Smoothing the transition into higher education: what can be learned from student non-completion?

Mantz Yorke

Abstract

Entering higher education requires considerable adjustment, and hence the first year experience is of critical significance to students. Some make the adjustment well, others do not. Evidence from studies of non-completion of full-time students indicates that, for some of them, insufficient attention has been given to preparation for the transition. Not only are their choices of programme and institution unsoundly grounded, but little attention has been given to extra-institutional considerations such as accommodation. The evidence also shows that institutions do not always place enough emphasis on inducting students, and on the first year's experience in general. Suggestions are offered regarding ways in which intending students, advisers and institutions can act to smooth the transition into higher education, and hence perhaps reduce the incidence of non-completion.

Politics and performance indicators

From time to time, utopians produce visions of futures in which everything interlocks and functions perfectly: Le Corbusier's concept of La Ville Radieuse, in which people were to be housed in enormous tower blocks, was one such vision. Later, when various cities had built tower blocks of various kinds, it was found that people's behaviour did not fit the architectural model, with the consequence that a number of blocks were pulled down well before the end of their design life and low-rise housing was erected in their stead.

A ministry of education, like an architect, has to have a synoptic perspective regarding the national higher education system. It looks for inefficiencies in the system and seeks ways of eliminating them. For a government faced with competing demands on resources, non-completion can be regarded as an undesirable inefficiency. Yet the world is 'untidier' than planners sometimes admit, and systems have to accommodate human foibles and fallibilities. Non-completion is often a consequence of idiosyncratic variables, and hence can only be minimised, rather than eliminated.

There is, in addition, a tension between the desire to minimise non-completion and the promotion of lifelong learning. Non-completion in the short term may nevertheless he a precursor of success over a life-span. There is currently virtually no UK evidence available regarding noncompleters' career trajectories, a matter which the Department for Education and Employment is seeking to remedy.

In the UK, there has in recent years been a concern that student non-completion involves a waste of public money but, until Yorke *et al* (1997) reported on the issue, there was little understanding of the costs of non-completion to the public purse. On the evidence available at the time, Yorke *et al* estimated that these costs came to around £90 million for England. Subsequent changes in the funding methodology would have led to a figure of around £55 million, assuming the same student participation data.

Yorke *et al* were forced in their research to use data from institutional student record systems. Since institutions cannot easily track students once they leave (quite often to attend other institutions), it is virtually impossible to build up a picture of the 'flow' of students on a system-wide basis from institutional data. The Higher Education Funding Council for England [HEFCEI therefore embarked on a complex investigation of student data at national level in order to produce figures for non-completion that

were as accurate as could be achieved. Since students in the UK do not have to present a unique identifier, such as the social security number that is used in other national higher education systems, this involved a matching of a number of fields in the sector-wide database held by the Higher Education Statistics Agency [HESA]. The HEFCE investigation showed that, across the UK, the non-completion rate for first degree full-time students was about 18% in 1998 (HEFCE, 1999), rather higher than the figure obtained by Yorke *et al*, and suggesting a UK-wide cost somewhere in the region of £100-120 million.

The HEFCE data were disaggregated by institution, and showed that non-completion was considerably higher in the former polytechnics and the colleges, where there was a high proportion of working class students, and where the proportion of mature students was also high.[1] The factors are highly intercorrelated, and the vast bulk of the variance in non-completion seems to be attributable to a combination of the proportions of mature and working class students in an institution's entry profile.

Even such limited subtlety of analysis escaped the tabloid press, which predictably came up with exaggerated estimates of the cost of non-completion and coupled this with assertions that some students should not have been admitted to the sector. The fact that participation of young people in the UK had roughly doubled from 15% to 30% over a ten year period, whereas non-completion had only moved up from 14% to 18% over the same time, was overlooked.

Non-completion is a political issue. As well as receiving considerable press comment, the relevant minister in the Scottish Parliament was questioned about it. Ministers generally in the UK are known to be concerned to reduce non-completion, but are at the same time promoting policies of widening access to higher education: when non-completion is used as a performance indicator, the problem of clashing policies is made manifest.

The importance of the first year in higher education

The data collected by Yorke *et al* (1997) indicated that a substantial proportion of non-completions took place during, or at the end of, the first year in higher education. HESA data for English institutions covering 20,783 known withdrawals[2] for first-year students in the 1994-95 academic year showed a steady increase till March 1995, with a plateau until the following June (the examination period), when there was a further rise. Some institutions report informally that the assessments at the end of the first semester of their modular schemes (December or January, depending on the institution) are a critical point for students.

The first year in higher education faces students with considerable change, as McInnis *et al* (1995) and others have recorded. Many of those entering direct from school have to learn to live away from home as well as deal with what is a very different learning environment in which they will be responsible for their own progress. They are also likely to have to review quite rapidly what their expectations regarding higher education are, since there is evidence that many school-leavers have misconceptions about what higher education is like (the student attending a new university who expected balls and formal occasions was one of those most in need of a 'reality check' before she enrolled). Older entrants, on the other hand may be rusty as regards studying and need to 'get up to speed' quickly, and may be uncomfortable amongst younger students.

A challenging transition such as that from school or employment into higher education implies the need for preparation well before it takes place. The Universities and Colleges Admissions Service [UCAS] in the UK saw that work on non-completion was a potentially useful source of information for those advising intending students, and commissioned a report (Yorke, l999a) which drew particularly upon comments made by students on questionnaires, but which had not been fully utilised in other publications. This

---

[1] Students of the former polytechnics and the colleges tend to have lower 'A'-level points scores than students entering the longer-established universities. Full comparisons are, however, difficult since the first grouping of students contains a high proportion of students entering on the basis of qualifications other than A-levels.

[2] This figure is probably a considerable underestimate, since this was the first year of data collection by HESA and many end-of-year withdrawals or failures may well have gone unrecorded. In addition, the date officially recorded for withdrawal almost certainly lags behind the true date of withdrawal.

article draws upon the qualitative data used in the UCAS report, and is a companion to the quantitative analysis of first-year non-completion that appeared in an earlier issue of this journal (Yorke, 1999c).

The responses of 979 full-time and sandwich students[3] who left during their first year in six institutions in the north-west of England could be located under seven main factors which accounted for 45% of the variance:

1. wrong choice of programme
2. unhappiness with the environment of the institution
3. dissatisfaction with aspects of institutional provision
4. inability to cope with the demands of the programme
5. poor quality of the student experience
6. financial and interpersonal problems
7. lack of peer support

The first four and perhaps the financial aspect of the sixth can be seen in terms of inadequate preparation for higher education, and the fourth, sixth and seventh can be seen in terms of failure to cope satisfactorily with the higher education environment in which they found themselves. The fifth could more reflect failings on the institution's part than failings of the student. There are, of course, other extraneous factors, such as accidents and illness, which played a part in the students' withdrawal from higher education, but the incidence of these was small — and, given their adventitious nature, these are not considered further here.

Preparation for transition

Students are often quite casual about their choices of study programme and institution. James *et al* (1999) found that hearsay and word of mouth contributed to a number of applicants' decisions in Australia. In the UK and elsewhere there is a growing list of publications purporting to guide intending students to 'the right choice', though the commercial desire to sell publications tends to obscure the problematic quality of the information being proffered. Some students simply drift into higher education 'because it is the expected thing', without a clear idea of what they want to do, and why. Lack of preparation, therefore, is in a variety of ways an important contributor to non-completion.

Evidence

The wrong choice of programme was the dominant reason for non-completion, and was mentioned by 45% of respondents. Within this figure, younger students (aged 18-20 on entry) were twice as likely as their older peers to have made a poor choice of programme. Reasons for withdrawal included the following, which are exemplified from what the students themselves wrote. Clearly, it would be unsound to generalise too much from the quotations, but there is a familiar ring about many of the things that the students said.

Simply getting into higher education as a personal objective:

> I was 18 years old, couldn't wait to leave home and had bad A-level grades. I got accepted on the first degree course I could. I really didn't have much direction. *Combined Science and Technology*

and was, for some, compounded by an expectation set from parents and others:

> Definitely went to University because I had always assumed the route school-uni-job and although I wasn't pressured, it was expected by school, friends, family, even myself. *Mathematics*

The second of these students later reapplied to enter higher education in order 'to study for a degree and not just go to university'.

---

[3] Sandwich students take, as part of their program, a period of 'out' in employment or voluntary service. An analysis of the full data-set of nearly 2500 responses from fulltime and parttime students can be found in Yorke (1999b).

Others found out, too late, that their suppositions were not borne out by reality. A question hangs over the way that the respective institutions presented themselves.

> Unfortunately, I was led to believe by institution tutors on Open Day, that the course was perfectly suited to my needs and requirements. This wasn't the case despite my reiteration of what I wanted. *Technology*

> [My] Mathematics not up to the standard required. It was very difficult and the course content was not explained before I embarked on it. *Engineering*

The latter student, not surprisingly, found difficulty in coping with the demands of the programme.

Lack of commitment was a notable contributor to withdrawal when the programme did not accord with students' expectations. One, following a programme related to Medicine, was disturbed to find that she was expected to study dead bodies, and another (in this case following a modular programme) found himself to be studying 'little bits about everything but not enough about anything'.

One made a useful point, albeit too late for her own best interest, that a hobby does not always transfer into a good choice of degree programme:

> I had always enjoyed [Performance Arts] but realised [...] that it was very intense and that I enjoyed it purely as a hobby and did not want to make a career of it. [...] My career objectives had always swung between Nursing and [Performing Arts]. It was only after I commenced the course that I realised that I was not committed enough to [Performance Arts] and that I wanted to do Nursing. *Performance Arts*

For a small minority of respondents, the lack of educational facilities was a factor in their withdrawal: pressure on library and computing resources was noted by some, for example:

> The library at the campus was very poorly equipped with relevant books for the course —I mostly had to go into the city centre and use the public library. If the book was available there was rarely more than one copy. *Social Science*

The poor standard of specialist equipment also received a few mentions.

The social environment proved problematic for some 10% of respondents, and the comments that students made tended towards the idiosyncratic. One female student experienced homophobia and lacked the emotional support to deal with the issue. One from Northern Ireland found students in the hall of residence so unfriendly that they enacted 'knee-capping' - shooting in the knee, used by the paramilitaries in the province as a form of punishment - in front of her.

Widening the concept of the social environment to the city in which they were studying, some students were taken by surprise by the violence in particular neighbourhoods. The unfamiliar setting created in some a desire for an apparently friendlier place.

> I was threatened by a knife at [city] station early in my course. [. . .] Also I missed my family, friends and home town enormously. I hated the place. *Engineering*

Burglaries and muggings were occasional, but terrifying, incidents in those areas of cities in which students congregate to live: students coming from gentler places may be particularly vulnerable since they may have not previously had to develop 'streetwise' behaviours.

Halls of residence did not escape adverse comment. Some found them very restrictive (boarding school and prison were used as similes), and the occasional comment was made about the (undesirable) drug culture within them.

Some students clearly were unaware of the financial implications of embarking on a programme of higher education and, as will be shown below, found themselves in difficulty. Students need pre-enrolment advice on coping financially with higher education. The incoming Labour government decided, against

the recommendations of the Dearing Report (NCIHE, 1997), to require full-time and sandwich students to contribute to their tuition fees at the start of each year of study (unless they were poor), and to replace the maintenance grant with a loan system. This may have focused students' attention more closely on the financial side of higher education than hitherto, and hence sharpened up their decision-making regarding the programme to follow - but, as yet, there is no hard evidence on the effect of the government's changes to the funding of students.

Implications

The implications of the evidence are that non-completion could be reduced if students were better prepared for their time in higher education.

The responsibility for some of this preparation has to lie with the student him- or herself. Intending students need to do the following.

■ Be clear in their own minds about what they really want to do and, if they are unclear, consider taking time out of education in order to get a better perspective (and, perhaps, earn some money to make it easier to cope with the financial pressures).

■ Not rely on 'league tables' of institutions produced in the ephemeral press and in 'guidebooks' since these are of dubious validity (Morrison *et al*, 1995; Yorke, 1997; 1998) and in any case refer to overall institutional performance; nor rely unduly on institutional reputation, since the programme in a prestigious institution may be bettered in a less prestigious institution because the latter is a better 'fit' with what is desired (one Languages student realised this too late, finding out that the literary approach of her chosen prestigious institution was less appropriate to her needs than the business-related programme in the less prestigious institution in which she later enrolled).

■ In the UK, not rely too heavily on the reports of teaching quality assessments or subject reviews, since assessments are increasingly stage-managed and there has been an upward drift in gradings over time (Baty, 1999a; 1999b). It is probably easier to identify where subject areas in institutions are particularly weak than to unpick minor differences in high gradings.

■ Be generally sceptical about information unless it can be independently corroborated.

■ Find out in some detail about the programme to be studied (prospectuses, whilst being attractively produced, do not tell a lot about the day-to-day reality of the programme or the associated educational facilities), and about how it will be taught. A visit to a 'likely' institution will help here, as will asking someone who has already experienced the programme.

■ Find out about the accommodation that will be available, and whether this is likely to be located in an area in which they would feel significantly threatened.

■ Find out about the costs associated with their intended commitment to higher education, remembering that some programme-related expenses may not be immediately obvious (materials for Art, for example). It is also wise to recognise, as experience with construction and defence contracts has shown, that costs are likely to turn out to be quite a lot higher than estimated.

Advisers can do a lot to help intending students. They can help them

■ to undertake the process of self-evaluation regarding their futures, not forgetting that personal factors (such as parting from a loved one) might impact more than the student believes;

■ to work up a list of key questions that they need to ask of an institution;

■ to think through the extra-institutional aspects of their higher education experience, and in particular the potential for accommodation to cause unexpected distress;

- to anticipate what will be expected of them when they enrol, and where difficulties might lie in ambush; and

- by forewarning them of the need to keep a close control of their finances.

Initiation into higher education

For some students, the early days in higher education are critical. The sense of feeling welcome and belonging matter particularly when the student has left home for the first time and is living in a new city or town. Martinez and Munday (1998), writing of further education, mention the importance of a welcome from the institution, and some non-completing students from higher education responding to questionnaires made the point that they had been 'turned off' by the offhand way in which they had been received into the academic community.

In concentrating on the transitional period when students are moving into higher education, attention should not slip from the broader aims for the higher education experience, as Mclnnis (1998) points out. A fine line has to be trodden between the desire to 'hand-hold' as students come to terms with a new environment, and that of encouraging the autonomy that institutions seek to develop through their curricula and social activities.

Evidence

More than one in five of the respondents to the survey of non-completion in England mentioned that a lack of staff support, within and outside the timetable, was a factor in their decision to withdraw. A third said that the teaching did not suit them. Underneath these findings there lies a possible mismatch between expectations and reality. Teaching in higher education is generally an undervalued activity (when compared with research), and hence it may not be as good as it could be. However, the expectations of students may be unrealistic. Students may be taken aback by the anonymity of large lecture rooms, by the need to argue a case in a seminar, or by the absence of close attention to their academic progress. A pre-enrolment 'checking-out' could do a lot to mitigate problems of this sort.

Three in five respondents indicated that they had made insufficient academic progress, with male students being more likely than females to indicate that studying was presenting difficulties. To some extent, the problem stemmed from a poor choice of subject in the first place. A lack of study skills was significant for some, perhaps reflecting the absence of a teacher to take notice of progress (or lack of it) on a more or less daily basis.

For some, the problem of unavailability of staff was made explicit:

> Academic staff, on occasions, had a tendency to project themselves as being very pushed for time, stressed out and could not fit you into their timetable of work. No matter who you turned to, or when you seeked [sic] someone's aid, they seemed to be busy. *Science*

Unsupportiveness was a key issue for a number of students, its form varying with the circumstances. For a mature student entering higher education from an access course, the switch from a warm and supportive environment to one which was more detached created a crisis:

> I completed an access course prior to attending I university] where the staff were really helpful and knew you on a 1 to 1 basis. At university this wasn't the case and [. . .] I couldn't cope with the workload with no tutorial support. *Diploma in Higher Education*

For a student in Art and Design, the problem had more than a single dimension:

> The course was taught very loosely, the tutors were never around to help, and when they were, they were very unhelpful. They were critical of your work to the point of being rude, not constructive criticism, if your work

was not the best, average, then you were ignored in favour of the best students. . . . the way one tutor spoke to me [...] has put me off higher education and [I] will take a long time in considering ever going back. *Art and Design*

A couple of mature students with family commitments berated their institutions for a lack of Flexibility in accommodating to their personal circumstances despite having a commitment to equal opportunities. One made her point with some force:

As a mature, married student with a minimum of 2 hours travelling time there and back, I found [university's] course too inflexible to accommodate my individual needs. Travelling for a total of 4 hours to attend a 1 hour lecture or tutorial only, was not sensible or constructive, yet I was told I must. [...] Leaving house at 8am and returning at 7pm and still having work to do, meant that relationships with friends, family and husband deteriorated to the point of being non-existent. I approached the mature-student counsellor who said that no concession could be made. NOT HELPFUL! *Law*

One disabled student's comments indicated that she had been treated badly (the subject is not given in this case since it could lead to the student's identification).

As a disabled and deaf student, I was told by one tutor, it was my problem if I could not hear what was being said by other group members. Another occasion I was left in the [...] room, when everybody else evacuated the building due to fire alarms. I was later dragged out by the tutor, who was very angry at me because I could not hear the alarm. Although in contact with [welfare services] and they tried to help, nothing changed. E.g. large seminars, unable to hear, lift breaking down and unable to walk up four flights of stairs.

Some issues relating to the student experience only unfold after enrolment, although the students might have anticipated them in discussion with an aware adviser prior to application. Problems associated with gender, class and age are exemplified in the following quotations.

I found I could not cope with being the only female on the course and found the staff were mainly male orientated to the males in the class. I could not cope with being left out especially when having to go into groups. *Architecture*

Lack of involvement with other students on the course due to social class differences, being of a different class other students seemed to look down on me and refused to associate with me. Majority of other students came from southern England and disregarded people from the north of England. *Architecture*

I felt that being a middle class mature student did not help my integration into student life — I felt that my experience and knowledge put me on a different footing from other students. This meant that many seminars were inappropriate for me. [. . .] As I found it difficult to meet anyone of a similar age and background I did not enjoy the student way of life. *Arts*

Some students found difficulty with managing their lives in a new and free environment. Ozga & Sukhnandan (1997, p.19) record that one student had come to university expecting that 'it would be one big party' and that work did not really have to be done till the final year. The student continued partying whilst the work built up, and was never able to catch up. The following quotation is at the more colourful end of the range of comments that were received by the author:

I was amazed by the 'big city'. I started clubbing regularly, took more and more drugs, became increasingly more ill, lost weight, became paranoid. I messed up in a very big way. One minute I was on top, the next rock bottom. I came from a cushioned background and believe if I had maybe waited a year or two and learnt more about the reality of life, then it would have been a different story. *Joint Arts and Social Science*

The management of money was problematic for some young students. Leaving home for the first time without having had to fend for themselves, they lacked the life-skills to cope with managing tight budgets. Excess, for some, became frightening.

One of my reasons for leaving was a financial one. I was terrified and completely panicked by the debt I would run up over the 3 years. *Combined Studies*

Whether these financial problems were in part self-induced is not clear. However, another student noted how a concentration on social integration at the expense of academic integration[4] had started a chain reaction.

> I spent all my money too quickly and on the wrong things (going out and drinking instead of paying my Hall fees). This contributed to my work slipping. After missing so many lectures and seminars I was too scared to go any more. *Humanities*

Students have for a long time undertaken paid employment in order to support themselves through higher education. As the funding for students has tightened in recent years, so the incidence of part-time work has increased, in terms both of the numbers of students undertaking it and also of the scale of engagement. The balance between part-time work and full-time study is a fine one to maintain. Concentrating on study may lead to frightening debt, as was noted earlier. Concentrating on part-time work can precipitate a series of effects which ends with departure from higher education, as the following quotation shows.

> I was forced to work PT which ate into my studying time and my relaxation time. This generated a lot of stress for me [. . .]. My commitment to the course was affected. I didn't feel that studying an Art degree subject with little career/job assurance justified the severe three-year struggle required to achieve it. *Art and Design*

For older students, matters like the need to keep up with repayments of a mortgage sometimes proved to be the precipitating factor in their withdrawal.

Modular schemes presented some students with difficulties that, to those familiar with such schemes, are recognisable — timetabling that did not deliver the module options that were theoretically on offer, disjunction between curricular components, and the like. Rather surprisingly, the issue of assessment during the first semester did not appear as a problem, yet the introduction of modularity has led to summative assessments halfway through the year. The problem for students is that because the time available for the module is so short formative assessments are less used than in year-long 'traditional' study units, and that some students are faced with 'failing and trailing' modules early in their time in higher education. Anecdotal evidence suggests that early failure can be a powerful disincentive to continuation and, from the point of view of student learning and development, it can be argued that the first year of full-time study would be better spent in developing the knowledge and skills needed for success in the later years of the programme. After all, the first year is typically a qualifying year as far as the degree award is concerned, and all that is basically required is that the student pass it: there seems little justification for building in summative assessments halfway through the first year, when formative assessment and tutorial support could - and should - be taking precedence.

Implications

Much that was said under 'Preparation for transition' applies here. Much of the knowledge and understanding that students should acquire before entry is valid once they have enrolled. However, there are some things that institutions can do to help students come to terms with the demands of their new environment.

Higher education institutions can do the following.

■ Design and deliver their curricula in such a way that students are inducted into the process of learning autonomously. This implies an emphasis on formative assessment early in the programme, with detailed feedback and associated tutorial support. The withdrawal of a student means a financial loss to UK institutions, and so it is in their own interests to find ways of maximising student retention.

■ Ensure that the approach to teaching is conducive to student learning. This ramifies into institutional learning and teaching strategies, now a requirement of English institutions, and associated matters like recognition and reward mechanisms for teaching. The key phrase is probably 'quality time' and the

---

[4] See Tinto (1993) for a theoretical perspective on this and other issues relating to non-completion.

key question is whether academics' time can be identified as quality time from the point of view of the student's learning and general development. Currently, often it is not.

- Create a supportive and welcoming environment. This may imply the disproportionation of effort towards first-year students, since well-inducted students ought to be better able to cope independently in the later stages of their programmes.

- Ensure, as far as possible, that sufficient learning resources are available for students' needs. Like the health service, demand is always likely to exceed supply, but if institutions expect students to spend a significant proportion of their time learning independently, then the other side of the 'deal' is that a reasonable level of resourcing should be provided.

- Use, where appropriate, mentoring and peer support. Mentoring could be given a value by allowing it to be a source of credit towards the final award (after all, this is a useful transferable skill for students to acquire). Pope and Van Dyke (1998) attest to the value of mentoring in reducing non-completion at Central Queensland University.

- Be alert to, and act to avoid, discriminatory practice within programmes and more broadly within the institution. Ensure that equal opportunities and other policies are not merely rhetorical flourishes.

- Promote the availability of support services of various kinds (e.g. financial, personal, accommodation).

You can't win 'em all

Students are hit by events that are beyond the compass of institutions to influence — illness, accident and so on. Some students simply do not get along with the programme or their peers, and transfer to another institution. A student may be tempted to take a job mid-way through the programme, as happened in the case of Computing, for example: non-completion as success, rather than failure, perhaps?

An institution can do everything in its power to support a student, and yet the student may still decide to leave. The following example is sad, because a student who was genuinely able found herself unable to believe the good things that the institution was telling her: any resolution of her problem may have lain in the area of counselling and psychotherapy (she refused the offer), since the root cause seems to be a desperately low sense of self-esteem.

> I didn't have enough confidence to take part in the tutorials, and I spoke to my tutors and they were all easier with me but I didn't like voicing my opinions in case everyone thought I was stupid, and I became very unhappy. [...] I just lost all confidence in myself even though my tutors told me I was a really good student, I didn't believe them. I thought they were lying. *Joint Arts*

References

Baty P (l999a) A quality game where cheating is allowed? *The Times Higher Education Supplement* No. 1375 (12 March), pp.4-5.

Baty P (1999b) Encounters of an unfair kind. *The Times Higher Education Supplement* No. 1376 (19 March), pp.6-7.

James R, Baldwin G & Mclnnis C (1999) *Which university? The factors influencing the choices of prospective undergraduates* [Report to DETYA], Melbourne, Centre for the Study of Higher Education, University of Melbourne).

Martinez P & Munday F (1998) *9000 voices: student persistence and drop-out in further education* (London, Further Education Development Agency).

Mclnnis C (1998) Cultivating independent learning in the first year: new challenges in a changing context. In R Stokell (compiler), *Proceedings of the Third Pacific Rim Conference on the First year in Higher Education*, Vol. 2, (Auckland, Auckland Institute of Technology), Paper No. 42.

Mclnnis C & James R, with McNaught C (1995) *First year on campus: diversity in the initial experiences of Australian undergraduates* (Melbourne, Centre for the Study of Higher Education, University of Melbourne).

Morrison HG, Magennis SP & Carey U (1995) Performance indicators and league tables: a call for standards. *Higher Education Quarterly* 49 (2), pp.128-145.

NCIHE (1997) *Higher education in the learning society* [Report of the National Committee of Inquiry into Higher Education] (Norwich, HMSO).

Ozga J & Sukhnandan L (1997) Undergraduate non-completion. Report No.2 in *Undergraduate non-completion in higher education in England* (Bristol, HEFCE).

Pope G &Van Dyke M (1998) Mentoring. . . value adding to the university. In R Stokell (compiler), *Proceedings of the Third Pacific Rim Conference on the First year in Higher Education,* Vol. 1, (Auckland, Auckland Institute of Technology), Paper No. 46.

Tinto V (1993) *Leaving college: rethinking the causes and cures of student attrition,* 2nd edition (Chicago, University of Chicago Press).

Yorke M (1997) A good league table guide? *Quality Assurance in Education* 5(2), pp.61-72.

Yorke M (1998) The Times 'league table' of universities, 1997: a statistical appraisal. *Quality Assurance in Education* 6(1), pp.58-60.

Yorke M (1999a) *Getting it right first time* (Cheltenham, UCAS).

Yorke M (1999b) *Leaving early: non-completion in higher education* (London,Falmer).

Yorke M (1999c) Student withdrawal during the first year of higher education. *Journal of Institutional Research in Australasia* 8 (1), pp. 17-35.

Yorke M, with Bell R, Dove A, Haslam U, Hughes Jones H, Longden B, O'Connell C, Typuszak R and Ward J (1997) Undergraduate non-completion in England. Report No.1 in *Undergraduate noncompletion in higher education in England* (Bristol, HEFCE).