

A comparison of academic outcomes for business and other students

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Abstract

A new university in Scotland enrolls many non-traditional students, so that the student population is diverse in terms of age and entry qualifications. In this paper the focus is on academic performance in the first year of enrolment and how this varies between students enrolling in the disciplines of business, management and accountancy and students enrolling in other disciplines. For 1552 new entrants in 2000/01, data were available on age, gender, entry qualifications, module marks and the number of modules in which each student attempted assessments. A feature of activity among these students is that, although they enrolled initially in full-time mode, several chose to reduce their load. That is, they did not attempt assessments in all of the modules that made up full-time study. When this and variation in entry qualifications are taken into account, different relationships emerge between age, gender and performance in business, management and accountancy compared with other disciplines. As in other research, women who enrol in the other disciplines outperform their male peers and the performance-age profiles for both males and females are concave; that is, performance improves initially with age and then declines.

In business, management and accountancy, women outperform men only for ages up to the mid-twenties. Men continue to improve, while the attainments of older women deteriorate. Drawing on a representative sample of the 1552 entrants, a number of contributing factors are discussed. These encompass: females studying during career breaks, while managing families and taking responsibility for household matters; career breaks inhibiting female job progression, limiting many who are wider-access entrants to work experiences that do not facilitate study to the extent that work experiences of older males might do; and the particular demands of learning in business, management and accounting that bring women into contact with social and cultural influences that discourage their learning. Further research is required to understand the relative importance of the factors that may adversely affect women taking up the study of business, management and accountancy. There are issues around the experience and preparation of entrants, student load, and culture that academic practitioners should consider.

Keywords: Academic performance; age; wider access; gender; social capital

Introduction

The government expects higher education to assist in achieving social justice by widening access for lower socio-economic groups, minorities and those returning to education as mature entrants (ABS n.d.). As business and management has been at the forefront of the expansion of higher education over previous decades, it is not surprising that widening access has particularly affected the composition of student cohorts in these disciplines. Educators in business, management and accounting feel that among students now there are particularly wide variations in literacy and numeracy, in earlier education, in work experience and in knowledge of business practices (Ottewill & Macfarlane 2003). The aim in this paper is to investigate how academic performance varies in the first year of study among entrants to business, management and accountancy at a university that has exceeded its targets on wider access and how this compares with performance elsewhere in the university. Because of the success of wider access, there is considerable diversity across the student population in terms of age, gender and entry qualifications.

There is a burgeoning literature on academic attainment.

Little of it singles out business, management and accountancy. Less of it focuses on wider access and attainment. As far as the authors could discover, even less research into attainment that involves age, gender and entry qualification has focused on business, management and accountancy, first year and wider access. Having done so in this paper, differences in attainment by age and gender are found to be surprising for students of business, management and accountancy. There are implications for academics teaching in the area.

For the estimations reported in this research, data were assembled on 1552 first-degree entrants to a new (post-1992) university in Scotland. Additional information was available from a representative sample that involved 230 of these students. This was used in suggesting interpretations of the quantitative findings.

Maturity, attainment and wider access

The net effect of age on academic attainment results from a number of influences. When older people become university students, external commitments may impose restrictions on the time they have available for study. They may find the transition to university is unset-

ting and the work arduous or stressful, especially if earlier experiences of education were unsatisfactory. Older students may be in different stages of cognitive development than younger ones. In unsighted, time-limited examinations, their academic performance might suffer, as memory and speed in processing information decreases to some extent with age (Collis 2000). On the other hand, social skills and strategic thinking may be more refined among older students (*ibid*; Warr 1994). These higher-level 'meta-cognitive' abilities are expected to become more effective as age and experience accumulate (*op cit*). Potentially it seems there are advantages and disadvantages for older students relative to younger students. For example, they could strategically manage time to deal effectively with each aspect of their lives. They might apply refined social skills to build networks among students, interact with tutors and make the most of other university services. In these ways they may compensate for erosion of cognitive capacities to efficiently prepare coursework and perform examinable tasks. Researchers allow for this uncertainty by using a functional form in estimations that allow them to detect whether performance increases with age, decreases with age, or does first one then the other (McNabb, Pal & Sloane 2002).

Age is examined frequently in studies of academic performance among graduates (Woodley 1984; Hoskins, Newstead & Dennis 1997; Smith & Naylor 2001).

Where studies have involved samples containing large numbers of older students, the results have indicated that the relationship between age and performance is... clearly a complex one.

(Woodley 1984)

This was re-confirmed recently:

There does not seem to be a straightforward relationship between age and academic attainment as measured by first-degree classifications.

(Richardson & Woodley 2003)

There is another dimension to consider. Twenty one years ago Woodley (1984) suggested that male and female graduates might display different performance patterns with advancing age. There is persistent concern that women outperform men (Smith & Naylor 2001). Women attain more upper seconds and firsts combined than men. However there is greater variation in the distribution of men's results. Typically they get higher proportions of firsts and thirds (McNabb *et al* 2002, p.481).

While recent research has concentrated on performance among finalists, this is not so useful in studying how performance unfolds when there is wide diversity in age and background. One reason is to do with attrition, that is, the complete discontinuation of study. In universities where access is widened most, there are usually high rates of discontinuation (Goddard 2003). Most of this occurs in the first year of study (Houston, Knox & Rimmer 2004). Some groups of wider-access students are disproportionately represented among leavers and so they have little influence on the age-performance rela-

tionship in later years (Foster, Houston, Knox & Rimmer 2002).

Rather than terminate all study, or before finally deciding to do so, students might discontinue their involvement in some modules, while continuing with others. Data for the study is drawn from University of Paisley (UP), a post-1992 university in Scotland, and Paisley Business School (PBS), in which the disciplines of Business, Management and Accounting reside. At UP a full-time load consists of eight modules. While full-time enrolments might suit students on the day of enrolment, subsequently they may decide to attempt assessments in fewer modules. There are many reasons for this. Often new students find that it is harder than expected to balance the demands of work and study or they are under pressure because of changed circumstances. Students might review module load in view of performances in coursework (of which every module at UP has a component) or in first-semester examinations. Consequently, they could vary the number of modules attempted to address external demands, to maximise grades or ensure that they pass retained modules, to satisfy programme regulations on satisfactory progress or to minimise effort (Yorke 2002; Lindsay 1998).¹ These considerations suggest a linkage running from performance onto work load. The reverse interaction or linkage has been investigated in the debate about whether increasing the number of modules has a beneficial or harmful effect on performance (Lindsay 1998; Szafran 2001; Lindsay, Salzburg & Turner 2003). The interactions are likely to be evident in institutions which have widened access among mature and lower socio-economic groups, because these students may not have capital reserves – social and/or financial – on which to draw when circumstances change. Their recourse is to discontinue or reduce load to provide time and effort for other activities. The likelihood of load modification has an impact on the estimation method to be used.

Methodology

The measure of academic performance in this paper is the total across all module marks. Use of good-outcome measures, such as gaining an A, dispenses unnecessarily with useful information (Yorke 2002; Morley, Burke & Carpentier 2004). Use of an average mark is problematic because it conflates the forward- and feedback interactions between total mark and module load. To see this recall that average mark is calculated via the division:

$$\text{average} = \frac{\text{total mark}}{\text{modules attempted}}$$

If, as hypothesised, marks influence the number of modules attempted and vice versa, then the interactions could partially or completely cancel each other in the calculation, so reducing the sensitivity of the average to influences that separately affect total mark and module load.² However, estimating the total mark and including the number of modules as an explanatory variable (so allowing for the linkage from it to total) does not conflate

effects.³ Two-stage, least-squares estimation (2SLS) was applied to the UP data to allow for the effects of both interactions (Gujarati 2003). Using this procedure, a relationship of the form

$$\text{total mark} = \alpha \times \text{module load} + \text{other effects}$$

is estimated for each of Paisley Business School and Rest of UP. In the equation α is a coefficient whose value is estimated by the 2SLS procedure. Suppose for illustration that α was found to be 50 for Rest of UP. This means a student in Rest of UP whose module load is eight, is expected to obtain a contribution towards total mark of $50 \times 8 = 400$. If the load was only six, the contribution to total mark would be $50 \times 6 = 300$. The impacts of other influences such as age, gender and entry qualification are captured in other effects in the equation for total mark. They will add to or subtract from the effect of module load depending on the results of the 2SLS procedure. For example, with females generally doing better in assessments in Rest of UP, then this gender effect would add to the effect from module load to increase the expected total mark for these women.

The independent variables

Entry qualification is modelled using the indicator *higher_entry*. This variable was constructed as follows. If students did not enter on the basis of Scottish Highers then for them *higher_entry* has the value zero. For students with Highers their grades were turned into points using the mapping

$$A \rightarrow 3 \quad B \rightarrow 2 \quad C \rightarrow 1$$

and the sum over these 'higher scores' was assigned to *higher_entry*.

A number of other entry pathways are possible. Some students entered UP on the basis of school results earned outside Scotland (denoted 'other school' below). Non-traditional methods involve completing Higher National Certificates (HNCs) or Diplomas (HNDs) in Colleges of Further Education (FE); having work experience recognised as appropriate for some applicants older than 21 ('mature-experience' below); and possessing a relevant professional or vocational certificate or completing access certificates at FE that permit entry to first year of university. Variables to indicate admission on the basis of other-school results, mature-experience and possession of an HNC or HND are included in the estimations. The reference group consists of those obtaining entry with access, professional or vocational certificates. Students who enter with HNCs or HNDs usually enrol in second- or third-level. This means that for them the 'first year of study at university' is at a later level than first. The inclusion of these students is consistent with the approach taken elsewhere (Smith & Naylor 2001; McNabb *et al* 2002).

In situations where entry qualifications have the forms described, there is robust evidence that academic performance first increases with age, then declines (*ibid*). These concave relationships can be estimated using

age and age² (*op cit*; Gujarati 2003). To allow for different profiles for males and females, the combination of age, age², an indicator for gender, female, and the interaction terms age \times female and age² \times female are included in Table 2. The best-subsets procedure was used to decide which combinations of these variables were appropriate for the Rest of UP and for PBS (Levine, Berenson & Stephen 1999).

The data

Data for this study consist of new entrants in September 2000/01, who

- ❖ had enrolled full-time;
- ❖ were not enrolled on nursing programmes.⁵

Preliminary indications are that among part-time students the linkages between academic outcomes, entry qualification, age and gender are very different. They will be considered in another paper. Nurses are excluded because letter grades only are awarded for most modules. Among full-time students, UP exceeded its targets on wider access (University of Edinburgh 2004). Fifty eight per cent were younger than 21, compared with 79% for the UK in 2000/01. The proportion under 21 became 54% when nurses were excluded.

Summary statistics are shown in Table 1. Entrants to Paisley Business School (PBS) make up slightly more than a quarter of the sample. The other students were enrolled in 'Rest of UP', which consists of ICT, Engineering and Science, Education, Media, Social Sciences and the Combined Awards Transfer Scheme. Females account for nearly half of students in the Rest of UP; while for PBS the proportion is closer to two-thirds. The higher proportion of women in PBS is explained by its long history of offering courses in Human Resources Management that are highly rated by the CIPD and which attract more women than men at PBS. For PBS, the average age of students on enrolment was 22.4 years. It is about one year older for the Rest of UP.

Note from Table 1 that at the mean, total mark is 66 marks lower for PBS than for the Rest of UP (that is, 282 compared with 348). Across PBS students, module load is also lower at 5.8, compared with 6.4. Now compare the 'Percentage effects' in Table 1. On average, total mark for PBS is 19% smaller than for the Rest of UP, while load is only 10% smaller.

More students (38.6%) enter the Rest of UP on the basis of achievement at secondary school than enter PBS (31.7%), although the summary statistics for their higher scores are similar. A notable difference in Table 1 is that about one in five entrants to PBS (21.2%) are admitted as mature-experience entrants; while for the Rest of UP the rate is about one in ten (10.5%). In summary, compared with the Rest of UP, students in PBS are a year younger on average; are more likely to be female; have comparable school scores (among those who have them); are more likely to enter on the basis of other qualifications; and on average they attempt fewer modules and have lower total marks.

	PBS	Rest of UP
<i>Female (%)</i>	62.8	49.1
<i>Age</i>		
Average	22.4	23.5
Standard deviation	7.2	8.1
<hr/>		
<i>Total mark</i>		
Average	282.0	348.3
Standard deviation	167.3	169.1
Percentage effect (Difference in averages/Rest of UP average)		-19.0
<hr/>		
<i>Number of modules attempted</i>		
Average	5.8	6.4
Standard deviation	2.9	2.6
Percentage effect (Difference in averages/Rest of UP average)		-10.1
<hr/>		
<i>Per cent entering on the basis of:</i>		
Scottish Highers	31.7	38.6
Average Higher score	5.8	5.5
Standard deviation	2.5	2.3
School results from outside Scotland	1.9	3.4
<hr/>		
HNC or HND	43.7	42.7
Mature-experience	21.2	10.5
<hr/>		
<i>Number</i>	419	1133

Table 1: Summary statistics for PBS and the rest of UP

Results

Estimations for academic performance are shown in Table 2. Separate estimations are given for PBS and non-PBS students.

Module load

Per module studied, students of PBS are expected to receive fewer marks (about 46) compared with students elsewhere in UP (53 marks). To interpret this, consider two students who are alike (same age, gender and entry qualification) but one, called X, is enrolled in PBS and one, Y, in Rest of UP. X is likely to be awarded marks within the range that attract a pass grade in each module, while Y is awarded marks corresponding to the next grade.

The values of 46 and 53 estimated for PBS and Rest of UP correspond to values for α in the equation

$$\text{total mark} = \alpha \times \text{module load} + \text{other effects}$$

discussed earlier. Thus, a student in PBS who attempts, say, a full-time load is expected to obtain a contribution to his or her total mark of $46 \times 8 = 368$; while a student elsewhere in UP doing eight modules is expected to obtain $53 \times 8 = 424$. This finding is consistent with UK-wide differences in assessment standards between disciplines (Yorke 2002).

Entry qualifications

The coefficients of *higher_entry* are positive. That is, as performance at school improves, so does academic performance at university. This is in line with findings elsewhere (Smith & Naylor 2001; McNabb *et al* 2002; Richardson & Woodley 2003). Note too that the difference between the coefficients is less than one. That is, the effects on university performance associated with school outcomes are comparable for students in PBS and in the Rest of UP. However, recall that if a student does not have Highers and gains entry with another qualification, then the value of *higher_entry* is zero. This includes entrants who did their schooling outside Scotland. For these students, the variable *other_school* has positive coefficients. However, only for PBS is it significantly different to zero at better than five per cent. This is associated with the performances of non-UK students who came to do specific degrees in business, management and accountancy and who performed well.

For entrants to Rest of UP with HNCs and HNDs or satisfying mature-experience criteria, the coefficients are positive, but they are not significantly different to zero at conventional levels. That is, relative to the reference group in the estimations, which consisted of those entering with access, professional or vocational certificates, outcomes differ little. However, the situation for PBS is different, in that HNC or HND entrants do significantly better than do members of the reference group. The effects of studying Highers or doing a HNC or HND can be compared as follows. The entry score for admission to a programme in PBS is three Bs or six Higher points. Multiply this value by the coefficient of *higher_entry* in Table 2 for PBS, which is approximately eight, to obtain 48. This exceeds the coefficient for entry with an HNC or HND by about seven marks. That is, the difference in contributions to total mark is small compared with the expected or mean values of total mark in PBS (Table 1).

The overall picture is one in which the UK-wide relationship between school performance and university attainment is confirmed, while in PBS one non-traditional form of entry is also associated with better outcomes. This is summarised in Table 3 where statistically insignificant effects in Table 2 are set to zero and the number of arrows indicate approximately the relative magnitudes of significant effects. (Thus, absence of an arrow corresponds to the effect of an entry type being statistically insignificant in the sample.)

	Rest of UP	PBS
Module load	53.27 (26.03)**	45.68 (18.89)**
Entry qualification		
Higher_entry	7.08 (5.63)**	7.93 (3.68)**
Other_school	19.54 (1.47)	61.40 (2.25)*
HNC or HND	4.04 (0.53)	40.50 (2.73)**
Mature-experience	10.69 (1.15)	28.67 (1.74)
Age and gender		
Age	8.90 (4.46)**	2.88 (3.40)**
Age ²	-0.122 (-3.85)**	
Female	8.94 (2.10)*	43.80 (3.77)**
Age × female		
Age ² × female		-0.0599 (-3.60)**
Constant	-150.92 (-4.74)**	-92.27 (-3.96)**
Adjusted R ²	0.47	0.64
F	128.12**	95.54**
N	1133	419

Table 2: Regressions for full-time students of UP

**(*) denotes significance at one (five) per cent or better.

	Rest of UP	PBS
Higher_entry	↑	↑
Other_school		↑↑
HNC or HND		↑
Mature-experience		
Access, professional or vocational qualifications		

Table 3: Entry effects

Age and gender

The effects of age and gender given in Table 2 are presented in two diagrams. Figure 1 shows age-performance profiles estimated for Rest of UP. They are concave and are relatively close together. The distance between them is nearly nine, the value estimated for the variable *female* in the first column of Table 2. This coefficient is significantly different from zero at conventional levels, suggesting that on average women outperform men in the Rest of PBS. These findings are comparable with those for graduates from the 'old' (pre-1992) universities (McNabb *et al* 2002). Also it can be seen from Figure 1 that fifty year olds are estimated to do better than those who are 23 or younger and have the same gender. As shown by the concavity, men and women in the age range 35 to 38 are expected to do better than those who are 23 or younger and have the same gender. As shown by the concavity, men and women in the age range 35 to 38 are expected to do better than both their younger and older peers.

The profiles for PBS differ substantially. The female schedule in Figure 2 is concave, but male attainment improves linearly with age. Thus the male profile, which initially lies beneath the female profile, intersects it at age 27. Female attainment declines from age 26.

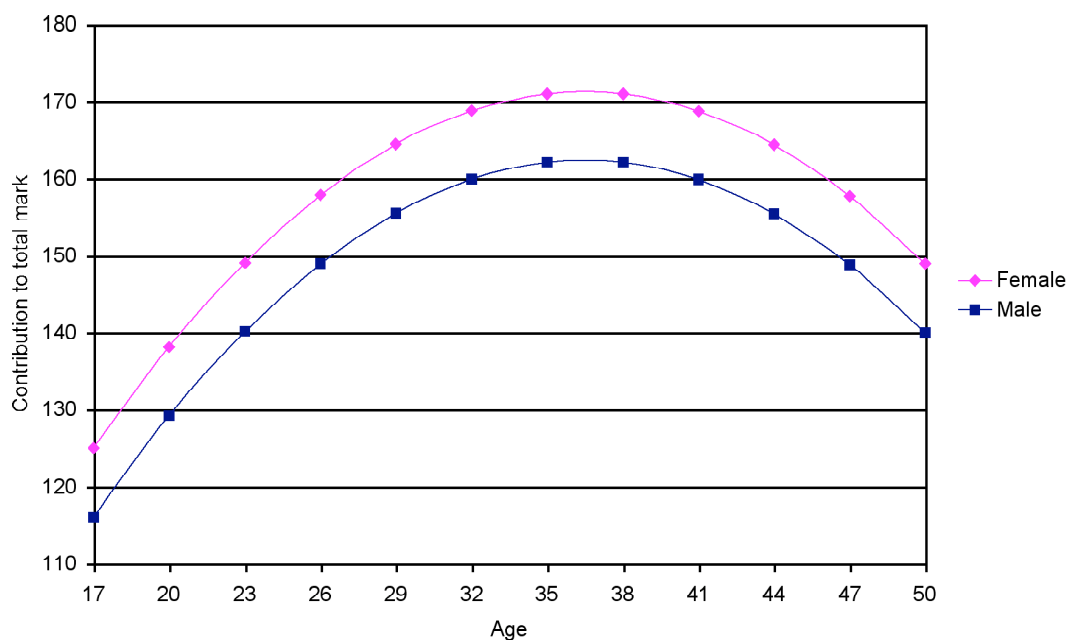


Figure 1: Contributions to total mark for Rest of UP

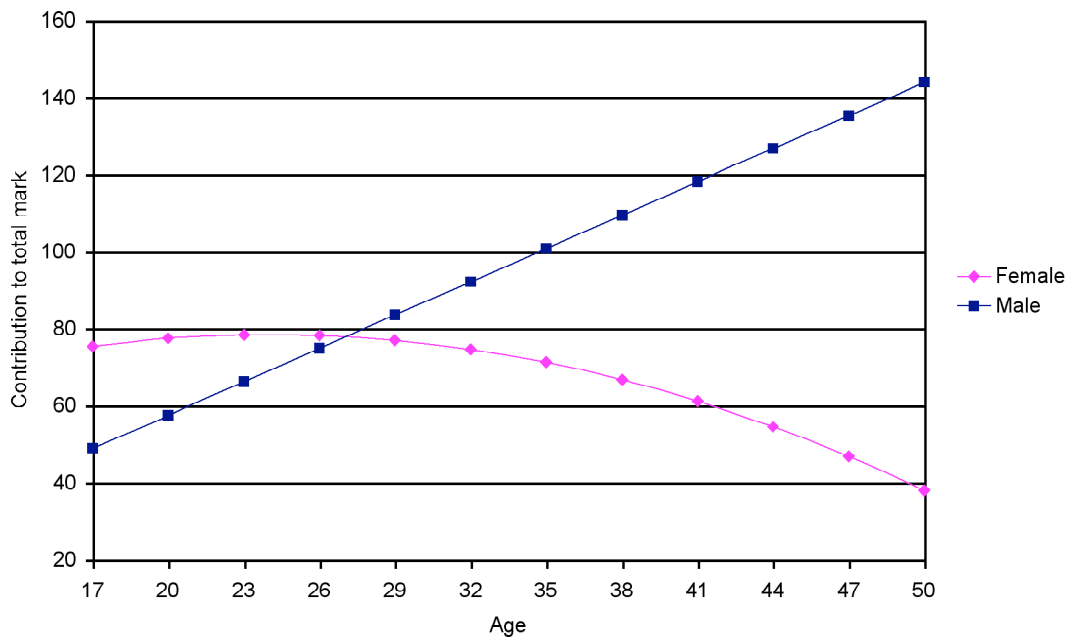


Figure 2: Contributions to total mark for PBS

Substantial differences open up between men and women studying business, management and accountancy. In the next section, reasons for the differences between the age-performance relationships are discussed.

Discussion

For Scottish entrants there is little difference in the sensitivity of performances to Higher results in PBS and Rest of UP. Better school results are associated with better attainments at university. Within PBS there is another effect. Entrants with HNCs or HNDs are projected to do better than those who are of the same age and gender, but have fewer years of formal education (that is, entered on the basis of professional or vocational certificates, completion of an access course or using the mature-experience pathway). This is an issue that might be developed in further research. One reason may be specifically tailored modules for non-traditional entrants with FE certificates or diplomas that are the subject of articulation agreements with UP. In these, academic content is integrated with acquisition of study and examination skills that they did not need or receive at College (Hatt & Baxter 2003). This was cost effective, as large numbers of these types of entrants were in programmes with core modules in common.

On the evidence of the performance profiles there is widely varying attainment by age for men and women. For men studying business, management and accountancy there is a strong positive trend: the older the male student the better his performance on average. As discussed earlier, advancing age is associated with the development or refinement of meta-cognitive abilities,

such as strategic thinking and improved social skills. For women, performances are superior to men at younger ages, but these deteriorate quickly after age 26. This is not the case in other disciplines. The comparison with men implies unusual variation of attainment by gender in business, management and accountancy. To comment on this, evidence is drawn from a survey conducted among a representative sample of the UP students (Foster, Houston, Knox & Rimmer 2002).

Respondents provided information on the work they were doing before enrolling full-time at UP. Women over 21 in business, management and accountancy who participated in the survey mainly reported working as clerks or secretaries, sales assistants and waiters or bar staff when in full-time employment. That is, their experience of the area in which they were studying was probably at a relatively junior level. None had worked as managers or supervisors. Only eight per cent had experience relating to accountancy. By comparison, about a third of women over 21 in the Rest of UP had experience relating directly to their area of study.

Further, when asked about their previous full-time work, there was a greater incidence among women in the Rest of UP of continuous spells of ten years or more in the workforce. Another possibility therefore is that women in PBS have had career breaks around spells working in clerical, sales-assistance or service roles. This would suggest that opportunities to improve jobs and to acquire experience important to their areas of study might have been more limited for women attracted to careers in business, management and accountancy. Thus, the extent of differences in experience and the possible depreciation of experience require further investigation, as they may be associated with the

observed variations in outcomes by age for men and women.

The implied interruptions to careers are suggestive of another influence that may depress female academic attainments relative to men studying the business, management and accountancy disciplines. Career interruptions are often associated with family formation and the raising of children. Recall that the academic performances of women turn down after age 26, the age at which it might be expected that many women have children and are meeting the demands of growing families. These commitments impose restrictions on time and energy available for study and for attendance at classes. Further, group work brings additional time demands to attend meetings and work jointly with others. Frequently these activities occur on campus and must be organised allowing for the commitments of other students. Thus, underpinning the deterioration of attainment among older women may be tension between family commitments and those internal to their study in business, management and accountancy. This area of concern could be reinforced by social and cultural trends.

First, after the birth of children, mothers assume sole responsibility for most household matters (Rimmer & Rimmer 1997). It is likely therefore that among the women who are raising families and studying for degrees there are intense time demands from both sources. Second, Schuller and Bamford (2000, p.13) record as impediments to women's further study 'explicit and implicit discouragement of women', partners' initial support 'turning sour', 'negative peer pressure' and 'reactionary attitudes'. While this may apply to women studying other disciplines, in the case of business, management and accountancy, it may be that the situation is particularly potent among women in the early stages of raising families. Third, it is possible that such attitudes to women's education are strongly held by males who place little value on learning, while in the classroom it is possible that older women are put off by less committed younger men (*op cit*). If so, large classes could provide opportunities for discouragement. Equally group work could provide a forum in which older women are even more intensely de-motivated by lack of commitment from younger male team members. Fourth, it should be noted that UP has exceeded its wider-access target for enrolments from 'low participation neighbourhoods', that is, neighbourhoods where participation in HE is less than two-thirds of the UK average. Students from these environments are less likely to have strong, positive understandings of the benefits of university attendance, forged via the accumulated social capital of family members who had attended earlier. For many women over 21 who enrolled in business, management and accountancy, their entry is a second or delayed chance at university study. Not having reserves of social capital to draw on could lead to declining educational motivation among older females, who, because of their central roles in family life, devote time and effort to unexpected events and issues that arise in families.

Conclusion

UP is a new university in Scotland. It enrolls many non-traditional entrants seeking a first degree. In this paper the focus of attention has been the performance of students in their first year of enrolment. It was reasoned that at UP, new entrants low in social and financial capital reduce the number of modules in which they attempt assessments so as to satisfy external commitments and continue with study. A technique that took this into account and allowed for the influence of entry qualifications was used to estimate the relationships between performance, age and gender. Substantial differences were found between the Business School and the Rest of UP.

The relationships found for entrants to Rest of UP conform to those for graduates of the pre-1992 UK universities, in that females on average outperform males. However, the relationships between age and performance for students enrolling in business, management and accountancy do not conform to this pattern. From the mid-twenties men are estimated to outperform women. Further, while male attainment goes on improving with age, female outcomes were found to deteriorate. A number of possible explanations were discussed, including: the likelihood that older male entrants may possess different work-related experience; female career interruptions inhibit job improvement; females tended to study during career interruptions, while managing growing families and increasingly taking responsibility for household matters; the particular demands of studying business, management and accountancy, such as group work, that may conflict with regular arrangements for the management of families and other aspects of life; a culture in which learning among women is little valued; and large business, management and accountancy classes and group work activities bringing older women into contact with younger males who have different attitudes to learning. While definitive evidence on the importance of these possibilities was not available, support for some of them was found in a representative survey taken among the entrants for whom the age-performance profiles were estimated. To understand the relative importance of these possibilities further research is required.

The finding of different age-performance profiles for men and women in business, management and accountancy and the possible underlying causes raise issues for staff. Across the board it is recognised that in changing curricula 'there are real difficulties in enabling students to learn experiential and enterprise skills systematically' (BEST 2001, p.4). This may be a particular challenge with students whose experience of work was in less-skilled occupations, was fragmented by career interruptions and whose current study is fitted around the demands of families and/or on-going work in less-skilled occupations. This produces a tension for business, management and accountancy teachers as others taking advantage of wider access may bring different work-related experiences to study. This adds to the complexity of providing context and experiential learning – one set

of approaches may be appropriate for young, traditional entrants, while quite another set may be required for older entrants.

The sensitivity to other pressures of engagement with study and academic outcomes must not be underestimated. Many women juggle work, family and study. Even young students juggling two of these – work and study – face pressures that may affect engagement and outcomes. Whatever the other demands, the need to attend a campus frequently adds to the difficulties of managing multiple roles. An obvious area of development to alleviate this is eLearning. It could appreciably reduce the need for attendance on campus at times that clash with other commitments and flexibly allow learning to span more than normal hours. Such developments will bring the professions within business, management and accountancy to grapple with students' educational self-development, experiential learning, development of enterprise skills and how these may be assessed in e-mediated teaching. Many of these issues are concerns in conventional delivery (BEST 2001). However, the benefits to students with family and/or work commitments may be sizeable.

Attention to the effects of social attitudes and their impact on students' outcomes is an area for particular attention. Dispelling reactionary attitudes to women's learning may be a very significant step to improving results and progression among older women. This might be done in courses that develop best-practice underpinnings of modern business. Possibly parts of HR courses that deal with equality issues should be made available to all students and become part of preparation for group work. On the other hand, there is a much wider constituency to be reached to influence cultural attitudes. This is an area where professional bodies might lobby government about positive campaigns that complement wider-access initiatives to extol the fairness, relevance and benefits of university learning for all.

Finally, load reduction at UP suggests that students strategically reduce load to ensure that they can continue study. By default they are doing what some Deans and HODs in business, management and accountancy areas recognise: load on students – especially in the areas of assessment and attendance at classes – should be lightened (BEST 2001). However, student reduction of load lengthens the time students take to complete their degree, fragments the learning experience and spreads or dilutes assessment over longer periods. It does not deal with time spent in classes or the integrity of assessment processes. As access is widened, ways are required that ease the pressure on students to trade-off between current study and other commitments.

Endnotes

1 It was suggested that load reduction is not frequent in disciplines where professional bodies insist on completion of all modules at a particular level before progression to the next level. This might be a consideration for entrants to accounting and law. However, seven modules – not eight – are required for progression, as they may do so without passing an optional module. That is, they too can reduce load, albeit to a limited extent, and still satisfy progression requirements within one academic year. Further, examination of the data shows that some accounting and law students delayed progression, because they did fewer than seven modules over the academic year, even though they originally enrolled full time.

2 Statistical testing on the UP data indicates that the two-way linkages between total mark and module load operate (Houston *et al* 2004).

3 An average could be calculated by dividing total mark by eight, the full-time load. However, this amounts to a constant re-scaling of total mark and estimating this re-scaled value. Any effect of load on the total is lost, unless actual load is included among the explanators, as was actually done.

4 Mature-experience entrants provide records of work- and life experiences. They provide references and attend for interview.

5 The estimations reported later were run also (i) for those who had withdrawn within one month of the start of the session and (ii) excluding anybody who reduced load by more than two modules. The results did not differ substantially from those presented in the paper.

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