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Demographic and socio-economic factors impacting education choice

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ABSTRACT
Demographic and socio-economic profiles are contrasted between university and polytechnic students, and the influence of these factors on tertiary education decision processes is examined. It is suggested that the model of the tertiary education market used by policy makers is simplistic and indicates a lack of appreciation of the complexity of the decision process used by potential tertiary education students. The way in which factors such as demographic and socioeconomic backgrounds may intervene in the student tertiary education choice decision process is discussed.

Introduction

The reform policies appear to be based on an assumption that tertiary education markets are homogenous. While there are a number of similarities, there are also major differences in terms of the demographic profiles of the two institutions studied (refer previous article for methodology). The previous article in this issue (Eagle & Shergill: 2000) indicates that tertiary education appears to be viewed differently by students attending the University of Auckland or Manukau Institute of Technology.

This paper therefore reviews the differences between the profiles of students at the two institutions, relating the differences to some of the key theories behind the reforms and to some of the policies that have evolved from them. The student data are also contrasted, where relevant, to data from recent graduates who have gained employment in the major industry groups. The level of satisfaction with the existing marketing / advertising programmes is also measured against all three groups, i.e. current students, recent graduates and the employers of those graduates.

The data used are drawn from the same empirical study reviewed in the previous paper. We have therefore not repeated the methodology here. In addition, the key findings from in-depth interviews conducted with eight current polytechnic students are also presented.

Some of the findings which suggest that the theories that underpin the reforms do not provide an complete explanation of the decision process involved in selecting whether or not to undertake tertiary study are highlighted. These are used as the basis for recommendations for both further study and for the consideration of policy makers.

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Reserarch findings

Demographic Analysis

Age and Sex Profile

Table 1 shows that, while the majority of students at both institutions are under 25 years of age, polytechnic students are older than university students, especially those undertaking the polytechnic degree programme. A chi-square test reveals that this difference is statistically significant ($p < .001$). The older profile of polytechnic degree students is mainly due to one main factor - approximately 50% of these students had completed the two year National Certificate in Business Studies (now the New Zealand Diploma in Business Studies) programme prior to commencing the degree programme (Eagle & McDonald, 1995:8). The majority of tertiary students are school leavers rather than mature students. Table 2 shows that 10% of recent graduates (i.e. those with less than 5 years of industry experience) were over the age of 30 and 50% were over the age of 25.

Table 1: Profile of current university and polytechnic students by age

Age group	Polytech Diploma (n=106) %	Polytech Degree (n=50) %	Uni. Main campus (n=367) %	Uni. Tamaki campus (n=112) %	Average %
under 20 yrs	37	28	48	33	36
20 - 24 yrs	41	44	42	49	44
25 - 29 yrs	8	14	5	9	9
30 - 34 yrs	7	8	3	7	6
35 + years	7	6	2	2	5
Total	100	100	100	100	100

Table 2: Profile of recent graduates (university and polytechnic combined) by age

Age group	percentage (n = 72)
under 20 years	1
20 - 24 years	49
25 - 29 years	40
30 - 34 years	8
35 + years	2
Total	100

Tables 3 and 4 provides a profile of both current students and recent graduates by gender. Although there is a slightly higher proportion of females enrolled in the polytechnic degree programme, the difference is not statistically significant.

Table 3: Profile of university and polytechnic students by gender

Gender	Polytech Diploma (n=106) %	Polytech Degree (n=50) %	University Main campus (n=367) %	Uni.Tamaki campus (n=112) %	Average %
Male	47	42	51	48	47
Female	49	56	48	50	51
Not specified	4	2	1	2	2
Total	100	100	100	100	100

Table 4: Profile of recent graduates (university and polytechnic combined) by gender

Gender	percentage (n = 72)
Male	50
Female	50
Total	100

Ethnic Origin

The profile of university and polytechnic students (refer Tables 5 and 6) shows a lower percentage of Maori students relative to the percentage in the total New Zealand population, and substantially higher percentages of Asian students, especially in the university groups, than the percentage of the total population represented by the Asian ethnic group. A chi-square test indicates that the difference between the university and polytechnic Asian cohorts is statistically significant ($p = .000$), with Asians making up 10% of the polytechnic degree group but almost 28% of the university main campus group and 33% of the university Tamaki group. The data presented in these tables suggest that the assumption made by policy makers of universal under-representation of both Maori *and* Pacific Islanders is not totally correct, with these groups being much more strongly represented within the polytechnic than in the university.

The ethnic profile of students is interesting when contrasted to that of recent graduates (refer Tables 5 and 6), who are overwhelmingly (97%) of European/ Pakeha origin. There are no Maori or Pacific Islanders in this group. As noted in the previous article, employers indicated that ethnic origin is not an important factor in recruitment considerations.

Table 5: Profile of university and polytechnic students by ethnic origin

Ethnic Group	Polytech Diploma (n=106) %	Polytech Degree (n=50) %	University Main campus (n=367) %	Uni. Tamaki campus (n=112) %	Average %
European	65	68	57	53	61
Maori	7	6	3	5	5
Pacific Is.	7	6	1	4	4
Asian	12	10	28	33	21
Indian	7	2	8	3	5
Other	2	8	3	2	4
Total	100	100	100	100	100

Table 6: Profile of recent graduates (university and polytechnic combined) by ethnic origin

Ethnic group	Respondents % n = 72	Total N.Z. population %
European	97	75
Maori	0	10
Pacific Islander	0	4
Asian	1	1
Indian	0	1
Other	2	9
Total	100	100

(population percentages from 1991 Census)

The low (almost non-existent) representation by minority groups may have several explanations. It is possible that the employers in the key industry groups studied *do* consciously or unconsciously discriminate against minority groups. Whether the student profile indicates a trend

towards ethnic diversity which may impact on workplace data in future years, or whether non-European students simply do not seek employment in the industry sectors studied is unclear.

Two in-depth interviews were conducted with Asian students (one from Hong Kong and one from Mainland China) on the polytechnic degree programme. Both indicated that the decision to study on the polytechnic degree programme had been made as a group decision with their families, and with the intention of their obtaining skills and knowledge to help with the family businesses. A third polytechnic degree student interviewed, from Western Samoa, was on a scholarship and intended returning to his own country upon graduation.

It may also be possible that students from some of the minority groups do not pursue careers within the major industry sectors due to the lack of role-models in the industry, thus self-selecting themselves out of consideration for employment in the key sectors.

Socio-economic Profiles

The reform objectives, as previously noted e.g. *Learning for Life,* (NZ Government, 1987), include improving participation by traditionally under-represented groups. Given that socio-economic levels have been identified by several researchers (e.g. Maani, 1995; Lauder et al, 1992, 1994) as significant factors in tertiary education decision rates, the socio-economic profiles of both current students and recent graduates have been included in the study. There is no uniform method in Western countries to characterise the socioeconomic levels of the population (see Schmeichel, 1994). The socio-economic index in common usage in New Zealand is drawn from an adaptation of the Elley and Irving socio-economic scales. It is used widely through the social sciences discipline and throughout the marketing and advertising industry (e.g. ACNielsen). This scale has been in use since 1972 and was updated using 1981 census data (e.g. Johnston, 1983). The scale is intended to provide an objective approach to the classification of people into different socio-economic groups which may reflect different behaviours, attitudes and 'ways of life' (Johnston, 1983:1).

Johnston (1983:2) notes several limitations with the scale, including that "revision should accompany every census" and that "these indices primarily scale *occupations* not individuals". It does not appear that any substantial revision has occurred since Johnston's work which has been used uncritically since, as shown by the standard wording used in every ACNielsen research report which includes socio-economic analysis.

> Individual socio-economic level: This scale has been adapted from that developed by Elley & Irving in their paper "Socio-economic Index for New Zealand", Vol. 11, No. 1, NZ Journal of Educational Studies, and subsequently revised using 1981 Census data. The scale is based on level of household occupation. The Elley & Irving scale is the only authoritative socio-economic scale widely used in New Zealand (ACNielsen, 1998).

The scale has therefore been used to determine the profiles of both current students and recent graduates. The levels allocated on the scale are as follows:

> **Level One:** Professionals, including doctors, lawyers, accountants, scientists etc.
>
> **Level Two:** Managerial / executives, including managers, directors teachers, computer programmes etc.
>
> **Level Three:** Clerical / supervisory, including draughtsmen, clerks, farmers, real estate agents etc
>
> **Level Four:** Skilled / technical, including boilermakers, butchers, sales representatives, hairdressers etc.
>
> **Level Five:** Semi-skilled, including dry cleaners, truck drivers, postmen etc.
>
> **Level Six:** Unskilled workers, including dustmen, labourers, packers, warehousemen etc.
>
> **Level Seven:** Other: where the household is headed by a student or unemployed person.

Table 7 shows that, while most students come from the upper socio-economic levels (levels I - 3), there are statistically significant differences between the profiles of university and polytechnic students (on a chi-square test, p = .000). University students are primarily from levels I and 2, polytechnic students from levels 2 and 3. The upper socio-economic groups are over represented relative to the total population and lower groups, especially levels 5 - 7, are under-represented, both among current students and recent graduates (refer Tables 7 and 8).

TABLE 7: PROFILE OF UNIVERSITY AND POLYTECHNIC STUDENTS BY SOCIO-ECONOMIC LEVEL

Socio-economic level	Polytech Diploma (n=106) %	Polytech Degree (n=50) %	University Main campus (n=367) %	Uni. Tamaki campus (n=112) %	Average %
Level 1	8	12	22	12	14
Level 2	35	44	51	51	45
Level 3	37	28	9	15	23
Level 4	11	8	11	11	10
Level 5	4	2	3	4	3
Level 6	3	0	2	5	2
Level 7	2	6	2	2	3
Total	100	100	100	100	100

Table 8: Profile of recent graduates (university and polytechnic combined) by socio-economic level

European	Respondents % n = 72	*Total population* %	*N.Z.*
Level 1	15	8	
Level 2	61	13	
Level 3	14	21	
Level 4	9	28	
Level 5	0	12	
Level 6	1	6	
Level 7	0	12	
Total	100	100	

The level of participation in tertiary education by under-represented groups, for the marketing and advertising programmes at least, is well below the levels suggested by the percentages in the population as a whole. It would be interesting (but well beyond the scope of this study) to extend this type of analysis longitudinally across all programmes offered by the two types of institutions to determine whether the under-representation indicated here for some groups is a universal factor and whether the reforms have improved the underrepresentation situation or not.

A regression analysis, with choice of institution as dependent variable and socio-economic level, gender, age and ethnicity as independent variables was conducted. The resulting regression equation explains only 11 % (significant at the 1% level) of the variation in choice of institution. The equation confirms that the higher the socio-economic level, the more likely students are to attend university rather than polytechnic and to study degree rather than diploma programmes. It also confirms that older students are more likely to attend polytechnics. Asian students gained a higher and more positive co-efficient compared to other ethnic groups, confirming that these students are more likely to pursue university rather than polytechnic courses.

When decision was made to commence tertiary studies

University students tend to make the decision to undertake tertiary study much earlier (before their 5th form year at secondary school) than polytechnic students (refer Table 9 and 10), and indicate that there was either general encouragement or family expectation of such a course of action (refer Table 11). Polytechnic students were more likely to have made the decision later in their secondary studies, or after leaving school and having worked for some time. The difference between the decision timing for university and polytechnic students, when subject to a chi-square test was statistically significant (p = .000).

Table 9: Profile of university and polytechnic students by when decision was made to commence tertiary study

Decision time	Polytech Diploma (n=106) %	Polytech Degree (n=50) %	University Main campus (n=367) %	University Tamaki campus (n=112) %	Average %
Before 5th form	5	22	55	46	32
During 5th form	4	8	9	9	8
During 6th form	19	10	8	5	10
During 7th form	29	18	15	17	20
After leaving school	27	32	10	16	21
Other	16	10	4	7	9
Total	100	100	100	100	100

Table 10: Profile of recent graduates (university and polytechnic combined) by when decision was made to commence tertiary study

Decision time	percentage n = 72
Before 5th form	40
During 5th form	10
During 6th form	15
During 7th form	21
After leaving school	10
Other (after working for several years)	4
Total	100

Polytechnic students were also more likely to be motivated in their studies by a desire to improve on their family situation, or as a result of initial work experience, with comments such as "I want more than my family has" and "I don't want money problems like my family has", jobs were 'scungy' and 'boring/ dead end' (refer Table 11). The responses of recent graduates (refer Table .10) shows a profile similar to that of current university students (due, as noted in the previous article, to the preponderance of university graduates in this group). The majority felt that there had been encouragement by parents or their secondary schools (refer Table 12).

Table 11: Comparison of university and polytechnic students: whether background influence was exerted on decision to undertake tertiary study - and type of influence exerted

Influence exerted	Polytech Diploma (n=106) %	Polytech Degree (n=50) %	Uni Main campus (n=367) %	Uni Tamaki campus (n=112) %	Average %
11a: Whether influence exerted or not					
Yes	64	76	64	68	68
No	36	24	36	32	32
Total	100	100	100	100	100
11b: Type of Influence exerted					
General encouragement	37	28	34	29	32
Family expectations	6	6	14	15	10
Work - needs quals to get ahead	15	18	7	13	13
Don't want future money problems	2	10	2	1	4
Limited by what can afford	0	0	1	0	0
Want more than family has	4	12	3	3	6
No-one in family has gone to university	1	0	0	0	0
Don't know / N/A	35	26	39	39	35
Total	100	100	100	100	100

Table 12: Recent graduates' perception of whether background influence was exerted in decision to undertake tertiary study - and type of influence exerted (university and polytechnic graduates combined)

Influence	percentage (n = 72)
Yes	86
No	14
Total	100
Type of influence	
Wanted more /better future	13
Encouraged by parents / school	64
Own personality / ability	8
Not applicable / no response	15
Total	100

Preferences in Tertiary Study

First preference of tertiary programme and reasons for programme selection

Over 75% of university students were enrolled on their first choice of tertiary programme, with law and arts programmes being the next most preferred options (refer/Table 13). Only 57% of polytechnic diploma and 58% of polytechnic degree students were enrolled on their first preference of programme. University commerce programmes were given as their next most preferred programme, although 9% of polytechnic diploma students indicated a polytechnic degree as their preferred option. These students would not have met the academic criteria for degree entry but have the option of moving on to the degree programme should they successfully complete their diploma studies. The commitment to such a lengthy programme of study that is required by these students may be an indication of the 'value' placed on achieving degree level qualifications. The remaining students listed a wide range of programme preferences as their first option.

Of recent graduates, only half indicated that a commerce degree had been their first preference (refer Table 14). Note: in the previous article, 58% had such a qualification. 24% of recent graduates listed an Arts degree as their first choice - such a qualification appears to have lost favour with the current student cohort, possibly indicating increased awareness of ' human capital' on their part. That is, if they undertake university studies, they should invest in a programme that will 'pay off'.

Table 13: First preference of tertiary programme: comparison of university and polytechnic students

Programme type	Polytech Diploma (n=106) %	Polytech Degree (n=50) %	Uni. Main Campus (n=367) %	Uni. Tamaki campus (n=112) %	Average %
Uni Commerce	14	16	76	78	46
University Law	0	0	10	3	3
Tourism	2	8	0	0	3
Polytech degree	9	58	1	1	17
University Arts	5	0	3	5	3
Graphic Design	7	2	2	1	3
Architecture	0	2	1	4	2
Uni. Science	0	2	2	1	1
Accounting	0	2	1	4	2
Medicine / Dentistry	2	4	1	1	2
Engineering	2	0	1	0	1
Uni. Tourism	1	0	1	0	0
Aviation	0	2	0	0	0
Journalism	0	0	1	0	0
Physical Ed / Physiotherapy	1	4	0	1	2
Poly.Bus Dip	57	0	0	0	14
Education	0	0	0	1	1
Total	100	100	100	100	100

Table 14: First preference of tertiary programme: recent graduates (university and polytechnic combined)

First preference	Percentage n = 72
University Commerce	50
University Arts Degree	24
Polytechnic Marketing / Advertising	9
Other Polytechnic Qualification	1
Law	11
Politics	1
Engineering	1
Physiotherapy / Medicine	3
Total	100

A range of reasons was given for the particular option being taken (refer Table 15), including, for 20% of the polytechnic degree students, the location of the institution, low travelling costs - and accessible parking. Only 8% of the diploma students gave these responses. None of the university students gave this as a factor. Note: MIT is currently the only provider of degree programmes in South Auckland, while there are a number of providers in the region offering diploma level studies.

Table 15: Reason for particular option actually undertaken being chosen comparison of university and polytechnic students

Programme type	Polytech Diploma (n=106) %	Polytech Degree (n=50) %	Uni. Main campus (n=367) %	Uni. Tamaki campus (n=112) %	Average %
1st option	32	20	59	44	39
Option not poss.	14	12	8	4	9
Location / facility /access	8	20	0	0	7
Job prospects	39	42	28	36	37
Cost (cheaper in Auckland)	0	0	1	2	1
Better quality	0	0	4	14	4
More practical	4	4	0	0	2
Flexible timetable	3	2	0	0	1
Total	100	100	100	100	100

Table 16: Reason for particular option actually undertaken being chosen: recent graduates (university and polytechnic combined)

Reason	percentage (n = 72)
Was first choice	36
Attended introductory lecture	4
Swapped majors at university	4
Unable to do first preference	6
Good career prospects	43
Credibility of university qualification	6
No response	1
Total	100

Of the eight polytechnic students interviewed in depth, five had the credentials to have enabled them to have studied at university. Two of these identified with low socioeconomic groups and stated that they felt more comfortable in the polytechnic environment ('where everyone knows your name - like 'Cheers'') and had come to the polytechnic straight from secondary school. There were two mature women in the interviewed group, one identifying with socio-economic level 3, the other with level 5, the former with a B Bursary, the latter with School Certificate only. Both had made inquiries at the university but felt that, as adult students, they would not fit in. They both felt that the small class sizes at the polytechnic provided a better environment for them, although one felt even that environment was intimidating until her first class where the lecturer quoted *Alice in Wonderland* and she "started to think I could cope". The quote used was:

> 'Would you tell me, please, which way I ought to walk from here?'
>
> 'That depends a good deal on where you want to get to', said the Cat.
>
> 'I don 't much care where ... ' said Alice.
>
> Then it doesn't matter which way you walk, 'said the Cat.
>
> 'So long as I get somewhere, 'Alice added, as an explanation.
>
> 'Oh, you 're sure to do that, ' said the Cat, 'if you only walk long enough. '
>
> (Lewis Carroll, quoted in Forsythe, 1992:26)

Two of the group, both mature males, had not had the educational credentials for univversity acceptance and had successfully completed bridging programmes, one completing the diploma to move on to the degree, the other a certificate programme before commencing the diploma. The first student had opted to stay at the polytechnic for the degree programme rather than apply for the university's Bachelor of Commerce programme, even though he would have automatically gained eight cross credits from the university towards the programme. His comments included the fact that he was the first in his family to gain a tertiary qualification, that he felt the university was "alien, sort of unfriendly territory" and that his "sort don't mix it well up there".

Of the remainder in the interviewed group, one had a B Bursary but had commenced studies on a part time basis while holding full time jobs and as he lived and worked in the South Auckland area, had only considered the polytechnic due to purely practical reasons of access, hours of classes and "utter and pure convenience".

The eighth person had an A Bursary and felt that there had been too much pressure on her in the latter part of her secondary schooling to conform to a 'predictable' programme which did not appeal ("an accounting degree and marrying some bloke with good prospects"). She believed that she had, "out of sheer rebelliousness" opted for the polytechnic, “in spite - or because - of all my friends going to university". She felt that there had been severe pressure on her in her first year of tertiary study to change her mind - until she opted for a degree major (Advertising) not available at the university - "I think that's called post rationalisation or something".

The in-depth interviews suggest that there is a more complex model of education decision making in action than envisaged by policy makers. Socio-economic and related factors appear to be substantial influences, modifying prospective choices for the students interviewed.

Factors stopping first choice of programme being taken

More polytechnic than university students agreed that there had been identifiable factors preventing them from taking their first choice of programme - either that their grades were not good enough to meet the entry criteria for their preferred programme, or that they had been unsuccessful in getting accepted on to that course even if they had the required minimum entry criteria for the programme (refer Table 17).

A similar percentage of recent graduates (22%) felt they were also able to identify the major factors which had prevented them from taking the programme they would have preferred and, as for the current student group, not meeting the prerequisites / not gaining acceptance were the principle reasons given (refer Table 18). None of these respondents gave details of the course. There is therefore no chart giving details of courses unable to be taken for this group.

Table 17: Details of factors stopping first choice from being taken: comparison of university and polytechnic students (multiple responses permitted)

Factors preventing choice	Polytech Diploma (n=106) %	Polytech Degree (n=50) %	Uni. Main campus (n=367) %	Uni. Tamaki campus (n=112) %	Average %
Grades not good enough	12	10	6	6	8
Not accepted	10	16	7	9	11
Could not afford course	4	4	1	1	3
Did not have prerequisites	1	2	0	2	1
Programme not recognised	2	0	1	0	1

Table 18: Details of factors stopping first choice from being taken: recent graduates (university and polytechnic combined: multiple responses permitted)

Factors preventing choice	Percentage (n = 72)
Option not available in home city	4
Unable to get into first choice	13
Did not meet prerequisites	6

Among the government's objectives for the reforms is, as has been noted previously, the provision of greater choice for students. Not only do these data suggest that choice is not as wide as policy makers might believe, but also the situation has not changed from when the recent graduates undertook their study to when the current students enrolled for their study. The proposed institution mergers and strategic alliances may lessen that choice still further. Where choice exists, a number of reasons exist for students to not benefit fully from the choices available.

No one clear programme stands out as the option which had not been able to be taken. University commerce or medicine degrees for polytechnic students; the polytechnic business degree for diploma students; law for university main campus students; and conjoint degrees for the Tamaki students each accounted for little more than 5% of responses There are significant differences between university and polytechnic students in terms of their demographic profiles, and the time at which they make the decision to study at tertiary level. The apparent correlation between time of choice and type of institution selected cannot, however, be interpreted as implying causation. The motivation behind selecting the polytechnic in preference to the university where both options are available shows little link to the economic rationalist theories of policy makers and suggests that there are a number of areas which warrant further research.

The polytechnic environment appears to have strong appeal for mature students. Allen (1993:20) suggests that the needs of non-traditional tertiary students, particularly those of mature women and of ethnic minorities, are not well understood due to a lack of research in the area. Certainly government policy appears to assume that all tertiary students are homogenous in terms of their motivations and perceptions of the tertiary education experience. The data presented in this and in the previous article suggest that this is not in fact correct and indicates that further research into the decision making processes of prospective students could be useful.

Satisfaction levels with existing programmes

If the criticisms of the 'existing' education structures made by Treasury (eg 1984; 1987) and extended into the range of policy documents that were developed, and which led to the establishment of NZQA and the National Framework, are correct (refer to the analysis in the previous articles), there should be substantial levels of dissatisfaction with the programmes which were studied by the recent graduates or which are being studied by the current student cohort. Note: both the polytechnic diploma and degree programmes are 'old world' qualifications and are not as yet on the National Framework.

Employers, recent graduates and current students were all asked via open ended questions to list:

- the best and worst things about the programmes;
- what aspects were irrelevant; and,
- what was missing from the programmes and which should be included in future.

There is no substantial evidence of dissatisfaction with earlier 'products' of the system, other than a perceived over-emphasis on theory - a factor which new framework based qualifications will be unlikely to alter. Tables 19 and 20 show employer and recent graduate perceptions respectively of the best things about the graduates' programmes of study. Employers emphasise the academic grounding and work-ready traits (e.g. perseverance, ability to think) more than graduates, but both groups provide a range of reasonably positive factors. Table 21 shows a diversity of opinion across the four current student groups, with elements of the basic knowledge gained coming through strongly.

Table 19: Best things about the programme of study completed by recent graduates: Employers' responses

Best things about programme	Percentage n = 44
Basic academic grounding	43
Ability to think / learn	20
Perseverance	13
Prepared for workforce	2
No response	22
Total	100

Table 20: Best things about programme of study: Recent Graduates' responses (university and polytechnic graduates combined)

Best things about programme of study	Percentage (n = 72)
Interpersonal skills gained	4
Learnt commitment / hard work	10
Interesting / challenging	21
Broad range of options	25
Applied courses	18
Gained academic grounding	10
Meeting people	1
Others' perceptions of its worth	7
No response	4
Total	100

Table 21: Best things about programme of study: comparison of university versus polytechnic students

Best thing about programme of study	Polytech Diploma (n=106) %	Polytech Degree (n=50) %	Uni. Main campus (n=367) %	Uni. Tamaki campus (n=112) %	Average %
Gives needed knowledge	13	6	15	27	15
Wide range of subjects	22	20	13	11	17
Cross disciplinary	0	2	0	1	1
Interesting / useful/ relevant	8	8	26	15	15
Status of uni qual	0	0	20	16	9
Challenging	4	0	6	4	3
Shorter than Waikato *	0	0	1	0	0
Career prospects	7	6	0	4	4
Creative ideas	1	0	0	0	0
Environment small classes / caring	17	20	0	1	9
Practical - not just theory	14	18	0	1	8
Flexible hours	7	14	0	0	5
International focus	0	0	0	4	1
Don't know / Not specified	7	6	19	16	13
Total	100	100	100	100	100

In terms of what was perceived to have been the worst things about the graduates' programmes of study, 43% of employers suggested that the programmes were too theoretical (Table 22) and 16% thought graduates were not prepared for the real world. Note: It had originally been intended to include a group of industry employees who did not have formal tertiary qualifications but we were unable to locate any such employees in employment within the industry other than in receptionist or accounting clerk roles. Employers made it clear than either a polytechnic or university qualification was the expected entry qualification - there appears to be the perception that these employees will therefore be totally 'work ready'.

Similar sentiments to the employers were expressed by the graduates themselves in terms of either irrelevant papers or the programme having been too academic / not practical / out of touch (Table 23).

Table 22: Worst things about their programme of study: employers

Worst things about programme of study	Percentage (n = 44)
Too theoretical	43
Not enough advertising content	4
Too long	2
Not competitive	2
Unprepared for the real world	16
Nothing / No response	33
Total	100

Table 23: Worst things about programme of study: recent graduates (university and polytechnic combined)

Worst things about programme of study	Percentage (n = 72)
Irrelevant papers / too long	24
Impersonal environment	6
Not a well regarded programme	8
Pressure / deadlines	12
Out of touch / incompetent lecturers	19
Too academic / not practical	17
No response	14
Total	100

A different perspective is provided by the current students (Table 24 overleaf), with a range of factors being offered ranging from heavy workloads and boring subjects, to criticisms of the elitist and competitive nature of the programmes. While the 'too theoretical' aspect was given as a factor, the percentage giving this was far smaller than either the employer or recent graduate group.

Table 24: Worst things about programme of study: comparison of university and polytechnic students

Worst thing about programme of study	Polytech Diploma (n=106) %	Polytech Degree (n=50) %	Uni Main campus (n=367) %	Uni. Tamaki campus (n=112) %	Average %
Too long	4	2	4	3	3
Lost earnings / debt	0	0	4	0	1
Forced to take boring subjects	15	14	8	17	13
Heavy workload	23	26	28	25	25
Out of date / irrelevant	1	0	5	2	2
Too theoretical	2	10	10	4	7
Costs	9	2	2	2	4
Elitist / competitive	1	0	5	3	2
Memory based rather than performance based exams	2	2	3	1	3
Not broad enough	1	6	1	1	2
Language difficulties	1	0	1	1	0
Teachers who can't teach	5	4	0	5	4
Lack of recognition: qualification	5	6	0	0	3
Light class hours	4	4	0	0	2
Need more than this qualification	1	0	0	0	0
Travel between campuses	0	0	0	1	0
/Don't know / Not specified	26	20	29	35	29
Total	100	100	100	100	100

Summary

Overall satisfaction levels appear high, as expressed by the 'best things' analysis and the high percentages in all groups studied who see nothing as being irrelevant. There is, however, evidence of some dissatisfaction with the theoretical nature of existing programmes.

The evolution of the framework is unlikely to substantially 'improve' the programmes as perceived by industry. With increasing public criticism of the framework developments (e.g. "North & South" Magazine, September 1996: cover story), it is possible that new framework based programmes may be actually perceived as being inferior to the old. There is also a lack of appreciation of industry's perceptions of the existing structures and what improvements to existing programmes (rather than complete replacements of these programmes with Framework based qualifications) would be desired and therefore supported by industry.

It appears that the economic based theories such as human capital theory offer an incomplete explanation of the education decision making process. The simplistic model of the market in tertiary education indicates a lack of appreciation of the complex demographic and socio-economic factors

that may be important intervening factors which influence decisions regarding tertiary study. Linkages cannot be assumed between socioeconomic / demographic differences and student education choice decisions without using more sophisticated in-depth data analysis techniques to investigate possible causality.

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