

How school-leavers choose a preferred university course and possible effects on the quality of the school-university transition

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Abstract

The Australian government is actively encouraging a more competitive market in the provision of higher education. One particular policy thrust has been to encourage expansion in the range of options available to prospective students, not only to widen individual choice but also in the belief that patterns of student decision-making will exert influences over universities which will lead to greater efficiencies and improved quality. These developments place new and important emphases on the decisions made by prospective students at the point of entry to university. This paper reports research into the factors influencing the choices of prospective university students and examines how shortfalls in information and the reputational characteristics of the market may affect the quality of the school-university transition. Some suggestions are made for improving the decision-making process for school-leaver entrants.

The policy context: A student-choices market in higher education

A little understood aspect of the transition to university in Australia is how the personal appropriateness of the courses chosen by prospective students — and for which they are subsequently selected — affects their subsequent experience of, and satisfaction with, the first year of university study. In the United States, where there is a more overt institutional marketing culture, an extensive research tradition into college choice (see, for example, Chapman 1981, Paulsen 1990) has shown important relationships between college choice processes and the quality of later experiences of higher education (Villegla & Hu 1990, Wiese 1994).

Though comparable empirical work is yet to be undertaken in Australia, it appears that an adequate match between students' expectations and their course-university combinations is a significant determinant in a successful transition from school to higher education. The evidence that is available points to some difficulties in achieving this 'fit'. Centre for the Study of Higher Education research into the first year experience (McInnis & James 1995), found that one third of first year school-leavers believed, with hindsight, they were not ready to choose a university course during their final year of school. Similarly, Yorke (1999) identified 'wrong choice of programme' among the six key factors in undergraduate non-completion in the United Kingdom.

Research into how students choose a course and university is always highly political, but particularly so at the present time. A clear commitment of the federal government in recent years has been to stimulate a more competitive environment for higher education provision in Australia, one in which universities more vigorously advertise the nature, quality and price of their offerings (West 1998), and in which prospective students are more consumer-like in their choice patterns. The thinking here is that heightened competition between universities will lead to multiple benefits, among these that differentiation of course offerings will be encouraged — providing more options to intending students — and gains in efficiency and quality will result from universities being subject to and responsive to the macro patterns of student choice (Barr 1998).

The *Which University?* study

A recent Australian study by the Centre for the Study of Higher Education (James, Baldwin, McInnis 1999) sheds light on student decision-making processes at the entry point to higher education. This research was

commissioned by the Department of Education, Training and Youth Affairs with the objective of examining the factors influencing applicants' selection of a preferred university course, the information sources they are using, and those which they consider most valuable. The findings provide insights into prospective students' decision-making processes, the factors they consider important, and the areas in which there are information shortfalls and uncertainty. The present analysis and discussion focuses on the latter issues.

The project surveyed a sample of tertiary applicants in three states — Victoria, Western Australia and New South Wales — at the time of initial application in 1998. Overall, 937 applicants responded to the single mail-out survey, a response rate of 29%. Of these, 684 were school-leavers. To complement the survey data, a series of telephone interviews were conducted with 12 respondents. This paper is based on analysis of the responses of the school-leaver subgroup and reports a case study of one interviewee.

The questionnaire was designed around three groups of possible factors that were assumed might influence applicants' choice of their preferred university course:

- those common to the field of study, such as the type of work involved in a career in this field;
- those associated with the particular course, such as the quality of teaching, options for flexible study or the reputation of the course with employers; and
- those associated with the university itself and not the course in question, such as the campus location, the institution's prestige and image, or the facilities and services available on-campus.

The instrument was designed to allow, as much as was possible, the separation and measurement of factors in these three areas.

The questionnaire used two five-point scales:

- 5 = very strong influence and 1 = no influence at all, when asking respondents to report the relative importance to them of various factors;
- 5 = a good deal of knowledge and 1= very little knowledge at all, when inviting applicants to assess their confidence in their knowledge of particular considerations.

Where influences are reported in this paper as 'strong or very strong' the response frequencies in categories 5 and 4 on the first scale were summed. The percentage of students reporting 'little or no influence' for particular factors have been derived by adding category 2 and 1 responses. Similarly, the percentage of students who claim a 'reasonable knowledge or a good deal of knowledge' or 'a little knowledge or very little at all' were calculated by summing points 5 and 4 and summing points 2 and 1 responses respectively. Factor analytic techniques (principal components analysis and congeneric modelling) were used to confirm the conceptual structure of the instrument and are reflected in the item groupings in the tables in this paper.

The influences on school-leavers' choice of a course and university

The findings of this study confirm earlier research (Harvey-Beavis & Elsworth 1998) which showed the majority of tertiary applicants to be primarily motivated by gaining entry to a particular field of study. Overall, 88% of school-leavers reported that personal influence in a field ('exploring the area of knowledge', 'opportunities for interesting and rewarding careers') was a strong or very strong influence in their decision. The strength of this intrinsic attraction to an area of knowledge, and its related career opportunities, considerably outweighs other considerations such as parents' wishes and more narrowly vocational objectives such as income potential in the field. Only a minority of applicants in this sample placed such a strong emphasis on attending a particular university that they were prepared to forego any field of study interests they might have had to secure a course place of some kind at their target university.

Table 1. Influences on school-leavers' choice of preferred course

Potential influence	Extent of influence		Mean *
	A strong or very strong influence (%)	Potential influence	
'Attainability/optimising opportunities'			
Confidence in ability to meet the demands of the course	70	9	3.9
Desire to get the most out of TER/TES score	46	31	3.2
Belief that school results are likely to allow comfortable entry	43	34	3.0
'Perceived course quality'			
The reputation of the course among employers	57	24	3.5
The satisfaction of graduates from the course	49	26	3.3
Employment rates for graduates from the course	45	27	3.2
Approaches to teaching and learning in the course	38	33	3.1
'Advice of others'			
Advice from teachers about the course	19	57	2.3
What parents say about the course	15	65	2.2
What friends say about the course	8	78	1.8
Other influences (individual items)			
The opportunities for flexible study	19	78	2.1

* 5 point scale, 5=very strong influence to 1=no influence at all

Examination of the considerations associated with particular course characteristics (Table 1) reveals a considerable range in the extent to which school-leaver applicants see specific factors as influences on their thinking. Generally, each individual factor exerts only moderate influence on the respondents overall, but the more significant ones are associated with attainability or optimising school results, and considerations falling under the rubric of course quality. The strength of the attainability/optimising influence is not unexpected, providing further evidence of the careful matching by applicants of their interests and objectives with their likely prospects in a competitive selection system. As discussed later, highly competitive entry and the imperative on many applicants to achieve excellent or outstanding school results may generate unrealistic expectations of the chosen courses.

The course quality items fall into two categories: those factors associated with the potential for long or medium term outcomes, such as the reputation of the course among employers and employment rates, and those which have more immediate impact, such as the styles and quality of teaching. The choice of preferred course appears to be slightly more influenced by outcome factors, however the differences are small.

Approaching one third of respondents reported that the quality of teaching in their preferred courses was of little or no influence on their decision. This apparent level of indifference to teaching quality can be interpreted in a number of ways. First, this may reflect a shortage of available information rather than a lack of perceived relevance – the findings presented in the next section lend some support to this conclusion. Second, this may be evidence of a level of indifference on the part of the more instrumental applicants whose needs are met by longer term objectives associated with career prospects. Third, the findings may indicate that many applicants believe that differences, should they exist, in the quality or styles of teaching across universities are insufficient to sway their decision-making.

Turning to the effects of the influences associated with universities rather than courses (Table 2), it is evident that institutional characteristics and amenities beyond overall status and reputation – which are in any case often closely associated with the reputation of particular courses – are not prominent factors in applicant thinking. The desire to undertake a particular course offered by the preferred university is a dominant factor, reinforcing the conclusion that applicants primarily focus on entering specific fields of study. Access from home is an important factor for about half the applicants.

Factors often thought to be influential, such as the use of information technology in teaching and the opportunities for flexible study are strong influences for only a minority of prospective students. Personal

'fit' factors are stronger considerations. Believing that they 'would fit in well' is very important for slightly

Potential influence	Extent of influence		Mean *
	A strong or very strong influence (%)	Little or no influence (%)	
Prominent individual items			
Wish to do a particular course the university offers	83	7	4.4
How easy it is to get to the university from home	53	32	3.3
'Institutional characteristics and reputation'			
The prestige of the university	46	28	3.3
Employment rates for graduates from the university	46	29	3.2
The 'image' of the university	42	33	3.1
The international character of the university	30	47	2.7
Starting salaries for graduates from the university	26	50	2.6
'Academic programs and services'			
The opportunities for higher degree study	45	31	3.2
The university's research reputation	32	40	2.8
The university's academic services for students, such as learning skills support	31	43	2.8
The information technology used in teaching	28	42	2.8
Teachers' recommendations about the university	28	47	2.6
The opportunities for flexible study options	18	68	2.1
'Personal "fit"'			
Belief that 'I would fit in well at this university'	51	22	3.4
The campus surroundings	51	28	3.3
The atmosphere of the campus	46	27	3.2
The social and cultural life of the university	37	38	2.9
The sporting and recreation facilities	27	51	2.5
The kinds of students who go to the university	26	51	2.5
The size of the campus	26	52	2.5
The clubs and societies at the university	19	57	2.3
Parents' views on the best university for you	17	61	2.2
Where friends are planning to go to university	7	77	1.8

over half of the applicants. The physical appearance of campus buildings and grounds is important to many applicants. The written comments of respondents to the survey suggest that campus appearance is perhaps the single major impression that many applicants have of institutions.

Table 2. Influences on school-leavers' choice of university

Information shortfalls: The case study of 'Fiona'

Quantitative analyses do not reveal the sometimes convoluted processes that are involved in prospective students final choice of a preferred course and university. The case study to follow illustrates some of this complexity, as well as showing the sometimes insufficient evidence and broad impressions, which, though vague, are nevertheless strongly influential in applicant decision-making.

'Fiona' conscientiously investigated her institutional options through attendance at university open days. She received broad impressions of courses and campus atmospheres, but ultimately the consideration of class sizes was decisive in her choice of a preferred university course.

Ideally Fiona would like to study physiotherapy, but she did not like her chances of getting a high enough score. Running a close second was her general interest in science, particularly marine science. 'I wanted to do physio, but was pretty sure I wouldn't have good enough marks (90s), whereas I won't have any trouble getting around the 70s necessary for marine science'.

Fiona attended open days at two Research Universities and also a Technology University. She said, 'I'm really lazy so I need somewhere close, but if there was a course somewhere else I really wanted to do, I'd certainly consider it'. The information she obtained and her impressions about various things (from the open days as well as from people she had met before) left her favouring the technological institution. Students she had spoken to at the open day left her with the impression that its courses were more 'applied' than those at Research University 'A' and that students left feeling more competent as a result. This contrasted with her impressions from Research University 'B' open day, where she quickly developed the impression that students were not happy to be there.

As application time drew near, Fiona's final decision boiled down to class size. While she had been told (by a neighbour who studied at Research University 'A') that lectures there were 'quite big, and the tutes have about 20 people', she was told at the Technology University open day that they put limits on the class size, and students said they had 'got to know everyone in their year'. Strongly influenced by this, Fiona ended up choosing Technology University as her first preference, and was offered a place, which she subsequently accepted (adapted from James, Baldwin & McInnis 1999: 64-65).

Fiona's decision-making process may not be the norm for the majority of applicants, nevertheless it is illustrative of the influence of chance encounters and the questionable sources on which applicants draw. Many of the twelve interviewees in this study seemed to work on similar ideas about curricula being more or less 'applied', 'analytical', 'practical' or 'hands on'. In most cases, they accepted on faith what they were told at open days and were susceptible to word-of-mouth testimony. The accuracy of Fiona's information is very doubtful, since few institutions wish to or are able to apply class size restrictions across all courses. Applicants with similar confidence in hearsay will be at least surprised, possibly very dissatisfied, if courses differ from their expectations. What impact this may have on later contentment and persistence with the course is not known.

Table 3. Summary of main influences and perceived knowledge of these influences

Main influences	% for whom strong or very strong influence	% believing they have reasonable or good knowledge of this influence
Course choice		
Confidence in ability to meet the demands of the course	70	N/A
The reputation of the course among employers	57	36
The satisfaction of graduates from the course	49	30
Employment rates for graduates from the course	45	36
University choice		
Wish to do a particular course that the university offers	83	N/A
How easy it is to get to the university from home	53	N/A
The prestige of the university	46	46
Employment rates for graduates from the university	46	30
The opportunities for higher degree study	45	30

The general uncertainty in the application process is supported by the quantitative analyses. Particularly striking are the apparent gaps between the importance that school-leavers attach to particular considerations and their confidence in their knowledge of these considerations, which is often considerably lower. In Table 3 the most influential considerations in school-leavers' decision-making about courses and universities are summarised. Also in the table are data on applicants' confidence in their knowledge of these considerations, the differences highlighting the uncertainty many applicants have about indicators of the likelihood of important outcomes, including the satisfaction of graduates and graduate employment rates.

Potential effects on the transition to university

Broadly speaking, the findings of the study suggest that some applicants are not in a good position to judge the appropriateness of programs for them or to judge the quality of courses overall. Many prospective students base their planning on limited, subjective information. Because the study relied on self-reported knowledge claims, the findings should be treated with caution and the usual caveats apply. There are plausible explanations for the shortfalls identified in this case. Choosing a course/institution will always involve some faith in the capacity of the provider to offer an extended program of appropriate quality and relevance. As argued in the *Which University?* report:

[t]here are the limits to which course and university information can capture the future university experience and its likely outcomes, no matter how faithfully the information is offered. First, higher education is clearly an interactive enterprise and its quality relies to a significant degree on the appropriateness of the match of expectations and commitment of both students and universities. Universities can hardly foresee and describe the suitability of this match for all students. Second, while the academic and social experiences provided by university courses are broadly predictable, they cannot be inspected and sampled in any useful fashion without an extended engagement with them. The student as consumer of higher education is inevitably under-informed, because the quality of the experience is far better understood during and after it, rather than before it (James, Baldwin & McInnis 1999: 79).

The evidence of the imperfect knowledge base of tertiary applicants encourages speculation on the reactions of enrolling students once they have experienced the realities of their courses and institutions. It is possible that the information shortfall will have least impact on students with extensive cultural capital who have access to informed advice from parents, siblings, friends and teachers. These students are likely to be well placed to understand the possible career outcomes and the relative status of institutions and courses. Nevertheless, while it might be imagined that these students are less concerned with attainability, their implicit understanding of the social 'sorting' dimension to university selection places pressure on them to aim for courses requiring high entry scores.

With the heavy reliance of universities on ENTER scores for tertiary admissions and strong family and community expectations on young people to achieve high scores and gain entry to highly selective courses, it would be surprising if the perception did not build that selectivity is associated with course quality. Indeed, our research has shown this to be the case. For most school-leavers, the attractiveness of a course at a university increases with the selectiveness of its admissions. In other words, students act to 'maximise' the 'pay-off' from their academic results in a largely reputational market. The logic of applicant thinking is neatly summed up by one respondent who wrote 'the main reasons [for choosing my preferred course] are the major subjects featured in the course, the university is nearby, and this course has the highest ENTER of all my preferences'. Clearly, many applicants believe that required entrance scores are a sign of prestige and possibly quality. Course entry scores serve, appropriately or otherwise, as a proxy for a range of quality criteria on which applicants do not necessarily have, or have not sought, more accurate information.

Of course, the relationship between competitive admissions and course quality is not at all so straightforward — there is no reason why highly selective courses should also be those with, for instance, the best teaching. This situation might lead to dissatisfaction or disillusionment for school-leavers who were highly committed to learning and academic achievement during their senior secondary education yet later discover that their success has led to a program they find tedious, neither interesting nor challenging.

Not all students, however, will be unsettled by a university experience that does not match their expectations. In fact, not all applicants have particularly high expectations of the experience of university and many might be quite willing to drift along. Highly instrumental students (Biggs 1982), for example, may put aside short-term discomfort or dissatisfaction with the university experience in favour of longer term goals. For these students, immediate concerns may be counterbalanced by a desire simply to pass in the long-run.

Perhaps the most vulnerable students are those who are very idealistic about pursuing knowledge. The usually high expectations of these applicants for an exceptional intellectual experience may be difficult for

universities to meet. In the USA, Wiese (1994) has described the cognitive dissonance that occurs for first year students when experiences contradict built-up expectations. These students are at particular risk of non-completion, or may adopt instrumental study strategies that limit the development of their potential.

Herzberg's (1993) theory of motivation to work, sometimes known as the hygiene theory or the two-factor theory, also yields insights into possible dissonance during the first year experience. Herzberg proposes two sets of environmental factors that affect people's satisfaction and motivation. Hygiene factors, such as the quality of working spaces and amenities, are associated with the level of personal comfort in the workplace. Herzberg argues that the absence of appropriate hygiene factors may cause dissatisfaction, but their presence does not in itself generate a commitment to task. In contrast, motivation factors are those that can inspire a high level of involvement, their presence lifts achievement beyond expectations. Inspiring leadership and intellectually stimulating work are typically thought to be motivation factors. Their absence does not in itself lead to dissatisfaction, but it will restrict personal involvement to mundane levels. Looking broadly at the process of student choice of a course and university, prospective students will find it easier to make decisions on course/institution characteristics that tend towards hygiene factors – readily observable, tangible qualities, such as ease of access from home and the ambiance of the campus surroundings. However, they have poor access to reliable information on the less tangible qualities that are likely to be motivation factors. The less observable dimensions of the university experience are what can capture imagination and spur a continuing commitment, and may be the key to enduring persistence and success at university – these include inspirational teaching and belonging to a thriving peer group and learning community (James & McInnis 1997). Only hints of these can be detected during an open-day campus visit, yet these are the characteristics of a premium quality educational environment. Further research into these relationships would be valuable.

Educating applicants

The entry to university has been described as a courtship, in which both parties are making decisions: the prospective student, about the relevance, prospects, personal fit, and attainability of preferred courses and universities; the university, about the social and academic potential of applicants. Both parties in this courtship rely heavily on information. In a more vigorously competitive market in Australian higher education there are growing responsibilities on universities to provide appropriate and accessible information on what they offer. Correspondingly, university applicants might be encouraged to invest considerable effort in collecting and comparing information on the courses and institutions of interest to them.

The findings of the *Which University?* study suggest that university advertising and information dissemination requires a strongly educative dimension and that the higher education sector may need to be more active in advising prospective students. We have identified three principal domains which prospective students should be strongly encouraged to investigate (James, Baldwin and McInnis 1999: 79):

- the nature of the teaching and learning experience that is offered, including such fundamental matters as class sizes, extent of use of learning technologies, and practicum or work-placement opportunities;
- the anticipated knowledge and skills outcomes for graduates;
- the career possibilities and likely prospects.

It would be simplistic to suggest that providing information of this kind is a straightforward endeavour for universities. First, there is an inevitable complexity to information of this kind. Course descriptions and numeric indicators of quality can be abstract and it is difficult to avoid specialist language – some 'insider' jargon is inescapable. For prospective students and their families, especially those less familiar with the language and culture of universities (James, Wyn *et al* 1999), such specialised, technical language may be poorly understood. Second, in a strongly competitive context it will be challenging to find a three-way balance between accurately informing, advising, and recruiting. These objectives are far from complementary.

These are not arguments, for universities to diminish their efforts in these areas. University students of the future are likely to be more discerning, more concerned with how university commitments will be accommodated with other personal priorities, and more demanding of 'just-in-time' services and resources. A more explicit 'contract' of the experiences that will be provided and the potential outcomes seems a likely direction. This will have the added benefit of enhancing the student-university match.

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