame in which to conduct and mark two written tasks between the last application form being received and the deadline for shortlisting meant administration resources were also intensified by the implementation of the written task. Additional communication with candidates was required throughout the shortlisting period.

Finally the course should have considered the external perceptions of the task more thoroughly before its implementation. For example, despite the need for our previous shortlisting system to be overhauled, many candidates still seem to believe that the application form offered more robust data

References and Appendices

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Appendices

Appendix 1: Variables from Application data entered into SPSS for the 2005, 2006 and 2007 intakes, type of data
Appendix 2: Questionnaire, 2007 Intake
Appendix 3: Questionnaire, 2008 Intake

Appendix 1 : Variables from Application data entered into SPSS for the 2005, 2006 and 2007 intakes, type of data

Unique ID number derived from Clinical Psychology application,
Date of Birth
Age of applicant when sat written task, continuous
Number of complete years since BPS accreditation when applicant sat written task, continuous
Nationality of applicant, categorical
Courses applied for all clustered in Geographic area of Northwest of England, binary
Number of referees who are clinical psychologists, continuous
A-levels attained (A=5, B=4, C=3, D=2, E=1, N & U=0. AS levels awarded half points), summed to form interval data
Psychology A Level, or equivalent, binary
Maths A Level, or equivalent, binary
Class of Psychology Degree attained at time of application, rank
Place of Psychology Degree, rank
Masters attained at time of application, binary
PHD attained at time of application, binary
Other qualifications attained at time of application, continuous
Number of paid roles as psychology assistant, continuous
Number of paid roles as research assistant, continuous
Number of other relevant paid roles, continuous
Number of unpaid roles as psychology assistant, continuous
Number of unpaid roles as research assistant, continuous
Number of other relevant unpaid roles, continuous
Number of research publications at time of application, continuous
Academic reference: Number of references referee has written, categorical
Academic reference: Comparison with other Clearing House applications (1 worse, 5 best), rank
Academic reference: How has referee known the applicant, categorical
Academic reference: Length referee known applicant, categorical
Academic reference: How well referee known the applicant, categorical
Academic reference: Rating of overall academic performance for Postgrad study, rank
Academic reference: Quality & originality of written work (1 low, 5 high), rank
Academic reference: Capacity of applicant to work independently (1 low, 5 high), rank
Academic reference: Research competence of applicant (1 low, 5 high), rank
Academic reference: Overall judgment of applicant's ability to complete DClinPsy, rank
Clinical reference: Number of references referee has written, categorical
Clinical reference: Comparison with other Clearing House applications (1 worse, 5 best), rank
Clinical reference: How known the applicant, categorical
Clinical reference: Length known applicant, categorical
Clinical reference: How well known the applicant, categorical
Clinical reference: Would they employ applicant in similar capacity again, categorical
Clinical reference: How many days absent in last year, categorical
Clinical reference: Applicant has ability to form positive working alliances with clients, categorical
Clinical reference: Applicant has ability to form positive working relationships with colleagues, categorical

Clinical reference: Overall judgment of applicant's ability to complete clinical psychology training, rank
Written Task (WT)-Effective communication score, continuous
WT-Score for Numeric part of test, continuous
WT-relevant skills and knowledge score, continuous
WT-Professional behavior, continuous
WT-Analysis & critical thinking total sore, continuous
Total score on written task, continuous
Interview – Values, continuous
Interview - Professional Behavior, continuous
Interview - Analysis and Critical Thinking, continuous
Interview - Effective Communication (Verbal), continuous
Interview - Self Management, continuous
Total score for the interview, continuous
Presentation – Values, continuous
Presentation - Relevant Knowledge and Skills, continuous
Presentation - Professional Behavior, continuous
Presentation - Effective Communication (Verbal), continuous
Presentation - Self Management, continuous
Presentation - Standard Setting, continuous
Total score for presentation, continuous
The total score for presentation & interview, continuous
Total effective communication score for presentation, written task and interview, continuous
Total professional behavior score for presentation, written task and interview, continuous,
Total 'analysis & critical thinking' score for presentation, written task and interview, continuous
Total 'values' score for interview and presentation, continuous
Total 'self-management' score or interview and presentation, continuous
Total 'relevant knowledge and skills' score for WT and presentation, continuous
Categorization of whether called for interview or not, binary
Whether applicant was offered a place on course, binary

In addition to the 69 variables above the following variables were also included for the 2005 intake:

Final mark for Child RCA-1st submission, continuous
Final mark for Adult RCA-1st submission, continuous
Final mark for the Older Adult RCA-1st submission , continuous
Final mark for Critical Review-1st submission, continuous
Final mark for the Professional Issues Essay-1st submission, continuous
Final mark for the SRP-1st submission, continuous
Final mark for the Learning Disabilities RCA-1st submission, continuous

For the 2006 intake the following variables were added to the variables in appendix one:

Final mark for Child RCA-1st submission, continuous
Final mark for Critical Review-1st submission, continuous
Final mark for Adult RCA-1st submission, continuous
Final mark for the Older Adult RCA-1st submission , continuous
Final mark for the Professional Issues Essay-1st submission, continuous
Final mark for the SRP-1st submission, continuous

Appendix Two: Questionnaire sent to all 2007 applicants invited to sit the written task

Assessing your views on the written test used by Lancaster University's Doctorate in Clinical Psychology as part of the admissions procedure

LANCASTER UNIVERSITY
The Institute for Health Research
Doctorate in Clinical Psychology

Please answer the questions below. Where multiple answers are provided please circle the most appropriate answer. Please note that your answers are completely anonymous so please be as honest as possible.

1. Did you sit the first written task in February 2007?

   Yes No

*If you answered **no** please go straight to question 8*

2. How old were you (in years) when you sat the task?

3. Did you sit the first written task online or at the university?

4. Were you subsequently invited to attend an interview and presentation at Lancaster?

   Yes No

*If you answered **no** please go to question 8*

5. Did you take up this invitation to attend the interview and presentation?

   Yes No

6. Following the interview were you offered a place on the Lancaster course? *(Nb. Please answer yes even if you did not* accept *the place)*

   Yes No

7. Were you offered a place on another clinical psychology training course which you have taken up?

   Yes No

8. How many years have you applied for clinical psychology training through the Clearing House, before and including your 2007 application?

9. If you were unsuccessful with getting on a clinical psychology training course in 2007 do you intend to continue to pursue a career in clinical psychology?

   Yes No Unsure

10. What is your gender?

Please read each statement below in the order they occur and indicate the degree with which you agree with each statement

The written task is a useful tool for shortlisting candidates

strongly disagree disagree neutral agree strongly agree

Testing academic ability is important in the selection of candidates

strongly disagree disagree neutral agree strongly agree

The written task makes clinical psychology more accessible to those not from traditional psychology backgrounds

strongly disagree disagree neutral agree strongly agree

The written task encouraged me to apply to the Lancaster course

strongly disagree disagree neutral agree strongly agree

If you did not sit the written task please end the questionnaire here

It was important that previous versions of the test were available to look at before I took the test

strongly disagree disagree neutral agree strongly agree

I found the past versions of the written task available on the Lancaster website useful

strongly disagree disagree neutral agree strongly agree

I found speaking to people who sat the written task in previous years useful

strongly disagree disagree neutral agree strongly agree

I felt prepared when I sat the written task

strongly disagree disagree neutral agree strongly agree

The task instructions were easy to follow

strongly disagree disagree neutral agree strongly agree

I thought the computer software was easy to use

strongly disagree disagree neutral agree strongly agree

I preferred to sit the written task online than at the university

strongly disagree disagree neutral agree strongly agree

I thought it was important to have books and references around me as I sat the test

strongly disagree disagree neutral agree strongly agree

I thought it was helpful to have people available to help me during the task

strongly disagree disagree neutral agree strongly agree

The written task required competencies a trainee clinical psychologist would require at the start of their training

strongly disagree disagree neutral agree strongly agree

The written task requires a writing ability suitable for doctoral level study

strongly disagree disagree neutral agree strongly agree

The written task requires mathematical skills higher than those which should be expected from a clinical psychology applicant

strongly disagree disagree neutral agree strongly agree

The outcome of the written task was fed back quickly

strongly disagree disagree neutral agree strongly agree

The results of the written task reflected how I thought I had done

strongly disagree disagree neutral agree strongly agree

It was necessary for candidates to re-sit the written task at the university before they attended an interview

strongly disagree disagree neutral agree strongly agree

Experiencing the written task has put me off applying to the Lancaster course in the future

strongly disagree disagree neutral agree strongly agree

Thank you for taking the time to answer these questions. Please return your completed questionnaire in the freepost envelope provided. Please note that your responses are completely anonymous and your participation in this study will have no affect on any current or future applications to the course.

Appendix Three: Questionnaire sent to all 2008 applicants invited to sit the written task

LANCASTER UNIVERSITY
The Institute for Health Research
Doctorate in Clinical Psychology

Assessing your views on the written test used by Lancaster University's Doctorate in Clinical Psychology as part of the admissions procedure

Please answer the questions below. Where multiple answers are provided please circle the most appropriate answer. Please note that your answers are completely anonymous so please be as honest as possible.

11. Did you sit the written task on 11th February 2008?

    Yes No

*If you answered **no** please go straight to question 6*

12. Did you sit the first written task online or at the university?

13. Were you subsequently invited to attend an interview and presentation at Lancaster?

    Yes No

14. Did you take up this invitation to attend the interview and presentation?

    Yes No

*If you answered **no** please go to question6*

15. Following the interview were you offered a place on the Lancaster course? *(Nb. Please answer yes even if you did not* accept *the place)*

    Yes No

16. How many years have you applied for clinical psychology training through the Clearing House, before and *including* your 2008 application?

17. If you are unsuccessful with getting on a clinical psychology training course do you intend to continue to pursue a career in clinical psychology?

    Yes No Unsure

18. How old were you (in years) when you were invited to sit the task?

19. What is your gender?

20. Were you also invited to sit the written task in 2007?

Yes No

21. Have you completed and returned a questionnaire regarding your perceptions of the 2007 written task?

Yes No

Please read each statement below in the order they occur and indicate the degree with which you agree with each statement

The written task is a useful tool for shortlisting candidates

strongly disagree disagree neutral agree strongly agree

Testing academic ability is important in the selection of candidates

strongly disagree disagree neutral agree strongly agree

The written task makes clinical psychology more accessible to those not from traditional psychology backgrounds

strongly disagree disagree neutral agree strongly agree

The written task encouraged me to apply to the Lancaster course

strongly disagree disagree neutral agree strongly agree

If you did not sit the written task please end the questionnaire here

It was important that previous versions of the test were available to look at before I took the test

strongly disagree disagree neutral agree strongly agree

I found the past versions of the written task available on the Lancaster website useful

strongly disagree disagree neutral agree strongly agree

I found speaking to people who sat the written task in previous years useful

strongly disagree disagree neutral agree strongly agree

I felt prepared when I sat the written task

strongly disagree disagree neutral agree strongly agree

The task instructions were easy to follow

strongly disagree disagree neutral agree strongly agree

I thought the computer software was easy to use

strongly disagree disagree neutral agree strongly agree

I preferred to sit the written task online than at the university

strongly disagree disagree neutral agree strongly agree

I thought it was important to have books and references around me as I sat the test

strongly disagree disagree neutral agree strongly agree

I thought it was helpful to have people available to help me during the task

strongly disagree disagree neutral agree strongly agree

The written task required competencies a trainee clinical psychologist would require at the start of their training

strongly disagree disagree neutral agree strongly agree

The written task requires a writing ability suitable for doctoral level study

strongly disagree disagree neutral agree strongly agree

The written task requires mathematical skills higher than those which should be expected from a clinical psychology applicant

strongly disagree disagree neutral agree strongly agree

The outcome of the written task was fed back quickly

strongly disagree disagree neutral agree strongly agree

The results of the written task reflected how I thought I had done

strongly disagree disagree neutral agree strongly agree

It was necessary for candidates to re-sit the written task at the university before they attended an interview

strongly disagree disagree neutral agree strongly agree

Experiencing the written task has put me off applying to the Lancaster course in the future

strongly disagree disagree neutral agree strongly agree

Thank you for taking the time to answer these questions. Please return your completed questionnaire in the freepost envelope provided. Please note that your responses are completely anonymous and your participation in this study will have no affect on any current or future applications to the course.