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Running head: ETHNICITY AND DISTANCE EDUCATION

**The role of ethnicity in the attainment and experiences
of graduates in distance education**

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The role of ethnicity in the attainment and experiences of graduates in distance education

Abstract. In the UK, the attainment of White graduates (as measured by the class of honours that they have been awarded) tends to be higher than that of graduates from other ethnic groups. This is apparent, in particular, in graduates who have taken courses by distance learning with the Open University. Analysis of data from Open University graduates over three successive years yielded no evidence that the latter trend could be attributed to confounded demographic variables. A postal survey found little variation in perceptions of academic quality or reports of personal development among Open University graduates from different ethnic groups. Quantitative variations in the attainment of graduates from different ethnic groups are not necessarily reflected in qualitative variations in their experience of distance education.

Keywords: academic attainment, Course Experience Questionnaire, degree classification, distance education, ethnicity, personal development.

Introduction

In the UK, first degrees are usually designated by the title of ‘Bachelor’, although enhanced degrees in science and engineering and arts degrees in the ‘ancient’ Scottish universities are designated by the title of ‘Master’. When such degrees are awarded with honours, they are usually classified as first, second or third class, and the second class is normally categorized into an upper and a lower division. Information about the classes of degree awarded by UK higher education institutions is collected by the Higher Education Statistics Agency (HESA), which publishes summary statistics on an annual basis and provides more extensive data sets for use by researchers. Few other countries collect national statistics of this sort. In the USA, for instance, the criteria for graduation *cum laude*, *magna cum laude* and *summa cum laude* vary widely across different universities, and national data on these awards are not collected.

The availability of such national statistics in the UK makes it possible to investigate substantive research questions regarding the predictors of academic attainment. The measure of attainment used in many studies is the likelihood of students being awarded a degree with either first-class or upper second-class honours, which is often described as a ‘good’ degree. Previous investigations have examined differences across institutions and academic subjects in the classes of degree awarded (e.g., Johnes and Taylor 1990) and the role of demographic variables such as the students’ age and gender as predictors of their academic attainment (e.g., Richardson and Woodley 2003). In this article, I focus upon the role of another demographic variable, that of the students’ ethnicity.

Stone (1996) explained: ‘Ethnicity is a fundamental category of social organization which is based on membership defined by a sense of common historical origins and which may also include shared culture, religion or language’ (pp. 260–261). In social research and increasingly in everyday discourse, it is nowadays used in preference to the term *race*, which was associated with now-discredited theories about human behaviour, character and social organization (Fenton 1996; Tobias 1996). The labels used to identify different ethnic groups differ from one country to another and evolve over time within each country. For instance, in

the USA the term *Asian* often refers to people with origins in the Far East or South-East Asia. In the UK, however, it normally refers only to people with origins in the Indian subcontinent, and many Chinese people living in the UK would not describe themselves as ‘Asian’.

Table 1 shows the ethnic classification used for official Government statistics in the UK with effect from the 2001 Census. As Fenton (1996) remarked when commenting on the ethnic classification that had been used in the previous Census, the categories are a mixture based partly on skin colour and partly on national, regional or continental origin. Even so, they are valid to the extent that people from different ethnic groups in the UK are prepared to use them to describe themselves for both formal and informal purposes. More specifically, information about the ethnicity of students in UK higher education is based upon their self-identification at the time of their registration: that is, they are asked to choose an ethnic group with which they most identify from a list similar to that employed in the national Census.

(Insert Table 1 about here)

It is often argued that structural inequalities in society reduce both the achievement and the aspirations of children from ethnic minorities (e.g., Ogbu 1978). For those who do gain access to higher education, their subsequent academic attainment may be curtailed by discriminatory practices on the part of academic staff (Nettles 1988, pp. 18–32) or anxiety about assessment due to the triggering of negative stereotypes in the students themselves (Brown and Lee 2005; Osborne 2001). In the UK, applicants to higher education from ethnic minorities tend to have lower entry qualifications than White students, and there is evidence that they are subject to discriminatory selection practices (Shiner and Modood 2002). On this basis, graduates from different ethnic groups might well vary in their classes of final degree.

A practical problem is that the Level 2 categories within ‘White’ and ‘Mixed’ are not applied consistently by educational institutions across the different countries of the UK, and they are therefore not used in HESA’s aggregate statistics. This means that comparisons can only be made at the national level between White students as a single group and those from other ethnic groups. Nevertheless, it should not be taken to mean that the category of White students is either homogeneous or unproblematic (see Bird 1996, pp. 96–97; Fenton 1996).

A number of recent investigations in the UK have found that White graduates are more likely to be awarded good degrees than are graduates from other ethnic groups (Connor et al. 1996, 2004; Owen et al. 2000; Naylor and Smith 2004; Leslie 2005; Elias and Jones 2006). Richardson (in press) confirmed this trend, but he found that it was greater in older students than in younger students, greater in women than in men, greater in part-time students than in full-time students, greater in some academic disciplines than in others, and greater in former polytechnics that had acquired degree-awarding powers after 1992 than in the 'Russell group' of older research-intensive universities. However, even when the effects of all of these other variables had been taken into account, White graduates were still markedly more likely to be awarded good degrees than were graduates from other ethnic groups.

One way of investigating the origins of this trend is to consider the classes of degree awarded by individual institutions. This article examines the attainment and experiences of graduates from different ethnic groups at the Open University. This institution was created in 1969 to provide degree programmes by distance education across the UK. It accepts all applicants over the normal minimum age of 18 without imposing any formal entrance requirements. Initially, nearly all its courses were delivered by correspondence materials, combined with television and radio broadcasts, video and audio recordings, tutorial support offered at a local level and (in some cases) week-long residential schools. In recent years, the University has made an increasing use of computer-based support such as CD-ROMs, dedicated websites and computer-mediated conferencing.

The Open University is an interesting case for present purposes because it has both an open admissions policy and a long-standing commitment to equal opportunities in education. It has also explored initiatives for supporting students from ethnic minorities. However, there are three reasons for expecting that the trend for White graduates to be more likely to obtain good degrees would be at least as apparent at the Open University as elsewhere:

- Open University students are typically older than those at other UK institutions of higher education. (Their average age is around 40.) However, Richardson (in press) found that

the proportion of graduates obtaining good degrees increased with age in the case of White students but declined with age in the case of students from other ethnic groups.

- Most of the Open University's courses are worth 30 or 60 credit points, on the basis that full-time study would consist of courses worth 120 credit points in a given year. Students may register for two or more courses up to a maximum of 120 credit points, but most register for just one course at a time, and all are regarded as studying on a part-time basis. Richardson found that full-time students were more likely to obtain good degrees than part-time students, but the disparity was greater in those from non-White ethnic groups.
- The Open University awards a BA or BSc on the basis of the balance of arts and science courses that each student has passed, and degrees with honours are awarded on the basis of a minimum number of passed advanced-level courses. Since 2000, the University has introduced named degrees based upon the satisfactory completion of specific schemes of study. However, many students still opt to receive a generic BA or BSc and are regarded as having been awarded 'combined' degrees. In the case of graduates from non-White ethnic groups, Richardson found that those who took combined degrees were less likely to obtain good degrees than were those who took degrees within specific subject areas.

Accordingly, the first part of this article considers whether White students are more likely to be awarded good degrees by the Open University than are those from other ethnic groups. The second part describes the findings of a survey that was carried out to examine whether there are qualitative variations in the experiences of graduates from different ethnic groups that might tend to explain any quantitative variations in their academic attainment.

The attainment of Open University graduates

Comparisons with national data

The various results obtained by Richardson (in press) were based on a data set containing all

UK-domiciled students who were awarded first degrees by UK higher-education institutions in the academic year 2004–05. Using the Level 1 ethnic categories shown in Table 1, out of the 241,300 graduates, 195,120 were White, 3,895 were Mixed, 18,545 were Asian or Asian British, 7,580 were Black or Black British, 4,375 were Chinese or Other, and the ethnicity of the remaining 11,785 was not known.

Further analysis of this data set reveals that 218,685 graduates had been studying on a full-time basis, 17,715 had studied on a part-time basis with institutions other than the Open University, and 4,900 had studied with the Open University. (Following HESA's procedures, these figures have been rounded to the nearest multiple of 5 to avoid the identification of any individuals. HESA also requires that any relative frequencies based on 52 students or fewer should be suppressed on the grounds that they are potentially unreliable. It is for this reason that the present analysis is restricted to the Level 1 categories from the UK Census.)

Table 2 shows the distributions of ethnic groups by mode of study. Discounting the graduates whose ethnicity was unknown, White students constituted 85.1% of the graduates who had studied on a full-time basis, 81.1% of the graduates who had studied on a part-time basis and 95.8% of the graduates who had studied with the Open University. The fact that a higher proportion of Open University graduates are White may be due in part to their older age distribution, as ethnic minority groups often have younger age profiles (Summerfield and Gill 2005, pp. 10–11).

(Insert Table 2 about here)

The distribution of degree classes awarded to these graduates was: first class, 11.9%; upper second class, 49.8%; lower second class, 33.2%; and third class, 5.1%. The overall proportion of graduates who obtained 'good' degrees was therefore 61.7%. Because of the relatively small numbers of graduates of Mixed, Chinese or other ethnicity, especially at the Open University, the latter were combined into a single 'Other' category. Table 3 shows the percentage of students in each of the five resulting groups who had obtained good degrees. As in the data presented by Richardson (in press), White students were more likely to obtain good degrees than students from other ethnic groups, and this tendency was more pronounced

in part-time students than in full-time students. Open University students performed broadly as well as other part-time students, but Asian students were somewhat more likely to obtain good degrees, and Black students were somewhat less likely to obtain good degrees.

(Insert Table 3 about here)

These data take the form of a multiway contingency table that was examined using logit loglinear analysis. This generates likelihood ratio statistics which, in large samples, follow the chi-square distribution and are therefore denoted using the Roman symbol ' X^2 '. Students whose ethnicity was not known were excluded from this analysis. The variation among the ethnic groups was statistically significant even when the effect of mode of study had been taken into account ($X^2 = 4066.22$; d.f. = 3; $p < 0.001$). The variation among the modes of study was statistically significant even when the effect of ethnicity had been taken into account ($X^2 = 461.29$; d.f. = 2; $p < 0.001$). However, the interaction between the two effects was also statistically significant ($X^2 = 225.62$; d.f. = 6; $p < 0.001$).

To compare trends obtained with different levels of performance or different selection criteria, one can compute odds ratios. If the probability of the members of Group 1 exhibiting a particular outcome is p (e.g., 0.60), then the odds of this are $p/(1 - p)$ (i.e., 0.60/0.40 or 1.50). If the probability of the members of Group 2 exhibiting that outcome is q (e.g., 0.70), then the odds of this are $q/(1 - q)$ (i.e., 0.70/0.30 = 2.33). The ratio between these odds is $1.50/2.33 = 0.64$. In other words, the odds of the members of Group 1 exhibiting the relevant outcome are 64% of the odds of the members of Group 2 exhibiting that outcome. Odds ratios vary from 0 (when $p = 0$ or $q = 1$) to infinity (when $p = 1$ or $q = 0$), and an odds ratio of 1 means that there is no difference in the odds of the two groups' members exhibiting the outcome (when $p = q$).

The odds ratios comparing the likelihood of Asian and White students obtaining a good degree were 0.52 for full-time students, 0.23 for part-time students and 0.52 for Open University students. That is, for full-time students and for Open University students, the odds of an Asian student obtaining a good degree were one half those of a White student obtaining a good degree; but for part-time students at other institutions, the odds of an Asian student

obtaining a good degree were only a quarter of those of a White student obtaining a good degree. The odds ratio for part-time students was significantly different from that for full-time students ($X^2 = 150.45$; d.f. = 1; $p < 0.001$) and that for Open University students ($X^2 = 9.26$; d.f. = 1; $p = 0.002$), but the two latter odds ratios were not significantly different from one another ($X^2 = 0.00$; d.f. = 1; $p = 0.98$).

The odds ratios comparing the likelihood of Black and White students obtaining a good degree were 0.36 for full-time students, 0.22 for part-time students and 0.14 for Open University students. That is, for full-time students, the odds of a Black student obtaining a good degree were one third of those of White student obtaining a good degree, but for part time students and for Open University students, the odds of a Black student obtaining a good degree were less than a quarter of a White student obtaining a good degree. The odds ratio for full-time students was significantly different from that for part-time students ($X^2 = 49.37$; d.f. = 1; $p < 0.001$) and that for Open University students ($X^2 = 12.50$; d.f. = 1; $p < 0.001$), but the two latter odds ratios were not significantly different ($X^2 = 2.31$; d.f. = 1; $p = 0.13$).

In short, as Richardson (in press) found when analysing the same data set, White graduates were more likely to be awarded good degrees than were those from other ethnic groups. In comparison with graduates who had studied on a full-time basis, this tendency was more pronounced in graduates who had studied on a part-time basis. It was also more pronounced in Black graduates who had studied with the Open University, who performed on a par with their part-time counterparts at other institutions of higher education. Nevertheless, it was not more pronounced in Asian graduates who had studied with the Open University, since they performed on a par with their full-time counterparts at other institutions.

Even so, it is hard to interpret these results, given the relatively small numbers of graduates from non-White ethnic groups at the Open University. It would also be useful to investigate variations within the Level 1 categories from the UK Census. To address these issues, a further analysis was carried out to compare the classes of degree awarded by the Open University to students from different ethnic groups over a period of three successive academic years.

A larger data set

In the three years from 2002–03 to 2004–05, the Open University awarded 20,945 classified honours degrees to its students. They were classified into the Level 2 categories from the UK Census, and Table 4 shows the distributions of degree classes awarded to the various groups. The graduates whose ethnicity was not known were excluded from any statistical analyses. The variation in the proportion of good degrees across the remaining five Level 1 categories was highly significant ($X^2 = 199.47$; d.f. = 4; $p < 0.001$). The variation in the proportion of good degrees within the five categories was also significant ($X^2 = 26.52$; d.f. = 13; $p = 0.01$). However, this was entirely attributable to variation among the four small groups of students of Mixed ethnicity ($X^2 = 9.59$; d.f. = 3; $p = 0.02$), in that the variation within each of the other four Level 1 categories was not statistically significant.

(Insert Table 4 about here)

Although subtle patterns of variation within the Level 1 categories might be apparent in larger data sets, the major phenomenon to be explained is the variation in attainment across the five Level 1 categories. In particular, the proportion obtaining good degrees was lower in Asian students than in White students and was lower still in Black students. The odds ratio comparing the likelihood of Asian and White students obtaining a good degree was 0.56; the odds ratio comparing the likelihood of Black and White students obtaining a good degree was 0.19. Because of the small numbers of graduates of Mixed, Chinese or other ethnicity, they were combined for further analysis into a single ‘Other’ group, leaving five different groups. Table 5 shows the proportions of good degrees awarded to students in these different groups, related to a number of demographic characteristics. Students whose ethnicity was not known are included in Table 5 for comparison, but they were excluded from the statistical analyses.

(Insert Table 5 about here)

The students’ ages (on 1 January in the year in question) varied from 19 to 91 with a mean of 43.7 years and a median of 42 years, and they were classified into the four age bands shown in Table 5. The variation in the proportion of good degrees across the different ethnic

groups was statistically significant even when the possible effect of age had been taken into account ($X^2 = 203.11$; d.f. = 3; $p < 0.001$). Asian and Black graduates were less likely to obtain good degrees than White graduates in each age band. Although this trend appears to become more pronounced with advancing age, the interaction between the effects of age and ethnicity was not statistically significant ($X^2 = 13.04$; d.f. = 9; $p = 0.16$).

The variation in the proportion of good degrees across different ethnic groups also remained statistically significant even when the possible effect of gender had been taken into account ($X^2 = 197.89$; d.f. = 3; $p < 0.001$). Both men and women who were Asian or Black were less likely to obtain good degrees than their White counterparts. Although this trend appears to be more pronounced in Asian men, the interaction between the effects of gender and ethnicity was not statistically significant ($X^2 = 5.79$; d.f. = 3; $p = 0.12$).

The students' educational qualifications prior to joining the Open University were classified into three categories by comparison with the General Certificate of Education, Advanced Level (GCE A-Level), which is the main university entrance qualification in the UK: low, fewer than two passes at GCE A-Level or the equivalent; medium, two or more passes at GCE A-Level, the normal minimum entry requirement at other UK universities, or the equivalent; and high, qualifications beyond GCE A-Level. This information was available for 20,202 of the 20,945 students.

The percentage of graduates with high prior qualifications in each of the four ethnic groups was: White, 43.7%; Asian, 47.1%; Black, 44.4%, and Other, 58.7%. The percentage of graduates with medium prior qualifications was: White, 28.7%; Asian, 25.4%; Black, 22.7%; and Other, 19.3%. The percentage of graduates with low prior qualifications was: White, 27.6%; Asian, 27.6%; Black, 32.9%; and Other, 22.0%. A Kruskal Wallis test showed that there was a significant difference among the four groups in their prior qualifications ($X^2 = 11.14$; d.f. = 3; $p = 0.01$). However, this could be attributed to the fact that the graduates assigned to the 'Other' category had higher prior qualifications than the other three groups, who did not differ significantly among themselves ($X^2 = 1.15$; d.f. = 2; $p = 0.56$).

Moreover, the variation in the proportion of good degrees across the different ethnic

groups remained statistically significant even when the possible effect of prior qualifications had been taken into account ($X^2 = 187.62$; d.f. = 3; $p < 0.001$). Asian and Black graduates were less likely to obtain good degrees than White graduates, regardless of their level of prior qualifications. The interaction between the effects of prior qualifications and ethnicity was not statistically significant ($X^2 = 8.28$; d.f. = 6; $p = 0.22$).

On the basis of their personal circumstances, Open University students may apply for financial assistance towards the cost of their registration fees and study materials. The award of such assistance may be taken as a rough proxy for lower socio-economic circumstances. The variation in the proportion of good degrees across different ethnic groups remained statistically significant even when the possible effect of financial assistance had been taken into account ($X^2 = 187.31$; d.f. = 3; $p < 0.001$). Asian and Black graduates were less likely to obtain good degrees than White graduates, regardless of whether or not they had received such assistance during the course of their studies. The interaction between the effects of financial assistance and ethnicity was not significant ($X^2 = 1.16$; d.f. = 3; $p = 0.76$).

Although age, gender, prior qualifications and financial assistance when considered individually did not explain why White students might be more likely to obtain good degrees than students from other ethnic groups, they might in principle have a collective effect. Nevertheless, the variation in the proportion of good degrees across different ethnic groups remained statistically significant even when the possible effects of all four variables and their various interactions had been taken into account ($X^2 = 182.67$; d.f. = 3; $p < 0.001$). In other words, the tendency for Asian and Black graduates to be less likely to obtain good degrees than White graduates is essentially independent of the students' age, gender, academic background and socio-economic circumstances.

Finally, it is well known that the likelihood of obtaining a good honours degree varies across different subjects of study (Richardson and Woodley 2003). In 2002–2005, 32 different honours degrees were awarded, including the generic BA/BSc. These varied significantly in the proportions of students from different ethnic groups who were awarded each degree ($X^2 = 299.31$; d.f. = 93; $p < 0.001$) and the proportions of students who were

awarded good degrees ($X^2 = 195.37$; d.f. = 31; $p < 0.001$). However, the variation in the proportion of good degrees across different ethnic groups remained statistically significant even when possible variation across different degrees had been taken into account ($X^2 = 186.02$; d.f. = 3; $p < 0.001$), and the interaction between the effects of degree and ethnicity was not significant ($X^2 = 72.42$; d.f. = 93; $p = 0.94$). Although there were apparent differences among the various degrees in the relative likelihood of students from different ethnic groups obtaining good degrees, there was no evidence that these differences were not simply the result of chance variation.

The experiences of Open University graduates

A simple explanation for the relatively poor performance of Asian and Black students would be that their experience of higher education is qualitatively inferior to that of White students. This should be apparent from students' own accounts of their experience of higher education. Early accounts of ethnic minority students' experiences tended to be couched in a rhetoric of exclusion, isolation and discrimination (see Bird 1996), but more recent investigations have painted a less extreme picture. For instance, Connor et al. (1996) carried out interviews with 25 students from non-White ethnic groups, and they came to the conclusion that, 'while blatant discrimination in higher education was rare, more subtle forms of exclusion and lack of access to informal sources of support were still common' (p. 74).

Connor et al. (2001) interviewed final-year full-time students at 15 institutions about their choices of programme and institution. White students gave higher satisfaction ratings than did students from other ethnic groups, and they tended to be less likely to feel that they had made the wrong choice of institution; Asian students were less likely to be satisfied with their choice of subject than either White or Black students. However, Connor et al. suggested that these differences were influenced by the specific subject taken and the type of institution attended (pp. 23–26). A follow-up study of these students 2 years later obtained similar findings, but the variations among different ethnic groups were not statistically significant

(Pollard et al. 2004, p. 109).

Connor et al. (2004) interviewed another sample of final-year full-time students at 29 institutions. They concluded: 'There was no consistent message from our student survey that any group of minority ethnic students felt more disadvantaged than White students, as most of the views expressed were very much part and parcel of university life at many institutions' (p. 80). A follow-up study carried out a year later found little variation among different ethnic groups in the perceived benefits of higher education. Some Asian and Black students seemed to be less satisfied with their choices of programme and institution; however, Connor et al. suggested that this reflected the greater difficulties that they had encountered in moving into the labour market (p. xviii).

Another source of information about students' experiences is the UK National Student Survey, which was launched early in 2005 as an annual survey of final-year undergraduates. Nevertheless, pilot work had been carried out with a large sample of recent graduates, and the results were presented by Richardson (2004). These included the evaluation of an instrument consisting of 19 items in seven scales measuring various aspects of teaching, and responses to this questionnaire were obtained from 14,789 graduates. They were classified into four broad ethnic categories, and these showed significant differences on five of the seven scales (p. 50). In general, White students tended to produce more favourable ratings of their programmes than Asian or Black students. Nevertheless, the magnitude of these differences was relatively slight, and they only achieved statistical significance because of the very large sample size.

In short, there is little evidence from previous research that the experiences of Asian and Black students are sufficiently inferior to those of White students to explain the marked variation in their degree performance. Lawless and Richardson (2004) described two different questionnaires that could be used in distance education to monitor the experiences of recent graduates. The first was an adapted version of the Course Experience Questionnaire (CEQ), which was originally devised by Ramsden (1991); the second was an 'in-house' instrument, the Personal and Educational Development Inventory (PEDI), which had been based upon a checklist of educational competences devised by Purcell and Pitcher (1998, pp. 12–16).

Lawless and Richardson found in a survey of Open University graduates that those graduates who had obtained better classes of degree produced significantly higher ratings of their courses on certain of the scales in the CEQ and significantly different ratings of their personal development on certain of the scales in the PEDI. Insofar as graduates from different ethnic groups vary in their degree performance, one might expect them to vary also in their scores on both these instruments. The following investigation was a replication of the study carried out by Lawless and Richardson that was aimed at comparing the scores on the CEQ and the PEDI obtained by recent Open University graduates from different ethnic groups.

Method

As adapted by Lawless and Richardson (2004), the CEQ consists of 36 statements in seven scales reflecting different aspects of academic quality. The defining items of these seven scales are shown in Table 6. Graduates are asked to respond to each statement with regard to their own experience of the courses that they have taken with the Open University on a 5-point scale from 5 for 'definitely agree' to 1 for 'definitely disagree'. As in previous studies, the scale's midpoint (3) was 'only to be used if the statement doesn't apply to you or if you really find it impossible to give a definite answer'.

(Insert Table 6 about here)

The PEDI consists of 26 areas that reflect different aspects of personal development: cognitive skills (e.g., critical analysis); mathematical skills (e.g., ability to use numerical data); self-organization (e.g., self-discipline); and social skills (e.g., leadership skills). Graduates are asked to rate the extent to which their studies have enabled them to develop in each area on a 4-point scale from 'not at all' to 'a great deal'. The items in the CEQ and the PEDI together with data on their psychometric properties can be found in Lawless and Richardson's report.

The CEQ and the PEDI were included in a single postal survey that was administered to students who had been awarded honours degrees by the Open University in 2002–03. The

survey was sent to all 3,065 students who had obtained named honours degrees in 2002–03 and to a random sample of 500 students who had been awarded the original generic BA/BSc honours degree. The respondents were also asked to assign themselves to one of 16 ethnic groups using categories from the 2001 Census. Although the survey was not anonymous, the graduates were assured of the confidentiality of their responses.

Results

A total of 2,351 graduates returned completed copies of the questionnaire, which represents an overall response rate of 65.9%. This would be considered to be good for a postal survey (e.g., Kidder 1981, pp. 150–151; Babbie 1990, p. 182). There was no significant difference between the response rates for the graduates who were awarded named degrees (66.3%) and those who were awarded generic degrees (64.0%) ($X^2 = 0.98$; d.f. = 1; $p = 0.32$). All but 78 respondents assigned themselves to one of the 16 ethnic groups, but because of the small numbers from some ethnic groups they were combined into the major categories used earlier.

On examining the responses to the CEQ, it was found that 138 students had failed to give a response to one or more of the 36 items. In most cases, these were isolated instances, and it was felt appropriate to regard them as items that did not apply to the specific student; accordingly, they were coded as '3' (i.e., 'doesn't apply to me'). However, 15 respondents had missed more than four items, and their data were dropped from further analysis. The remaining 2,336 students were assigned scores on the seven scales following the procedures described by Lawless and Richardson (2004). The mean score across the seven scales was also used as a measure of overall perceived quality.

Table 7 shows the mean scores on the CEQ produced by the graduates who had been awarded different classes of degree. A multivariate analysis of variance showed that their scores were significantly different ($F = 12.42$; d.f. = 21, 6680; $p < 0.001$). Univariate tests were carried out to locate the source of this variation, using the differentiation ratio η^2 (eta squared) as a measure of effect size. This measure is equal to the proportion of variation in a

dependent variable that is explained by an independent variable. Cohen (1988, pp. 286–287) suggested that values of 0.0099, 0.0588 and 0.1379 would represent ‘small’, ‘medium’ and ‘large’ effects, respectively.

(Insert Table 7 about here)

The groups produced significantly different scores on Appropriate Assessment ($F = 36.05$; d.f. = 3, 2332; $p < 0.001$; $\eta^2 = 0.044$), Appropriate Workload ($F = 16.53$; d.f. = 3, 2332; $p < 0.001$; $\eta^2 = 0.021$), Clear Goals and Standards ($F = 20.74$; d.f. = 3, 2332; $p < 0.001$; $\eta^2 = 0.026$), Good Materials ($F = 2.83$; d.f. = 3, 2332; $p = 0.04$; $\eta^2 = 0.004$), Good Tutoring ($F = 4.76$; d.f. = 3, 2332; $p = 0.003$; $\eta^2 = 0.006$) and Student Choice ($F = 13.29$; d.f. = 3, 2332; $p < 0.001$; $\eta^2 = 0.017$). A separate univariate test showed that they also produced significantly different scores on the measure of perceived quality ($F = 11.93$; d.f. = 2, 2332; $p < .001$; $\eta^2 = 0.015$). The graduates who had been awarded better degrees tended to produce higher scores, except in the case of Student Choice, where this pattern was reversed.

In the case of the PEDI, 102 students had failed to give a response to one or more of the 26 items. There is no obvious way of treating missing responses on the PEDI, and so they were dropped from the analysis. The remaining 2,249 respondents were assigned scores on the four scales following the procedures described by Lawless and Richardson (2004). Table 7 also shows the mean scores on the PEDI obtained by the graduates who had been awarded different classes of degree. A multivariate analysis of variance showed that their scores were significantly different ($F = 11.54$; d.f. = 12, 5932; $p < 0.001$). Univariate tests showed that the graduates with better degrees tended to obtain significantly higher scores on Cognitive Skills ($F = 3.13$; d.f. = 3, 2245; $p = 0.02$; $\eta^2 = 0.004$) but significantly lower scores on Social Skills ($F = 20.40$; d.f. = 3, 2245; $p < 0.001$; $\eta^2 = 0.027$).

Table 8 shows the mean scores on the CEQ obtained by respondents in each of the major ethnic categories. Students who withheld their ethnicity are included for comparison but were excluded from the statistical analysis. Because graduates who have obtained good degrees obtain different scores on the CEQ and the PEDI, it is necessary to take degree class into account when comparing the scores obtained by graduates from different ethnic groups.

Accordingly, a multivariate analysis of variance was carried out on the CEQ scores, using the independent variables of degree class and ethnicity.

(Insert Table 8 about here)

The graduates who had been awarded different classes of degree once again produced significantly different scores ($F = 1.98$; d.f. = 21, 6435; $p = 0.005$), but the graduates from the four major ethnic groups did not ($F = 1.30$; d.f. = 21, 6435; $p = 0.16$). Univariate tests found that the graduates from the four ethnic groups differed significantly only in their scores on Appropriate Assessment ($F = 3.01$; d.f. = 3, 2247; $p = 0.03$; $\eta^2 = 0.004$). *Post hoc* tests using the Newman–Keuls method showed that the White and Other students obtained significantly higher scores on this scale than the Asian or Black students. A further univariate analysis of variance was carried out on the scores on Overall Perceived Quality, but this found that there was no significant variation among the four ethnic groups ($F = 1.77$; d.f. = 3, 2247; $p = 0.15$; $\eta^2 = 0.002$). In none of these analyses was the interaction between the effects of degree class and ethnicity statistically significant.

Table 9 shows the mean scores on the PEDI obtained by respondents in each of the major ethnic categories. Students who withheld their ethnicity are included for comparison but were excluded from the statistical analysis. A multivariate analysis of variance was carried out on the PEDI scores using the independent variables of degree class and ethnicity. The graduates awarded different classes of degree once again obtained significantly different scores ($F = 2.05$; d.f. = 12, 5718; $p = 0.02$), as did the graduates from the four major ethnic groups ($F = 2.00$; d.f. = 12, 5718; $p = 0.02$). Univariate tests found that the graduates from the four ethnic groups differed significantly only in their scores on Mathematical Skills ($F = 2.62$; d.f. = 3, 2164; $p = 0.05$; $\eta^2 = 0.004$). *Post hoc* tests showed that the Asian students obtained significantly higher scores on this scale than did the Other students. The White and Black students obtained scores that were intermediate between and not significantly different from those of the Asian students or the Other students. Once again, in none of these analyses was the interaction between the effects of degree class and ethnicity statistically significant.

(Insert Table 9 about here)

Discussion

In this survey, recent graduates from the Open University were asked to evaluate the courses that they had taken using the CEQ and to assess the extent to which their courses had enabled them to develop in different aspects using the PEDI. In the case of the CEQ, those graduates who had achieved a better class of degree produced higher scores on the scales that measured Appropriate Assessment, Appropriate Workload, Clear Goals and Standards, Good Materials and Good Tutoring; however, they produced lower scores on the scale that measured Student Choice. They also produced higher scores on the measure of Overall Perceived Quality. In the case of the PEDI, those graduates who had achieved a better class of degree obtained higher scores in terms of Cognitive Skills but lower scores in terms of Social Skills. These results precisely replicate the pattern of findings obtained by Lawless and Richardson (2004) on the basis of surveys of previous cohorts of Open University graduates.

None of these effects would be described as ‘medium’ or ‘large’ on Cohen’s (1988) criteria, and in some cases they achieved statistical significance only due to the large size of the sample of respondents. Nevertheless, they need to be taken into account when comparing graduates from different ethnic groups with regard to their scores on the CEQ and the PEDI. In this regard, the reliability of the findings is limited by the small numbers of respondents from non-White ethnic groups. Equally, however, differences among the different groups may once again have achieved significance simply due to the large number of White respondents with which they were compared.

With regard to their CEQ scores, there were no significant differences among the graduates from different ethnic groups on the overall measure of perceived quality or on six out of the seven scales. The Asian and Black graduates did produce significantly lower scores than the White graduates on the scale concerned with appropriate assessment. Nevertheless, the differences were relatively slight in absolute terms, and the proportion of variance in the scale scores that was explained by membership of the four different ethnic groups would be regarded as constituting at best a small effect on Cohen’s (1988) criteria.

With regard to their PEDI scores, there were no significant differences on three of the four scales. On the fourth scale, that concerned with the development of mathematical skills, Asian graduates actually obtained the highest scores, although once again the difference was relatively slight in absolute terms and the proportion of variance in the scale scores explained by membership of the different ethnic groups would be regarded as a small effect. Inspection of Table 9 indeed shows that on every scale Asian and Black graduates obtained mean scores that were similar to or (nonsignificantly) higher than those obtained by White graduates.

These results are consistent with those obtained by Connor et al. (2001, 2004), Pollard et al. (2004) and Richardson (2004) in suggesting that differences in the experience of higher education on the part of graduates from different ethnic groups are relatively slight. There is certainly no support for the notion that the experience of Asian and Black graduates had been qualitatively inferior to that of White graduates. The causes of the poor performance of Asian and Black students in terms of the class of their degrees must therefore be sought elsewhere.

Conclusions

This investigation has confirmed the findings of previous reports (Connor et al. 1996, 2004; Owen et al. 2000; Naylor and Smith 2004; Leslie 2005; Elias and Jones 2006; Richardson, in press) that the academic attainment of White graduates is appreciably higher than that of graduates from other ethnic groups. This is true, in particular, of graduates who have taken courses by distance learning with the Open University: the odds of an Asian student being awarded a good degree by the Open University are only one half those of a White student being awarded a good degree; and the odds of a Black student being awarded a good degree by the Open University are only one fifth of those of a White student being awarded a good degree.

At least as far as the Open University is concerned, this trend cannot be ascribed to the demographic variables of age, gender, prior qualifications, socio-economic circumstances or subject of study. Indeed, the White, Asian and Black graduates studied in this investigation

had joined the Open University with very similar educational qualifications. This implies that there were no intrinsic differences in their academic ability that might explain the substantial variation in their subsequent attainment. (*A fortiori*, it also rules out naive explanations based on supposed differences in ‘intelligence’.) On the contrary, it suggests that the origins of this variation lie in the quality of their engagement with distance education.

Nevertheless, this investigation has found no evidence for any concomitant variation in the experiences of students from different ethnic groups. With regard to the perceived quality of their degree programmes, both Asian and Black students produced lower ratings than White students of the appropriateness of their assessment, but the effect in question was relatively slight. With regard to their reports of their personal development while studying with the Open University, there were no significant differences between the ratings given by Asian and Black students and those given by White students.

Why should these instruments have failed to reveal any substantial differences in the experiences of Asian, Black and White students when there is such a major discrepancy in their attainment? In consumer theory, satisfaction is often assumed to reflect the degree of fit between the consumer’s expectations and their subsequent experiences (Oliver 1976, chaps. 3 and 4). One possibility is that White students enter higher education with higher expectations than do students from other ethnic groups, and that the latter students subsequently calibrate their responses to feedback questionnaires against their reduced initial expectations. This is a plausible account of the absence of significant differences on the PEDI, where graduates were asked to report how much they had developed during higher education. However, it is far less plausible in the case of the CEQ, where graduates were simply asked whether they agreed or disagreed with particular descriptions of their courses.

In short, the substantial quantitative variations in the academic attainment of students from different ethnic groups do not seem to be reflected in concomitant qualitative variations in their experience of higher education. This, too, is consistent with the findings of previous investigations using both interview-based methods (Connor et al. 2001, 2004; Pollard et al. 2004) and questionnaires (Richardson 2004). It suggests, in turn, that variations in academic

attainment do not arise from the institutional context in which students from different ethnic groups undertake their studies. Accounts of the poor performance of students from non-White ethnic groups that presuppose discriminatory teaching and assessment practices can probably be ruled out, even though some of the latter students do experience exclusionary attitudes and behaviour on the part of teaching staff and other students (Osler 1999). Nevertheless, this does not exclude factors related to the broader social and cultural context, such as how much support students receive from their families, friends and communities and (for part-time and distance-learning students) their employers.

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Table 1. UK National Statistics classification of ethnic groups

Level 1	Level 2
White	British
	Irish
	Other White background
Mixed	White and Black Caribbean
	White and Black African
	White and Asian
	Other Mixed background
Asian or Asian British	Indian
	Pakistani
	Bangladeshi
	Other Asian background
Black or Black British	Caribbean
	African
	Other Black background
Chinese or Other ethnic group	Chinese
	Other ethnic group
Not stated	Not stated

Table 2. Percentage frequency distributions for ethnicity by mode of study for UK-domiciled students awarded degrees by UK institutions in 2004–05

Ethnic group	Full time	Part time	Open University
<i>n</i>	218,685	17,715	4,900
White	81.4	71.3	89.9
Mixed	1.7	0.9	0.2
Asian or Asian British	7.9	7.3	1.3
Black or Black British	2.9	6.6	1.7
Chinese or other ethnic group	1.8	1.9	0.8
Not known	4.3	12.0	6.1

Table 3. Percentage of good degrees awarded by UK institutions in 2004–05 to students from different ethnic groups by mode of study

Ethnic group	Full time	Part time	Open University
White	65.3	59.9	60.0
Asian or Asian British	49.5	25.8	43.9
Black or Black British	40.6	24.4	17.3
Other ethnic group	57.0	37.1	—*
Not known	49.3	53.3	41.2

*Percentage based on 52 students or fewer and therefore suppressed as potentially unreliable.

Table 4. Percentage frequency distributions of classes of first degrees awarded by the Open University in 2002–05 to students from different ethnic groups

Ethnic group	<i>n</i>	Degree classes				% good degrees
		I	II(i)	II(ii)	III	
White British	16,728	17.7	41.1	31.8	9.4	58.9
White Irish	1,359	14.5	41.6	31.9	12.1	56.1
Other White background	620	17.3	43.1	29.4	10.3	60.3
<i>Total White</i>	18,707	17.5	41.2	31.7	9.6	58.7
White and Black Caribbean	1	0.0	0.0	100.0	0.0	0.0
White and Black African	9	0.0	33.3	55.6	11.1	33.3
White and Asian	5	20.0	80.0	0.0	0.0	100.0
Other Mixed background	24	41.7	20.8	12.5	25.0	62.5
<i>Total Mixed</i>	39	28.2	30.8	23.1	17.9	59.0
Indian	47	10.6	25.5	48.9	14.9	36.2
Pakistani	37	16.2	32.4	32.4	18.9	48.6
Bangladeshi	6	0.0	16.7	50.0	33.3	16.7
Asian British	134	9.7	34.3	33.6	22.4	44.0
Other Asian background	52	7.7	44.2	36.5	11.5	51.9
<i>Total Asian or Asian British</i>	276	10.1	34.1	37.0	18.8	44.2
Black Caribbean	60	8.3	15.0	50.0	26.7	23.3
Black African	117	1.7	15.4	47.0	35.9	17.1
Black British	97	2.1	18.6	42.3	37.1	20.6
Other Black background	22	9.1	27.3	40.9	22.7	36.4
<i>Total Black or Black British</i>	296	3.7	17.2	45.6	33.4	20.9
Chinese	40	12.5	22.5	47.5	17.5	35.0
Other ethnic group	75	18.7	36.0	36.0	9.3	54.7
<i>Total Chinese or Other</i>	115	16.5	31.3	40.0	12.2	47.8
Not known	1,512	11.2	36.0	35.3	17.5	47.2

Note: I, first-class honours; II(i), upper second-class honours; II(ii), lower second-class honours; III, third-class honours.

Table 5. Percentage of good degrees awarded by the Open University in 2002–05 to students from different ethnic groups

	<i>n</i>	White	Asian	Black	Other	Unknown
Age						
Under 30 years	1,532	55.1	50.0	31.6	58.6	37.9
30–39 years	6,616	60.6	47.7	25.2	52.1	51.1
40–49 years	7,278	60.3	39.4	21.0	50.0	51.2
50 years and over	5,519	55.3	38.6	6.5	38.1	43.3
Gender						
Female	12,475	58.6	48.7	20.9	50.0	46.2
Male	8,470	58.9	33.3	21.1	51.9	48.7
Prior qualifications						
Low	5,635	47.1	34.7	22.3	39.4	42.6
Medium	5,585	60.8	49.3	24.6	51.7	46.2
High	8,982	64.9	46.1	19.7	54.5	50.4
Financial assistance						
Yes	3,970	52.3	43.5	16.7	45.1	38.3
No	16,975	60.1	44.6	22.6	53.4	49.5

Table 6. Defining items of the seven scales in Lawless and Richardson's (2004) version of the CEQ

Scale	Defining item
Appropriate Assessment	Assessment on OU [Open University] courses seems to be more to do with testing what you've memorized than with testing what you've understood.*
Appropriate Workload	The sheer volume of work to be got through in OU courses means that you can't comprehend it all thoroughly.*
Clear Goals and Standards	On OU courses, it is always easy to know the standard of work that is expected of you.
Generic Skills	As a result of taking OU courses, I feel more confident about tackling unfamiliar problems.
Good Materials	The teaching materials for OU courses are extremely good at explaining things.
Good Tutoring	Tutors make a real effort to understand the difficulties that students may be having with their work.
Student Choice	The students on OU courses are given a lot of choice in the work they have to do.

Note: Items indicated with asterisks are coded in reverse.

Table 7. Mean scores on the CEQ and the PEDI by class of degree

	I	II(i)	II(ii)	III
Course Experience Questionnaire				
Appropriate Assessment	4.51	4.35	4.23	3.99
Appropriate Workload	3.41	3.18	3.12	3.00
Clear Goals and Standards	4.10	3.95	3.79	3.74
Generic Skills	4.09	4.06	4.05	4.02
Good Materials	4.40	4.34	4.30	4.28
Good Tutoring	3.77	3.64	3.64	3.57
Student Choice	3.08	3.08	3.26	3.34
Overall Perceived Quality	3.91	3.80	3.77	3.71
Personal and Educational Development Inventory				
Cognitive Skills	3.48	3.48	3.44	3.39
Mathematical Skills	2.48	2.52	2.55	2.49
Self-organization	3.44	3.49	3.51	3.45
Social Skills	2.17	2.28	2.46	2.54

Note: I, first-class honours; II(i), upper second-class honours; II(ii), lower second-class honours; III, third-class honours. The possible range of scores on the CEQ is from 1 to 5, where 5 is the most favourable score. The possible range of scores on the PEDI is from 1 to 4, where 4 is the most favourable score.

Table 8. Mean scores obtained on the CEQ by graduates in different ethnic groups

	White	Asian	Black	Other	Unknown
<i>n</i>	2,207	17	23	16	73
Appropriate Assessment	4.32	3.88	3.93	4.44	4.25
Appropriate Workload	3.20	2.87	2.91	2.95	3.16
Clear Goals and Standards	3.91	3.78	4.13	3.81	3.75
Generic Skills	4.07	3.97	4.04	4.25	3.81
Good Materials	4.35	4.10	4.17	4.29	4.16
Good Tutoring	3.67	3.37	3.56	3.60	3.50
Student Choice	3.16	2.94	3.40	3.06	3.11
Overall Perceived Quality	3.81	3.56	3.74	3.77	3.68

Note: The possible range of scores is from 1 to 5, where 5 is the most favourable score.

‘Asian’ includes Asian and Asian British; ‘Black’ includes Black and Black British; ‘Other’ includes Chinese, Mixed and other ethnic groups.

Table 9. Mean scores obtained on the PEDI by graduates in different ethnic groups

	White	Asian	Black	Other	Unknown
<i>n</i>	2,126	17	21	16	69
Cognitive Skills	3.47	3.41	3.43	3.50	3.22
Mathematical Skills	2.53	3.01	2.85	2.31	2.06
Self-organization	3.49	3.41	3.65	3.60	3.22
Social Skills	2.34	2.51	2.53	2.55	1.95

Note: The possible range of scores is from 1 to 4, where 4 is the most favourable score.

‘Asian’ includes Asian and Asian British; ‘Black’ includes Black and Black British; ‘Other’ includes Chinese, Mixed and other ethnic groups.