

*

Student Expectations in the New Millennium
—An Explorative Study of the Higher Education in Hong Kong

*

Inaugural-Dissertation
zur Erlangung des Doktorgrades der Philosophie an der
Ludwig-Maximilians-Universität
München

*

vorgelegt von
Yee-Tak Wan

aus
Hongkong

*

LMU München, 2006

*

*

Erstgutachter:

Professor Dr Rudolf Tippelt

Lehrstuhl Allgemeine Pädagogik und Bildungsforschung

Institut für Pädagogik, LMU

*

Zweitgutachter:

Professor Dr Heinz Neber

Fakultät für Pädagogik

Universität Saarland

*

Tag der mündlichen Prüfung:

24.07.2006

*

ABOUT THE AUTHOR

Postanschrift

Flat D, 1/F
73 Caine Road
Central
Hong Kong

[E-Mail: ytwan@hotmail.com]

Herkunft

- geboren am 22. November, 1961
- Geburtsort: Hongkong
- Staatsangehörigkeit: British National (Overseas)

Sprachen

- Kantonesisch-Chinesisch (Muttersprache)
- Hochchinesisch
- Englisch (Zweitesprache)
- Deutsch (Drittesprache)

Vorbildung

- **Ph.D.** (Education), University of Munich, Germany, 2006
- **Master of Arts** (Psychology of Excellence), University of Munich, Germany, 2004
- **Master of Arts** (Religious Education), Southwestern Baptist Theological Seminary, Fort Worth, Texas, U.S.A., 1995
- **Master of Arts** (Marriage and Family Counselling), Southwestern Baptist Theological Seminary, Fort Worth, Texas, U.S.A., 1995
- **Master of Music** (Composition), Southwestern Baptist Theological Seminary, Fort Worth, Texas, U.S.A., 1993
- **Bachelor of Sacred Music** (Composition), Canadian Bible College, Regina, Sask., Canada, 1991

- **Teacher's Certificate**, Northcote College of Education, Hong Kong, 1984
- **High School Certificate**, St. Paul's College, Hong Kong, 1979

Berufserfahrungen

- **Teaching Assistant**, Department of Education, University of Munich, Germany, 2006
- **Supply Teacher**, English Primary Section, Munich European School, 2003-2006
- **Adjunct Lecturer** (Counselling), Alliance Bible Seminary, Hong Kong, 1997-2001
- **Editorial Committee Member**, for the publication of *Hong Kong Vocal Music Collection*, Chinese Christian Literature Council, 1998-1999
- **Youth Program Director**, Clear Lake Chinese Church, Houston, Texas, U.S.A., 1996-1997
- **Educational T.V. Program Instructor**, "Dial-A-Teacher", Radio & Television H.K., Hong Kong, 1986-1987
- **Secondary School English Teacher**, Kwei Wah Shan College, Hong Kong, 1985-1987
- **Secondary School Music Teacher**, Wu York Yu Memorial College, Hong Kong, 1984-1985

ACKNOWLEDGEMENT

The author would like to thank the following people without whose help the project could not have been completed. The names appear in alphabetical order of the institutions to which they belong.

*

City University of Hong Kong:

Dr David Mole

Ms Tracy Lo

Ms Teresa Yu

Hong Kong Academy for Performing Arts:

Dr Herbert Huey

Ms Kandith Wan

Ms Polly Yung

Hong Kong Baptist University:

Dr Eddie Ho

Mrs S.L. Sham

Ms Verona Lau

Lingnan University:

Dr Veronica Tam

Ms Carmen Yau

The Chinese University of Hong Kong:

Mr Tom Fong

The Hong Kong Institute of Education:

Dr Grace Mak

Dr K.S. So

Dr Stella Kong

The Hong Kong University of Science and Technology:

Mr Luke Wong

Mr Ricky Yeung

The Open University of Hong Kong:

Dr Richard Armour

Dr K.S. Yuen

Dr S.L. Chung

The University of Hong Kong:

Mr Henry Wai

Ms Dora Yue

The University of Munich:

Professor Dr Rudolf Tippelt (my supervisor)

Dr Bernhard Schmidt

The University of the Saarland:

Professor Dr Heinz Neber

University of Applied Management, Erding:

Mr Joel Schmidt

*

TABLE OF CONTENTS

TITLE PAGE	1
NAMES OF SUPERVISOR AND SECOND READER	2
ABOUT THE AUTHOR	3
ACKNOWLEDGEMENT	5
TABLE OF CONTENTS	7
LIST OF TABLES	10
ABSTRACT (IN GERMAN)	15
ABSTRACT (IN ENGLISH)	16
INTRODUCTION	17
The Changing University	19
The Changing Student Population	26
STUDENT EXPECTATIONS	33
Four Recurring Themes	38
1. Job-oriented Curriculum Design	38
2. User-friendly Course Delivery Method	40
3. Opportunities for Lifelong Learning	42
4. Student Consumerism	47
HIGHER EDUCATION IN HONG KONG	51
The Nine Institutions in This Study	64
1. City University of Hong Kong	64
2. Hong Kong Academy for Performing Arts	64
3. Hong Kong Baptist University	65
4. Lingnan University	66
5. The Chinese University of Hong Kong	66
6. The Hong Kong Institute of Education	67
7. The Hong Kong University of Science and Technology	68

8. The Open University of Hong Kong	69
9. The University of Hong Kong	70
PURPOSE OF THE STUDY	72
METHOD	76
Participants	76
Instrument	78
Procedure	87
RESULTS	92
Gender	92
Age	93
Nationality	98
Enrollment Status	98
Choice of Institution and Satisfaction	99
Self-Reported Grade Average	108
Fields of Study	110
Marital Status	112
Employment Status	113
Who Pays for Subjects' Higher Education	114
Family Income	116
Parents' Highest Level of Formal Education	117
Personal Academic Aspiration	118
Reasons for Going to University	121
What Participants Value about a University	125
Self-Perception of Ability to Cope with University Life	128
The Four Scales	136
DISCUSSION	145
Gender	145
Age	147
Choice of Institution and Satisfaction	149
Self-Reported Grade Average	152
Fields of Study	156

Employment Status, Family Income, and How Tuition is Paid . . .	159
Parents' Highest Level of Formal Education and Personal Aspiration	165
Reasons for Going to University	168
What Participants Value about a University	172
Self-Efficacy in University Life	176
Job-Oriented Curriculum Design	180
User-Friendly Course Delivery Method	188
Opportunities for Lifelong Learning	197
Student Consumerism	208
CONCLUSION	217
LIMITATIONS	224
Concerning sampling	224
Concerning instrument	227
BIBLIOGRAPHY	230
APPENDIX A: Websites of the Nine Participating Institutions	254
APPENDIX B: Student Expectations Questionnaire	255

LIST OF TABLES

- Table 1. Four Cultures of Universities
- Table 2. Summary Characteristics of Four University Models
- Table 3. A Profile of the Lifelong Learner
- Table 4. An Overview of the Education System in Hong Kong
- Table 5. Number of Participants from Each Institution
- Table 6. Scale: Job-oriented Curriculum Design (1st pilot test: $\alpha = .65$)
- Table 7. Scale: User-friendly Course Delivery Method (1st pilot test: $\alpha = .60$)
- Table 8. Scale: Opportunities for Lifelong Learning (1st pilot test: $\alpha = .60$)
- Table 9. Scale: Student Consumerism (1st pilot test: $\alpha = .67$)
- Table 10. Scale: Job-oriented Curriculum Design (2nd pilot test: $\alpha = .85$)
- Table 11. Scale: User-friendly Course Delivery Method (2nd pilot test: $\alpha = .82$)
- Table 12. Scale: Opportunities for Lifelong Learning (2nd pilot test: $\alpha = .61$)
- Table 13. Scale: Student Consumerism (2nd pilot test: $\alpha = .83$)
- Table 14. Gender Distribution
- Table 15. Significant Results of Binominal Tests on Gender Distribution
- Table 16. Age Distribution
- Table 17. Significant Results of Tamhane's T2 Post-Hoc Test on Age Means

- Table 18. Age Distribution of the Entire Sample
- Table 19. Significant Chi-Square Tests Results of Age Distribution
- Table 20. Nationality of Participants
- Table 21. Enrollment Status of Participants
- Table 22. Rank of Choice of Participants' Institutions
- Table 23. Rank of Choice of Participants' Institutions by Institution
- Table 24. Rank of Choice Mean by Institutions
- Table 25. Tamhane's T2 Post Hoc Test: Rank of Choice of Institution
- Table 26. Level of Satisfaction in Attending the Institution
- Table 27. Level of Satisfaction by Rank of Choice of Institutions
- Table 28. Satisfaction Mean by Institution
- Table 29. Self-Reported Grade Average
- Table 30. Correlations between Self-reported Grade Average, Rank of Choice of Institution, and Satisfaction
- Table 31. Ten Categories of Majors
- Table 32. Significant Results of Binomial Tests on Gender Distribution by Major
- Table 33. Significant Results of Turkey HSD Post-Hoc Test on Self-Reported Grade Average by Major
- Table 34. Marital Status
- Table 35. Employment Status
- Table 36. Work Hours per Week of Participants with Part-time Jobs

- Table 37. Who Pays for Participants' Higher Education?
- Table 38. Crosstabulation: Employment Status * Who Pays for Higher Education
- Table 39. Participants' Family Monthly Income
- Table 40. 'Who Pays for Your Higher Education' by Two Income Groups
- Table 41. Parents' Highest Level of Formal Education
- Table 42. Academic Aspiration
- Table 43. Correlations between Self-Reported Grade Average, Parents' Highest Level of Education, and Personal Academic Aspiration
- Table 44. Crosstabulation: Gender * Academic Aspiration
- Table 45. Reasons for Attending University
- Table 46. Independent t-Tests on Gender Differences in Three Top Reasons for Attending University
- Table 47. Significant Post-Hoc Tests Results on Major Difference in Reasons for Attending University
- Table 48. What Participants Value about a University
- Table 49. 'What Participants Value about a University' by Major
- Table 50. Self-Perception of Ability to Cope with University Life
- Table 51. Correlations among the Self-Perception Items
- Table 52. Reliability Test on Self-Perception Items ($\alpha = .77$)
- Table 53. Principal Component Factor Analysis on Five Self-Perception Items

- Table 54. Correlations between Self-Efficacy in University Life, Self-Reported Gr. Average, Rank of Choice of Institution, and Academic Aspiration
- Table 55. Self-Efficacy in University Life Scale Mean by Major
- Table 56. Significant Results of Turkey HSD Post-Hoc Test on 'Self-Efficacy in University Life' Scale Mean Difference among Majors
- Table 57: Scale: Job-oriented Curriculum Design ($\alpha = .83$)
- Table 58. Independent t-Tests of Gender Difference and Employment Status Difference in cd-Scale Mean
- Table 59. One-Way ANOVAs of Age Group, Institution, and Major Differences in cd-Scale Mean
- Table 60. Scale: User-friendly Course Delivery Method ($\alpha = .58$)
- Table 61. Independent t-Tests of Gender Difference and Employment Status Difference in dm-Scale Mean
- Table 62. One-Way ANOVAs of Age Group, Institution, and Major Differences in dm-Scale Mean
- Table 63. Scale: Opportunities for Lifelong Learning ($\alpha = .67$)
- Table 64. Independent t-Tests of Gender Difference and Employment Status Difference in ll-Scale Mean
- Table 65. One-Way ANOVAs of Age Group, Institution, and Major Differences in ll-Scale Mean
- Table 66. Scale: Student Consumerism ($\alpha = .76$)
- Table 67. Independent t-Tests of Gender Difference and Employment Status Difference in sc-Scale Mean
- Table 68. One-Way ANOVAs of Age Group, Institution, and Major Differences in sc-Scale Mean

Table 69. Descriptive Statistics (with α s) of the Four Scales

Table 70. Descriptive Statistics of Item 22 by Institution

Table 71. What Participants Value about a University: Gender Percentage

Table 72. Some Comparisons between Business and Arts & Humanities

Table 73. Correlations between cd-Scale Mean, 'To be Able to Get a Better Job', and 'To Get Training for a Specific Career'

ZUSAMMENFASSUNG

Aufgrund globaler politischer und wirtschaftlicher Entwicklungen hat sich auch die Hochschulausbildung verändert. Kulturelle und soziale Veränderungen im letzten Jahrzehnt haben die Entwicklung der Hochschulausbildung geprägt. Unvermeidbar hat dieser Wandel Studentenerwartungen beeinflusst, besonders bei denen, die im ersten Studienjahr sind. Um eine gute Passung zwischen den Anforderungen von Hochschulen und Studenten zu sichern, sind ausreichende Einsichten in die Studentenerwartungen nötig. Diese Doktorarbeit ist eine deskriptive und quantitative Untersuchung über Studentenerwartungen in Hongkong, die eine Basis für künftige Forschung legt. Vier Skalen wurden entwickelt, um Einstellungen der Studenten zu messen: 1. Job-Orientierung im Lehrplan, 2. benutzerfreundliche Gestaltung des Lehrmaterials, 3. Möglichkeiten lebenslangen Lernens, und 4. Konsumhaltung der Studenten gegenüber Hochschulausbildung. Zusätzlich wird gezeigt, was Studenten mit einer guten Hochschulausbildung verbinden, was junge Menschen zur Aufnahme eines Studiums motiviert und inwieweit sie sich selbst für die Anforderungen eines Studiums gerüstet fühlen. Mit dem *Student Expectations Questionnaire* (vom Autor entwickelt) wurde eine Umfrage unter 857 Studenten durchgeführt, die sich an neun Hochschulen in Hongkong im ersten Studienjahr befinden.

ABSTRACT

Higher education has experienced vast changes as a result of global political and economic developments. Cultural and social changes in the last decade have also added to the continuing evolution of higher education. These changes inevitably lead to changing expectations of students entering higher education. An adequate understanding of student expectations is crucial in ensuring a good fit between higher educational institutions and their students. This study attempts to carry out a baseline descriptive-quantitative research on student expectations in the higher education of Hong Kong. Four scales have been developed to measure students' attitude toward: 1. job-oriented curriculum design, 2. user-friendly course delivery method, 3. opportunities for lifelong learning, and 4. student consumerism. Students' priority of what makes a good university, their reasons for going to university, and their self-perception of ability to cope with university life are also explored. The Student Expectations Questionnaire (developed by the author) was used to gather data from 857 first-year undergrads from nine institutions of higher education in Hong Kong. Analyses include, among others, gender, age, major of study as well as institution comparisons.

INTRODUCTION

Fifteen years ago Pascarella and Terenzini pointed out, when concluding the chapter on 'Studying college outcomes: Overview and organization of the research,' that a major future direction for research on the impact of college will be "to focus on that growing proportion of students whom we have typically classified as non-traditional, although they are rapidly becoming the majority participants in the American postsecondary system." They continued to say, "These include minority and older students, those who commute to college and quite likely work part- or full-time, and those who attend college part-time" (Pascarella & Terenzini, 1991). That same year Kraft and Nakib explored the 'new' economics of education in an article published in the *International Review of Education* (Kraft & Nakib, 1991). They observed that after WWII, the product market went through a major shift from physical production of goods to service-oriented production. As a result, what was being taught at schools then became partially obsolete. What was required in the service industries included good communication skills, analytical capabilities, and other qualifications that were not addressed by school curricula but were becoming necessities in the workplace (Levin & Rumberger, 1989). The rise of inflation in the 70s and the resulting economic recession caused a major reduction in

real public expenditures on social and welfare programs, including education. The 1980s witnessed the era of a conservative administration which cut spending in order to balance the budget—the education sector was not spared from all these social realities. Kraft and Nakib went on to say that to meet the dynamic changes in economics and labor markets, educational planning should gear toward 'human competence development' (Kraft & Nakib, 1991).

The world never stops changing—politically, economically as well as socially. As part of the social milieu, the education arena has always been affected by political, economical and social changes—higher education is no exception. What Pascarella & Terenzini and Kraft & Nakib had said fifteen years ago still ring true today. A decline in government funding in the 1980s and 1990s had forced many higher educational institutions to seek non-government income and they were gradually influenced to adopt a more market-oriented management style (McNay, I., 1995). The link between evaluation of performance and the allocation of resources became stronger and more explicit as higher education expanded. As a result there was a shift toward system resource approach whereby effectiveness was judged by an institution's ability to attract resources (Thomas, 1999). The university's role in the society has indeed gone through major changes.

The Changing University

Bleiklie (1999) observes that the higher education systems of a number of countries in Western Europe have been going through changes which are characterized by two developments: 1. a large increase in student numbers; and 2. a comprehensive reform effort. Due to the expansion of student numbers, the changes that are taking place at the level of national educational policies are unavoidable. The nature of the changes hinges upon the relationship between the universities and their environments. On the one hand, they have resulted in new organizational forms designed for applied research, educational services and co-operation with private industry. On the other hand, they have led to national political reforms such as university legislation and integration into general administrative management-by-objective styles of planning systems.

The transformation experienced by modern universities stems from their being faced with changing expectations as to the tasks on which they should concentrate and as to how they ought to be organized (Bleiklie, 1999). This transformation does not necessarily imply that new expectations replace existing ones; it may simply mean that new expectations are added to existing ones. Bleiklie provides three sets of expectations which may be seen as different organizational ideals giving different directions

for public policy depending on which tasks they emphasize and what kinds of authority relationship they recommend.

The first one is the university as a public agency. Here the university finds itself within a hierarchical bureaucratic order and basically puts knowledge at the disposal of higher political administrative units. Such relationship is characterized by a loyalty expectation directed toward a university and the primary 'duty' of which is to implement state policies. The state, which holds the financial and political authority, expects the universities to serve as public agencies. This public agency expectation is reinforced by the integration of universities into a management-by-objective style of activity planning system and national higher education legislation. The purpose is to standardize and to integrate the universities as part of the national higher education system. As a consequence university personnel have been faced with expectations that they are part of an organization and that they ought to contribute to the official goals of that organization.

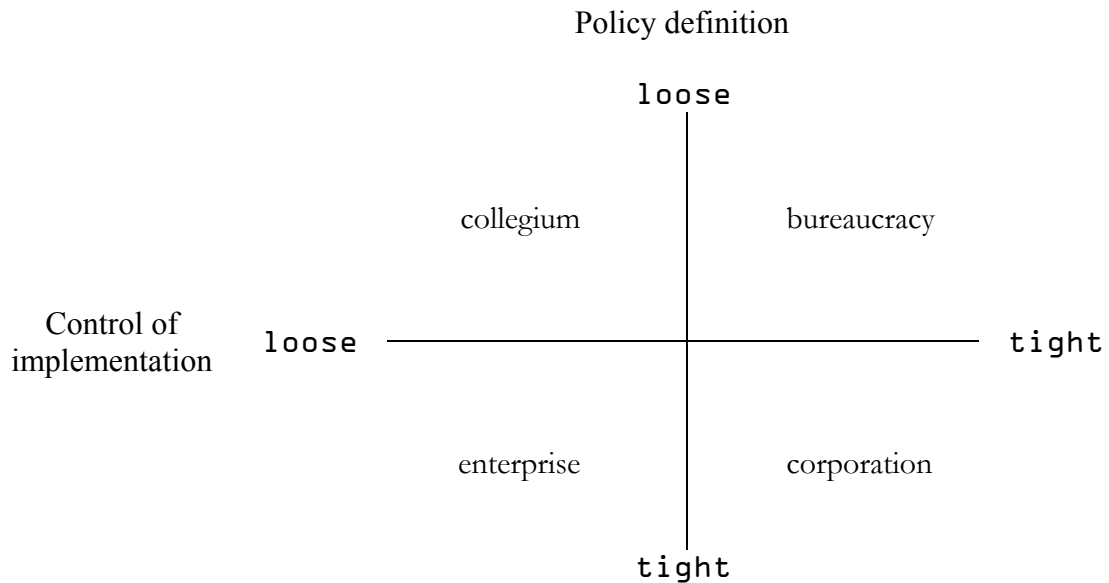
The second one is the university as an autonomous cultural institution. Here the primary task of the university is to engage in academic activity based on autonomous research and teaching. Within this category there are actually two slightly different models of

university structure. One is based on the idea of autonomous chairs with affiliated apprentice students—as in the case of most European universities. The core values fostered is that of academic freedom granted to the professors on the basis of formal qualifications. Only the professors themselves were entitled to evaluate their own performances as a group of peers. Another version of the university as a cultural institution is the disciplinary model like that of most American research universities. The disciplines constitute relatively egalitarian communities organized formally within disciplinary departments and with a number of professors in each department. Authority is primarily based on the disciplinary community, especially in the field of teaching, instead of solely on the professors themselves.

The third and last one is the university as a corporate enterprise. This last set of expectations view the university as a producer of educational and research services. A university consists of, similar to that of a corporate enterprise, a leadership with various functional staff groups servicing different user groups in need of the services the enterprise offers. Efficiency and quality are the key emphases. The university is expected to produce useful services in the form of research and candidates to the benefit of the users—they may be the university's own

faculty, administrators, employers of university graduates, or buyers of research. A major aim is to enhance national economic growth by raising the number of students and to make the production candidates more efficient, especially at graduate level (Bleiklie et al., 2000).

Today expectations are moving away from the classical definition of the university as a cultural institution to a corporate enterprise in the knowledge industry. The emphasis is on efficiency, quality and 'consumer-orientedness' with personnel management as the central means through which these values are realized (Bleiklie, 1999). In his article, 'From the collegial academy to corporate enterprise: The changing cultures of universities,' McNay outlines four cultures of universities based on the two coordinates of 'policy definition' and 'control of implementation' (McNay, 1995). Table 1 depicts the resulting four cultures of universities based on the interplay between policy definition and control of implementation. According to McNay, the four labels 'collegium', 'bureaucracy', 'corporation' and 'enterprise' can all be justified—what is crucial is the appropriateness of the fit with circumstances. All four co-exist in most universities, but with different balances among them. Factors like traditions, mission and leadership style contribute to a particular 'mix' of cultures.

Table 1. Four Cultures of Universities

The core value of collegium is freedom and it defines organizational expectations in terms of freedom from external controls—formerly by the church, but now mainly by government. Most developments will spring from the two main tasks of the university—teaching and research—and decisions will be based within a frame of reference set of peer scholars in the international community. This culture is open to abuse through personal bias and may not work well in large organization.

In the bureaucracy, regulation is most important. Possible positive objectives include: 1. consistency treatment in financial allocations; 2. quality of activities by due process of consideration; 3. propriety of behavior by regulatory oversight; and 4. efficiency through standard operating procedures. It may be particularly good

in maintaining stability, but not for rapid change. Potential problems are: 1. a concern for consistency of standards can lead to standardization of convenience; 2. novel ideas may not be effectively judged under the status quo of established ideas; and 3. the rigidity can be compounded by the time involved in the cycle of decision-making.

The key word is power in corporation culture. The executive asserts authority, with the vice-chancellor as chief executive. Particularly in the treatment of people, this culture leads to relatively frequent reaction of resentment. It also tends to be political in its process of bargaining and negotiation. Senior staff usually develop alliances outside formal decision arenas and working parties with appointed members set agendas and condition outcomes.

In the enterprise, the key word is client. This culture is where knowledge and skills of experts come together with the needs and wishes of those seeking their services. In organization terms, it means that decisions are made within a well-defined general policy framework and the satisfaction of the client is the dominant criterion for decision-making. In university terms, its main concern is about curricula committed to serve diverse communities or to develop enterprise skills and competences. There are a

number of potential problems: 1. it may compromise on standards if what paying clients want is a qualification and if payment systems depend on results; 2. loss of coherence and continuity if the fashions of the market become too dominant; and 3. it may be contaminated by commercial values (Tasker & Packham, 1993).

Table 2. Summary Characteristics of Four University Models

	Collegium	Bureaucracy	Corporation	Enterprise
<i>*Dominant value</i>	Freedom	Equity	Loyalty	Competence
<i>Role of central authorities</i>	Permissive	Regulatory	Directive	Supportive
<i>**Organization culture</i>	Person	Role	Power	Task
<i>Dominant unit</i>	Department/ individual	Faculty/ committees	Institution/ senior manage- ment team	Sub-unit/ project teams
<i>Decision arenas</i>	Informal groups networks	Committees and administrative briefings	Working parties and senior management team	Project teams
<i>Management style</i>	Consensual	Formal/ 'rational'	Political/tactical	Devolved leadership
<i>Timeframe</i>	Long	Cyclic	Short/mid-term	Instant
<i>Environmental 'fit'</i>	Evolution	Stability	Crisis	Turbulence
<i>Nature of change</i>	Organic innovation	Reactive adaptation	Proactive transformation	Tactical flexibility
<i>External referents</i>	Invisible college	Regulatory bodies	Policymakers as opinion leaders	Clients/ sponsors
<i>Internal referents</i>	The discipline	The rules	The plans	Market strength/ students
<i>Basis for evaluation</i>	Peer assessment	Audit of procedures	Performance indicators	Repeat business
<i>Student status</i>	Apprentice academic	Statistics	Unit of resource	Customer
<i>Administrator roles: Servant of ...</i>	The community	The committee	The chief executive	The client, internal and external

(*Clark, 1983; **Handy, 1993)

Table 2 summarizes the characteristics of McNay's (1995) four university models. According to him, there appeared to be a shift to the enterprise culture for many universities in the 1990s. One antecedent was the continuing squeeze on public funding of universities. The need for independent income generation resulted in looking at costs as part of competitive pricing, and at services to students as the core business of the university to ensure they were satisfied. Another reason was the competitive market for students that led to students' awareness of their 'value' to university budgets. The development of this student consumerism in turn led to demands for 'value for money.'

The role of university as well as the management of it has changed—but that is only half of the story. The profiles of students are changing too. Yesterday's traditional student is, very likely, today's exception.

The Changing Student Population

In 1993 the Johnson Foundation, together with The William and Flora Hewlett Foundation, The Lilly Endowment Inc., and The Pew Charitable Trusts, examined the question: What does society need from higher education? In the resulting document, *An American Imperative* (Johnson Foundation, 1993), they put forth the following statistics: 1. there were more

women than men among the 13.5 million students on U.S. campuses; 2. 43% of the students were over the age of 25, including 300,000 over the age of 50; 3. minority Americans made up about 20 percent of enrollments in higher education; 4. almost as many students attended part-time and intermittently as attending full-time and without interruption; 5. more college students were enrolled in community college than in four-year institutions; and 6. more students were living at home or off-campus than there were in dormitories.

The document also mentioned that 3,400 institutions of higher learning in America came in all shapes and sizes, public and private. They included small liberal arts institutions, two-year community colleges, and technical institutions, state college and universities, and flagship research universities. In each of these categories, models of both excellence and mediocrity existed. Despite this diversity, most operated as though their focus were still the traditional student of days gone by: a white, male, recent high school graduate, who attended classes full-time at a four-year institution and lived on campus.

Ten year later E.L. Anderson lists the following student statistics in his article, 'Changing U.S. demographics and American higher education' (Anderson, 2003):

- In 1970, about 2.5 million of America's 8.5 million undergraduate students were 25 and older. Over the next 3 decades, the number of older students increased by 144%, whereas the number of students under 25 increased 45%.
- From 1970 to 1999 the number of part-time students in higher education rose by 117%, compared with 51% for full-time students.
- Of the nearly 6 million post-secondary students age 25 and older in 1999, 69% were enrolled part-time.
- According to the National Center of Educational Statistics (NCES), the number of older college students will continue to increase.
- In 1976, only 16% of post-secondary students were minorities. By 1999, 28% of all post-secondary students were persons of color. From 1976-1999 the number of minorities enrolled in post-secondary institutions increased by 137%, compared with an increase of only 13% among whites.
- From 1976 to 1999, the number of students of color rose by 2.3 million, two times greater than the rise in number of white students.
- In 1999, nearly a quarter of all Americans were people of color; by 2000 it had increased to 31%.

Students entering universities are unmistakably more diverse than before. This is one of the inevitable ramifications of massification of higher education. The growth of higher education is not just an American phenomenon, but rather a global trend. Canada, for instance, has gone further than any other country except the United States in developing a mass system of higher education (Schuetze, 1995). Schuetze reports that according to the OECD, 66.5% of the Canadian population in the typical age group are enrolled in tertiary education, as compared to 38.6% in Japan, 39% in France, 27.5% in Germany, and 26% in the United Kingdom. From 1956-1968, the number of university-level institutions grew from 40 to 59 and now stands at 69. From a university enrollment of 90,000 full-time students at the beginning of the 1950s, Canadian university enrollment expanded to over 500,000 in 1990, excluding more than 300,000 part-time students.

The U.K., on the other hand, with the binary line between the universities and what had been the polytechnics officially abolished in the early 1990s, now has a single university model totalling 113 universities. Full-time student numbers increased by almost 70 percent between 1989 and 1995 and one in three young people now enter higher education, compared with one in six in 1989. In 1996-97 there were more than 1.6 million students studying at

higher education level in higher education institutions. In addition there are estimated to be in the region of 200,000 higher education students in further education colleges. If current patterns of participation continue, more than half of today's school leavers will experience higher education at some time in their lives (Report of the National Committee, 1997).

In Australia, universities have also coped with a massive expansion in student numbers (James & Beckett, 2000). According to government statistics (DETYA, 1998), in 1987 there were 394,000 university students; by 1997 this had climbed to 659,000. The number of undergraduates grew by 58%, from 330,500 to 521,000. The biggest growth was in postgraduate education. Graduate coursework students rose more than 100% from 49,000 to 102,500 during this period. The number of postgraduate research students even grew by 145%, jumping from 14,500 in 1987 to 35,000 in 1997.

Quantitative expansion can indeed be observed in student enrolments in higher education all over the world. UNESCO's statistical data showed that enrolments in education at all levels grew from 437 million in 1960, representing some 14% of the world's population, to 990 million in 1991, or 18% of the world's population (UNESCO, 1995). The number of students in higher education grew even faster—from 13 million students in 1960 to 28 million

in 1970, 46 million in 1980 and 65 million in 1991. UNESCO's projections for enrolment in higher education showed an increase in the number worldwide from 65 million in 1991 to 79 million in the year 2000, 97 million in 2015, and 100 million by 2025. Thus the need to develop mass quality higher education will present a major challenge in the years to come. UNESCO's 1995 policy paper for change and development in higher education proceeded to point out both external and internal reasons for the changes in the institutional structures and forms of higher education. External factors include: 1. increased social demand for higher education and the need to cater for a much more diversified clientele; 2. drastic cuts in spending on public higher education, thus compelling institutions to design alternative, more cost-effective programs and delivery systems; and 3. constantly changing labor market needs which have required higher education institutions to make provision for training in new professional, technological and managerial fields and in new contexts, as a result of the globalization and regionalization of economics. Internal factors are: 1. enormous advances in science, resulting in the development of academic disciplines and their further diversification; 2. growing awareness of the need to promote interdisciplinary and multidisciplinary approaches and method in teaching, training and research; and 3. rapid development of new

information and communication technologies and their growing applicability to various functions and needs in higher education.

The challenge facing higher education across nations is not just the sheer quantity of students entering universities. The development of globalization and the advancement in information technology have changed and will continue to change the world outlook, values, and attitudes of students in this new millennium. What students want from university and what they bring to it is also changing. The changing values and attitudes of students will in turn shape and mould student expectations toward higher education.

STUDENT EXPECTATIONS

The results from various projects at the Center for the Study of Higher Education (CSHE) in the University of Melbourne show that the current generation of undergraduate school leaver students are:

- generally clear about what they want from university and what it should do for them, but not so clear about their own obligations to the university;
- finding it more difficult to motivate themselves to study and tending to spend less time on tasks that would improve their learning. Most would, however, prefer to do well in their studies and not merely pass;
- more and more of them choosing a pragmatic cycle of low expectations and low demands;
- engaging in part-time paid work as the sole or main source of independent or discretionary income;
- currently less likely to study on weekends than they were just five or six years ago, and more likely to borrow course materials from friends to meet deadlines or to catch up on classes missed;
- increasingly using information and computer-based technologies—but not necessarily in ways that enhance their engagement with the learning experience or with the learning community. (McInnis, 2003)

Though we need not take this as a blanket description of undergraduate students around the world, the findings of CSHE do give us a rough picture of the profile of a typical contemporary student entering university. This profile is in some way similar to the picture describes by King (1995) concerning the characteristics of tomorrow's students. First, they are likely to be self-financing, studying part-time or in a mixed mode. Aware of the fact that the job market will not guarantee a 'graduate job', they will study a mixture of subjects which will allow them flexibility and transferable skills. They are also likely to be aware of themselves as the 'purchaser' of higher education and not afraid of expressing what they expect in terms of content, timing, and quality.

Second, more students will study part-time or in a mixed mode, so that they can work to finance their studies or to manage domestic circumstances. They will probably expect the choice of undertaking a large proportion of their course work at home by means of distance-learning packages.

Third, it will be increasingly common for students to be in employment and study 'in-company' with university staff working with them in their place of employment. They will want professional updating and recognition of their skills and experience. Students will be aware of the need for flexible and up-datable skills in their university programs.

Fourth and last, there will be a generation of 'higher-age' entrants who have retired from full-time employment seeking a structured learning and social experience. Most of them will be self-funding and study part-time, collecting credits as they go. This group will also want to be able to undertake some part of their course work at home as well as having personal contact with staff and other students.

In a national study that involved 423,003 U.S. college students, Low (2000) reported some demographic differences in expectations:

- Age: student expectations generally increase with age.
- Gender: females have higher expectations than males across all institutional types.
- Class level: freshmen and sophomores have higher expectations than juniors and seniors.
- Class load: full-time students have higher expectations than part-time students.
- Enrollment status: day students have higher expectations than evening and weekend students.
- Ethnicity/race: African-American students have the highest expectations among all ethnic groups.
- Residence: in-state students have higher expectations than out-of-state students across all institutional types. International students at 4-year private

institutions have the highest expectations for their college experience.

- Current residence: students living on campus have higher expectations than those living off campus.
- Employment status: students employed part-time on campus have higher expectations than students employed part-time off campus, full-time off or on campus, or not employed.
- Institutional choice: students for whom the institution is their first choice have higher expectations for their college experience.
- Educational goal: doctoral students have higher expectations than undergraduate or master students.
- Grade point average: student expectations increase as the self-reported GPA increases.
- Disabilities: students with no reported disabilities have higher expectations than those with disabilities.

The impact of student expectations and the ways in which a university responds to them are increasingly important for the future welfare of the university. The massification of higher education has certainly raised the profile of the various roles of universities, but it has also raised expectations. Universities nowadays face major management challenges in working with multiple demands and expectations including those of the students (Coaldrake,

2000). Houser's most recent studies, for instance, are good examples of how understanding student expectations can inform educators on students' preferences regarding instructor communication behaviors (Houser, 2004a; 2004b; 2005). Adult learning scholars have consistently revealed differential learning expectations for mature learners compared with traditional college students (Kasworm, 2003). Traditional and non-traditional students have been reported to have varying learner orientations (Gorham, 1999; Landrum et al., 2000).

Coaldrake (2002) articulated some broad parameters of contemporary student expectations. They include:

- quality and professionalism in the provision of university amenities and services;
- access to suitably qualified teachers and learning support;
- value of programs of study to the students' later life (and their professional working life in particular);
- convenience in the delivery of education;
- being treated with respect;
- value for money, and
- high academic standards.

The present study focuses on four recurring themes emerged in the literature concerning student expectations.

We shall next review the related literature on these four issues before moving on to the context and method of the study.

Four Recurring Themes

1. Job-oriented Curriculum Design

Over the years universities have experienced important changes in their environments and in their relationship with society. Globalization has resulted in worldwide economic, political, and technological interdependence in which continuous innovations have become a fundamental ingredient for international competitiveness. Industrial development will depend more and more on knowledge—a trend that makes education a major economic resource (Soares & Amaral, 1999). The increasing number of mature students, with work experience and values different from those of regular undergraduates, will expedite changes in study contents, teaching methodologies, and in the organization of disciplines (Price, 1989). Universities have been asked to direct research toward programs which may gain some technological advantage for their societies. For example, as early as in the late 1980s, the U.K. government Department of Education and Science published a White Paper asking universities to serve the economy better by achieving greater commercial and industrial relevance in

higher education activity (Department of Education and Science, 1987).

As a result of massification, more and more students entering universities are hoping that a degree will give them an edge in the job market. And with the changing skills base of the economy, universities are faced with the question of the relevancy of their curricula and programs. Cowen (1995) went as far as to suggest that "the central core of the present process is that the university itself should become a business". Many educators may not share this extreme view, but it is true that an increasing number of universities are becoming less independent as they pursue joint ventures with industries (Soares & Amaral, 1999). The market seems to have replaced public administration as the driving force behind the development of higher education. When employers express their concerns about the weakness in new workers' skills—which can be a competitive issue for local companies when challenged by foreign enterprises—more corporations are trying to influence the educational system to improve the skills of future workers (Coates et al., 1990). The public and other shareholders in higher education want improvements in students' abilities to think critically and solve problems—skills that are necessary to raise the quality of the workforce.

Many national public policies and university strategies have begun to focus on developing new academic programs oriented to the needs to the job market. In Europe, the trend has been labeled as the 'professionalization' of general education (Gellert, 1999). Market orientation of universities has led to much discussion about management styles, professional tools, and entrepreneurial behavior (Müller-Böling et al., 1998). Switzerland, Austria, and Italy, in particular, have been diversifying their higher education systems through the introduction of vocational colleges (Sporn, 1999).

2. User-friendly Course Delivery Method

According to the U.S. National Center for Education Statistics, in 2000-2001, 56% of all post-secondary institutions offered distance education courses—up from 34% three years earlier (NECS, 2004). Though the public sector is more likely to offer distance education, growth is also occurring in the private sector: the percentage of private 4-year institutions offering distance education almost double between 1997-98 and 2000-01. Total course enrollments in distance education in the U.S. have increased from 1.7 million to 3.1 million during this period. A study released in 1998 by the U.S. Department of Education revealed that more than half of all post-secondary institutions are offering distance learning courses (Lucas, 1998).

Distance learning was a practical choice for many students long before the birth of the Internet. With the popularity of the World Wide Web almost permeating all levels of the society, however, the interest in distance learning and user-friendly course delivery modes has been accelerated to an unprecedented degree (Roblyer, 1999). Distance learning has become an important instructional delivery system in higher education (Blumenstyk, 1998; Selingo, 1998). Some post-secondary institutions even fear extinction if they do not offer distance learning courses and programs (Kiernan, 1998; Mangan, 1999).

It has been found that in the past most distance learners were working adults, primarily female (Moore & Kearsley, 1996; Hardy & Boaz, 1997). But Wallace (1996) and Guernsey (1998) report that these demographics may be changing as distance learning becomes a more mainstream educational choice. There are a variety of reasons for the popularity of distance learning (Nyiri, 1997), but the convenience and flexibility that distance learning offers is probably still the most important motivational factor for students' choosing it (Klesius et al., 1997). Students with more responsibilities are found to be more receptive to the flexibility offered by distance learning (Christensen, 2001; Jacobson, 1994).

Developments in information technologies and distance learning are changing various facets of higher education. In order to remain competitive in the higher education 'market', universities are increasingly adopting distance learning technologies and flexible delivery modes (Rahm & Reed, 1997). Though policy concerns surrounding distance learning are complex and numerous (Gellman-Danley & Fetzner, 1998), distance learning and more user-friendly course delivery methods are here to stay and grow as the adult learner population continues to expand (Christensen et al., 2001). An obvious example of the potential of distance learning via information technology is the establishment of the International University of the Web, a cyber-university founded in 1993 that claimed to encompass a 'global campus' (Pease, 1999).

3. Opportunities for Lifelong Learning

International interest in the concept of lifelong education was first aroused in the 1960s by discussion and debate within UNESCO concerning the future development of adult education (UNESCO, 2000). The Third World Conference on Adult Education (Tokyo, 1972) evoked the *Universal Declaration of Human Rights* in declaring its belief that the right of individuals to education, their right to learn and to go on learning, is to be considered on the same

basis as their other fundamental rights. *Recommendation on the Development of Adult Education* adopted by the UNESCO General Conference at its nineteenth session included the following two main points (UNESCO, 1976):

- the term 'life-long education and learning', for its part, denotes an overall scheme aimed both at restructuring the existing education system and at developing the entire educational potential outside the education system; and
- education and learning, far from being limited to the period of attendance at school, should extend throughout life, include all skills and branches of knowledge, use all possible means, and give the opportunity to all people for full development of the personality.

Policy documents from various countries as well as the EU, OECD, and UNESCO share the same intention to promote lifelong learning as the foundation for educational and training policy (European Commission, 1995; OECD, 1996; UNESCO, 1996). Lifelong learning means the provision of "opportunities for higher learning and for learn throughout life, giving to learners an optimal range of choice and a flexibility of entry and exit points within the system" (UNESCO, 1996). Kehm (2001) summarizes the core characteristics of the concept of lifelong learning:

- a strong emphasis on the intrinsic rather than the instrumental value of education and learning;
- universal access to learning opportunities;
- recognition of learning in diverse settings and not only in educational institutions;
- learning throughout the lifespan;
- a diversity of methods of teaching and learning and modes of delivery unlike conventional education;
- a shift in emphasis from learning substance to learning process; and
- a shift from teaching to learning and from supply to demand in educational provisions.

Before the development of mass higher education, defining the characteristics of non-traditional used to be relatively easy: those who had not entered directly from secondary school, or were not from the dominant social groups, or were not studying in a conventional mode. But after the drastic expansion of higher education which resulted in a much more heterogeneous composition of the student body, now it becomes more difficult to draw a clear line between traditional and typical students (Schuetze & Slowey, 2000). "The experience of mature students in the 1990s has changed radically from that of previous decades. It is now a misnomer to talk about 'non-traditional'

students quite simply because in some universities it is the 18 to 21 year olds who are in a minority" (*Times Higher Education Supplement*, 1994). The OECD study (1987) distinguished between four categories of adults:

- students who enter or re-enter higher education as adults in order to pursue mainstream studies leading to a full first degree or diploma ('delayers', 'deferrers', or 'second chancers', i.e., those who are admitted on credentials gained via work experience or second-chance educational routes);
- adults who re-enter to update their professional knowledge, or seek to acquire additional qualifications, in order to change occupation or advance in their career ('refreshers', 'recyclers');
- those without previous experience in higher education, who enroll for professional purposes especially in courses of short duration; and
- adults, with or without previous experience in higher education, who enroll for courses with the explicit purpose of personal fulfillment ('personal developers').

Similar to the above OECD categories, but more specific on the aspect of lifelong learning, a profile of lifelong learner was developed by the authors of the report *Developing Lifelong Learners through Undergraduate Education*, prepared for the Australian National Board of

Employment, Education and Training (Candy et al., 1994). A summary of this profile is presented in Table 3.

Table 3. A Profile of the Lifelong Learner

<p>1. An inquiring mind</p> <p><i>1.1.</i> a love of learning; a sense of curiosity and question asking</p> <p><i>1.2.</i> a critical spirit; comprehension monitoring and self-evaluation</p>
<p>2. Helicopter vision</p> <p><i>2.1.</i> a sense of the interconnectedness of fields</p> <p><i>2.2.</i> an awareness of how knowledge is created in at least one field of study, and an understanding of the methodological and substantive limitations of that field</p> <p><i>2.3.</i> breadth of vision</p>
<p>3. Information literacy</p> <p><i>3.1.</i> knowledge of major current sources available in at least one field of study</p> <p><i>3.2.</i> ability to frame researchable questions in at least one field of study</p> <p><i>3.3.</i> ability to locate, evaluate, manage, and use information in a range of contexts</p> <p><i>3.4.</i> ability to retrieve information using a variety of media</p> <p><i>3.5.</i> ability to decode information in a variety of forms: written, statistical, graphs, charts, diagrams and tables</p> <p><i>3.6.</i> critical evaluation of information</p>
<p>4. A sense of personal agency</p> <p><i>4.1.</i> A positive concept of oneself as capable and autonomous</p> <p><i>4.2.</i> self-organization skills (time management, goal-setting, etc.)</p>
<p>5. A repertoire of learning skills</p> <p><i>5.1.</i> a knowledge of one's own strengths, weaknesses and preferred learning style</p> <p><i>5.2.</i> a range of strategies of learning in whatever context one finds oneself</p> <p><i>5.3.</i> an understanding of the differences between surface and deep level learning</p>

(Candy et al., 1994)

This profile fits well with what Alley dubs the 'new-millennium knowledge worker'. "A traditional university degree was thought to provide most requisite skills for

most careers begun in 1950. By 1975, most graduates could expect to return to some substantial tertiary learning occasionally during their career. But by the year 2000, graduates in many knowledge-intensive jobs can expect to require continuous learning throughout their careers" (Alley, 1999). As an increasingly knowledge-based and science-dependent business and service economy replaces the industrial economy, the traditional concept of one-time front-end education can no longer provide an adequate foundation for a lifetime of work (Rubenson & Schuetze, 2000). The passing of the industrial age and the advent of the information era have created new forms and modes of knowledge and information production whereby lifelong continuous transnational learning will be required in the global knowledge-intensive work place of the new millennium (Agbo, 2000).

4. Student Consumerism

As early as 1980 Riesman wrote about student consumerism in his book, *On Higher Education: The Academic Enterprise in an Era of Student Consumerism* (Riesman, 1980). To illustrate how higher education institutions would seek to attract 'customers', he observed that if it appeared that students believed that a B.A. in business administration would bring them employment, it would not be long before a thousand colleges started to offer such programs, hiring

adjunct faculty member, or simply re-labeling old courses in order to make it appear that they had a program about business management at the undergraduate level.

Consumerism is often used to refer to a life excessively preoccupied with consumption (Gabriel & Lang, 1995). Student consumerism, however, is simply a term borrowed from the market culture to describe the consumer orientation of students in the sense that they view themselves as customers of higher education (Delucchi & Smith, 1997a; Delucchi & Korgen, 2002). Blumberg (2000) remarks that since Riesman's study of student consumerism, the consumerist attitude of students has grown and is now present at all levels of schooling in the U.S.

Kurt Wiesenfeld of the Georgia Institute of Technology remarked in an article that "in the last few years...some students have developed a disgruntled-consumer approach. If they don't like their grade, they go to the 'return' counter to trade it for something better" (Wiesenfeld, 1996). In the Stanford Business School a student, who was obviously not happy with a certain lecture, reportedly shouted at the instructor, "I didn't pay \$40,000 to listen to this bullshit", and then walked out of the class (Bellah, 1999). The Higher Education Research Institute reported increasing college students' academic disengagement (Higher Education Research Institute, 1999; 2000). In 1999, HERI reported

38%—and in 2000 40%—of students reporting they frequently felt bored in class. This growing level of student disengagement seems to be rooted in a belief that the main purpose of higher education is economic (Flacks & Thomas, 1998). HERI reported that 75% of the students in their survey in 1999 said they went to college in order to make more money (Higher Education Research Institute, 1999).

Today students' consumer orientation seems to go hand in hand with their expecting higher education to involve little effort (Trout, 1997) and to be given high grades for simply paying tuition and showing up (Trout, 2000); they want to be rewarded liberally just for self-disclosure (Perillo, 1997); and they expect to be amused (Edmundson, 1997). At home, when students do not like what they view on television, they just change the channel. It seems that many of them are transferring this attitude to higher education: since they are paying more and more for college tuition, they demand a certain level of 'entertainment' from going to classes (Bellah, 1999). In a study by Swann and Arthus (1998), a large number of students seemed to take an instrumental view of learning. The study by Delucchi and Korgen (2002), on the other hand, reveals that 53% of their sample of sociology majors hold faculty responsible for their attentiveness, and over 42% believe that their payment of tuition 'entitles' them to a degree.

In recent years, the costs of higher education have increased drastically in most countries (Schutze, 1995; Boretz, 2004; Mayhew et al., 2004) and students increasingly expect greater value for the education dollar. The value is often judged, unfortunately, by student grades. As a result there is presently pressure to deliver grades that satisfy students and/or parents (Nagle, 1998). Universities are also caught up in this tide of student consumerist attitude and start to structure programs and curricula that not only are relevant but also delivered in ways that are valued by the students (Schuetze, 1995). The marketization of higher education is seen by some people as promoting an improved experience for the student-as-customer/consumer versus the institution-as-service-provider (Scott, 1999). Even a study carried out by Pitman (2000) to survey university administrative staff's perceptions of academics and students as customers reveals that all staff in this particular survey recognize students as customers—although they have reservations about the word.

The present study intends to explore, among other things, the four recurring themes about student expectations mentioned above in the context of the higher education in Hong Kong. Therefore we now proceed to present an overview of the education system in Hong Kong with special emphasis on its higher education.

HIGHER EDUCATION IN HONG KONG

With about seven million inhabitants Hong Kong ranks only 90th by population, but it is the world's 8th largest trading economy (Postiglione, 2000). It has the second-highest living standard in Asia, a large banking sector, efficient civil service, and a highly skilled and educated populace. Back in 1842 when Hong Kong was ceded to Britain at the end of the Opium War, it was inhabited by only a few thousand farmers and fishermen in several small villages (Luk, 1991). The British declared it a free port and there were few restrictions to the free flow of goods and people (Endacott, 1964). By the year 1900 Hong Kong's population (now including also Kowloon Peninsula and the New Territories) had already grown to several hundred thousand. Hong Kong was a city built by Chinese colonists under British rule. The nature of governance in Hong Kong includes authoritarianism, benign and enlightened rule, and the rule of law. The Hong Kong Chinese society differs from traditional and modern Chinese society in a number of ways (Postiglione, 1991):

1. high degree of modernization;
2. industrialization and urbanization;
3. dominance by market forces;
4. erosion of tradition;

5. adapted changes in the family and other primary and quasi-primary social structures;
6. the lack of a moralizing elite; and
7. dominance of an economic elite.

Before 1997, under British colonial rule, most senior posts were held by foreigners and English was, and still is, the main language for government business, although Chinese has also been accepted as official language. By the time the colonial period ended in 1997, Hong Kong had become one of the world's largest trading, financial, and commercial centers (Postiglione & Lee, 1998).

British educational policies in Hong Kong aimed at supplying the manpower needs of the China trade and at the same time serving the broader interests of Sino-British economic and diplomatic relations—Hong Kong was to serve as the Sino-British bridge of communication (Luk, 1991). Hong Kong became a Special Administrative Region (SAR) of Mainland China in 1997 and has been promised that it can maintain its capitalist system for another fifty years and enjoy a high degree of self-government with 'Hong Kong people ruling Hong Kong' (*Sino-British Joint Declaration on the Question of Hong Kong*, 1984). According to the *Sino-British Declaration and the Basic Law of the SAR (The Basic Law of the Hong Kong Special Administrative Region of the People's Republic of China*, 1991), education will retain a

high degree of autonomy. The education system in Hong Kong comprises mainly of five sectors: 1. pre-school; 2. general education; 3. technical education and vocational training; and 4. higher education; and 5. adult education. What follows is a brief summary of the system (based on Cheng, 1998).

Pre-school starts at age 3 or 4, provided in nurseries or kindergartens. Nurseries are meant for children aged 2 or above. Mostly operated by voluntary agencies (such as church bodies) and with some of them subsidized by the government, they are under the control of the Social Welfare Department. Kindergartens are usually for children aged 4 to 6. Most kindergartens are private and they are under the control of the Education Department. In 1994, a proposal was made by the Board of Education that the government should subsidize kindergartens in order to raise quality (Board of Education, 1994).

General education basically starts at age 6. Nine years of compulsory education—six years of primary plus three years of junior secondary—have been required by law since 1978. Children must attend schools until they have reached the age of 15 or Form 3. Around 90% of primary schools use Chinese as the medium of instruction. Junior secondary education is part of a 5-year secondary education. Medium of instruction is a mix of English and Chinese. Senior

secondary (Form 4 to 5) are often classified under science, arts and commerce, or the general streams. Form 6 and 7 follow a narrow curriculum of three to six subjects, basically dictated by the entrance requirements of institutions of higher education. Schools are either government, aided, or private. Government schools are financed by the government. Aided schools are the majority and they are financed by public funding and are managed by voluntary agencies. All schools are overseen by the Education Department.

Technical and pre-vocational training may start at as early as the first year of junior secondary school (Form 1). Pre-vocational schools offer at all secondary levels (Form 1 to 7) a curriculum that prepares young people for one or more occupations. Technical schools are the major training ground for technicians. Pre-vocational schools and technical schools are governed by the Education Department. (Training centers, technical institutes, and technical colleges are, however, operated by the Vocational Training Council).

(For a better flow of the presentation, we shall next deal with adult education before moving on to higher education.) Operators of adult or continuing education comprise of three main categories: 1. church bodies which obtain some subsidies from the government; 2. institutes,

such as the Hong Kong College of Technology, which are run by trade unions; and 3. other commercial entities which operate with a market demand. The continuing education departments of formal institutions of higher education play an important role in Hong Kong's adult education. They offer many different popular part-time or evening programs. There are four main groups of adult education programs: 1. those leading to formal degrees of qualifications; 2. those that qualify people through professional recognition, such as accountancy; 3. those providing recognized skills, such as secretarial work; and 4. those for personal interest and individual development. Unfortunately there is no government department overseeing adult education. Its development is mostly driven by market forces.

Higher education in Hong Kong has gone through dramatic changes in the past twenty years and particularly in the years leading up to the handover of Hong Kong back to China. Until the late 1980s, Hong Kong had only two universities. For many years Hong Kong adopted the U.K. binary system (which was abolished in the early 1990s) with universities and other tertiary institutions (such as polytechnics). Universities are self-accrediting, while the other tertiary institutions are subject to external accreditation and they offer mostly sub-degree courses. But following the U.K. example, Hong Kong also upgraded its polytechnics and

several other higher education institutions to university level, thereby moving away from the binary system. In order to ensure appropriate standards in the upgrading process, in the early 1980s the Hong Kong government requested an established accreditation organization in the U.K., the Council for National Academic Awards (CNAA), to advise on the matters of academic standards. The rapid expansion of tertiary education, however, made the government realize that continual reliance on an overseas organization was no longer appropriate and that a better option was to establish a system of its own (Sensicle, 1992). In 1990 the Hong Kong Council for Academic Accreditation (HKCAA) was set up (*Hong Kong Government*, 1990).

Higher education funding matters in Hong Kong are looked after by the University Grants Committee (UGC, previously the University and Polytechnic Grants Committee). Today there are eight institutions of higher education that are funded by the government through the UGC. They are, in alphabetical order:

- City University of Hong Kong (CityU)
- Hong Kong Baptist University (BU)
- Lingnan University (LU)
- The Chinese University of Hong Kong (CU)

- The Hong Kong Institute of Education (IEd)
- The Hong Kong Polytechnic University (PolyU)
- The Hong Kong University of Science and Technology (UST)
- The University of Hong Kong (HKU)

The PolyU and CityU offer a substantial number of sub-degree program (over 30%). The IEd is not a university but they are offering more and more degree programs in education. There is no government department overseeing the administration of higher education. All these institutions are autonomous in their governance as granted by their respective ordinances.

The HKCAA, UGC, and the Education Commission (EC) are the three main advisory bodies to the government on higher education (French, 1999). The HKCAA, established in 1990 as a statutory body, looks into the standards of degrees in non-university institutions in Hong Kong. It also provides advice to the Director of Education on the registrability of non-local courses offered in Hong Kong by higher and professional education providers outside the territory (French, 1999). There are about 500 tertiary-level courses in Hong Kong being offered by overseas institutions from Australia, the U.K., and some other countries (Chuang & Leong, 1998). The EC, established as a non-statutory advisory body in 1984, looks at the development of the education system as a whole. The UGC, established as a non-

statutory advisory body in 1965, is the most influential body in higher education in Hong Kong (Postiglione, 2000). It deals with all matters concerning development funding and quality assurance of higher education.

There are institutions, such as the Open University (OpenU) and the Hong Kong Academy for Performing Arts (APA), which are also supported by the government, but not under the UGC. Their degree programs are also accredited by the HKCAA.

After a comprehensive review of the education system in the year 2000, the EC recommended the government to allow the private sector to provide university education—this will create a new channel for the wider community to contribute non-government resources and efforts to the university sector (M.H. Lee, 2001). The Shue Yan College, whose proposed degree programs are being reviewed by the HKCAA, will probably become the first private university in Hong Kong.

Before the 1990s the proportion of the population enrolled in higher education in Hong Kong had been small. In the late 1980s only 6% of the relevant age cohort (between 17 and 20) enrolled in local universities (M.H. Lee, 2001). Back then more than 65% of the degree-holding work force of Hong Kong had received undergraduate education overseas (French, 1999). After the Tiananmen Square student

repression in Beijing in 1989, Governor Wilson made the decision to triple the enrolments in higher education (Post, 2003)—probably in anticipation of loss of professional workers through emigration. This executive-led decision to expand Hong Kong's higher education aimed at achieving 18% of the relevant cohort being enrolled in higher education by 1994 (Mok, 1999). Student enrollment in full-time equivalent terms at the UGC institutions increased by almost one-third from 1990-91 to 1995-96. Enrollments increased from 42,102 in 1990-91 to 60,289 (including 7,553 full-time equivalent postgraduate students) in 1995-96. The expansion represents a 66% increase of the number of first-degree students and a 123% in the number of postgraduate students (UGC, 1996a)! The provision of first-year undergraduate places increased from 7.2% in 1988-89 to 18% in 1994-95 for the relevant age cohort. In 2002, the figure remains at 18% (UGC, 2002). This expansion marked a drastic change from an elitist system to a massive expansion of opportunity for undergraduate education (Mok, 1999). According to the Education Commission's latest statistics, in 2003-04 48% of the relevant age cohort (between 17 and 20) is in post-secondary institutions, which includes vocational education (Education Commission, 2004). It is also estimated that as many as 30,000 (roughly 10% of the relevant age cohort) or more pursue higher education overseas (Postiglione, 2000). In 2000, former Chief Executive Mr Tung announced in his

fourth policy address that the enrollment of tertiary should be increased to 60%—similar to the percentage in such Asian cities as Shanghai and Singapore (Hayhoe, 2001)—which means an increase from 28,000 to 55,000 places within ten years (Tung, 2000).

The Hong Kong government spends about 3% of Hong Kong's GDP on education. This figure has remained unchanged for at least two decades. This is rather low comparing with the world average of 5.1% (UNESCO, 1993). The unit expenditure for a university student in Hong Kong could be as high as US\$16,000. This is 130% of Hong Kong's per capita GDP and is above average by international standards. But for many years, this rather high expenditure went to only the selected few, i.e., 2% of the relevant age cohort in the early 1980s. Hence the total amount is comparatively low (Cheng, 1998). With a sudden expansion in higher education system, the immediate implication of the drastic change is financial. This in turn has prompted suggestions for cost-sharing or cost-recovery. A proposal is to achieve a total of 10% reduction over three years from 1998-2001. This would mean a substantial reduction of resources for higher education institutions. The UGC makes its position clear that "all education in all countries is expensive and occupies a substantial part of national budgets, but higher education is particularly costly" (UGC,

1996b). UGC has adopted a policy of raising fees and the government has set minimum fee levels in subsidized institutions to recover 18% of cost. Higher education institutions are encouraged to charge higher fees in appropriate circumstances to reduce the financial burdens of the government (Mok, 1999).

In 1994-95 government expenditure for higher education was 35% (Postiglione, 1998). In 2003-04 it was reduced to 23%. Total government expenditure on education amounts to 4.7% of the GDP (Education Commission, 2004). The government has allocated about HK\$12 billion (US\$1.53 billion), which accounts for about 82% of the universities' operating budget, to sustain eight publicly funded tertiary institutions since the mid-1990s because of massification. But in order to avoid over-reliance on the government for university funding these institutions have been urged by the government to become more prudent in spending public money and avoid resource waste in the face of a 25% funding cutback between 1998 and 2004. In March 2003, the government proposed to set up a HK\$1 billion (US\$142 million) dollar-for-dollar matching fund for those institutions that succeed in securing private donations for teaching and research purposes. It is widely believed that the introduction of the matching fund is a means to reduce the financial burden shouldered by the government on

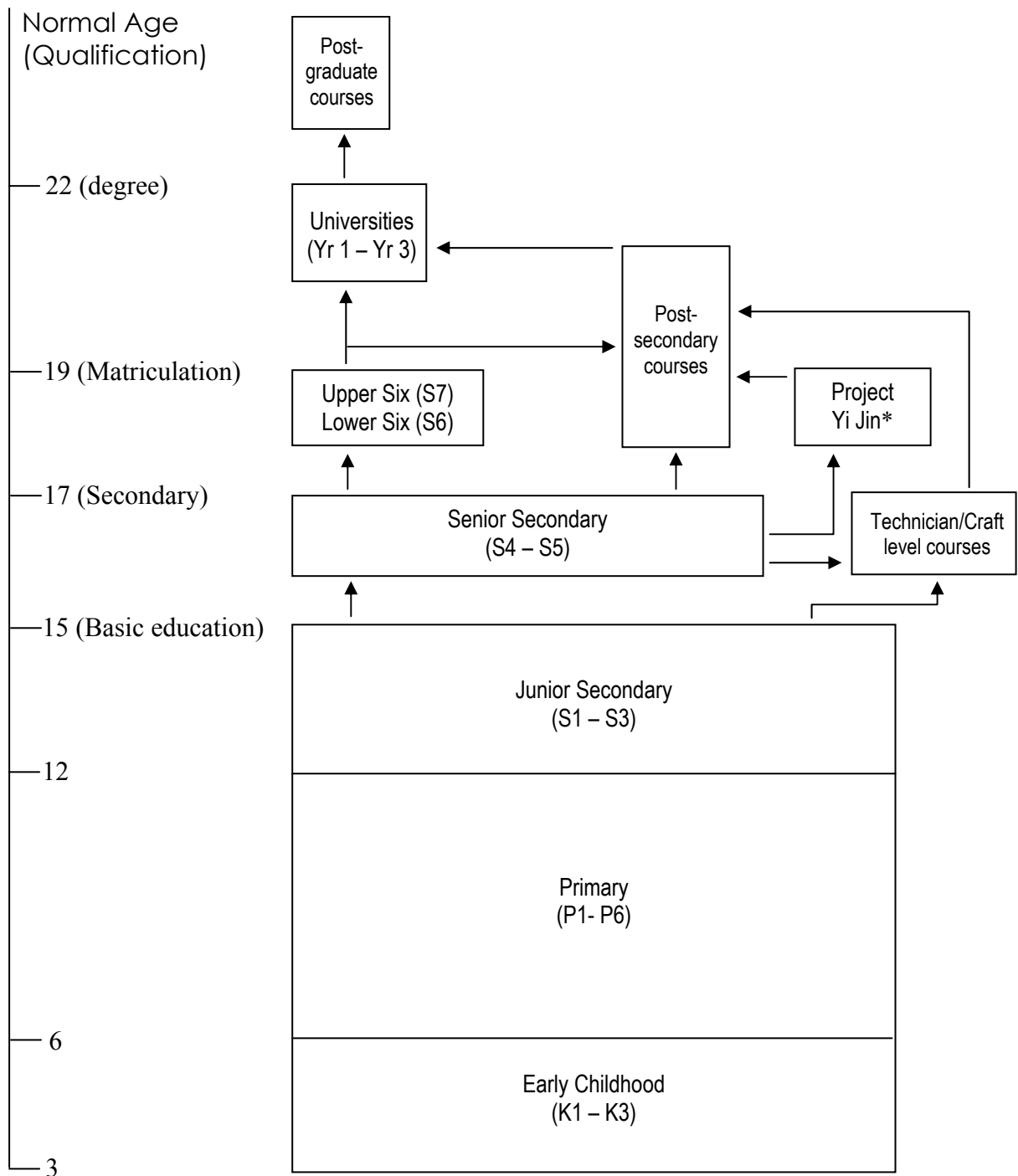
university education given the anticipated huge budget deficit of HK\$70 billion (US\$9 billion) in 2002-2003 (Lee & Gopinathan, 2003).

The post-1997 higher education in Hong Kong, according to Postiglione (2000), faces four issues:

- Rapid expansion means increased competition among the institutions subsidized by the government for not only funding, but also students, and even faculty. This has led to the introduction of increased accountability measures as well as management and teaching quality control.
- As the tendency toward self-censorship becomes more pronounced, academic freedom and institutional autonomy appear to have become less certain.
- Hong Kong's research in science and technology must work hard to keep pace with that of its regional rivals in Singapore, Taiwan, and South Korea.
- Over 90% of all doctorates held by Hong Kong faculty were earned overseas. With a large number of overseas appointees in higher education, localization of administration and academic leadership will be hard to achieve.

Before we proceed further, Table 4 provides an overview of the education system in Hong Kong (EC, 2004).

Table 4. An Overview of the Education System in Hong Kong



*Project Yi Jin was launched in October 2000 to provide an alternative route and to expand the continuing education opportunities for secondary school leavers and adult learners. Students who can successfully complete the program will be awarded a full certificate which has been assessed by the Hong Kong Council for Academic Accreditation as comparable to five passes in the Hong Kong Certificate of Education Examination (i.e., O-Level).

The Nine Institutions in This Study

Information provided in this section is mostly taken from the official Website of the respective institution. For a list of all the Websites please refer to Appendix A. The institutions appeared below are in alphabetical order.

1. City University of Hong Kong (CityU)

As a UGC-funded institution CityU was established in 1984 as the City Polytechnic of Hong Kong and was upgraded to university level in 1994. It has around 20,000 full-time and part-time students in more than 100 academic programs at the undergraduate and postgraduate levels. It has five faculties—business, humanities and social sciences, science and engineering, creative media, and law—and a college of higher vocational studies. Around 680 students are enrolled in M.Phil. and Ph.D. programs. There are some 900 full-time academic and 400 full-time research staff. CityU also offers a substantial number of sub-degree programs—students in these programs amount to over 30% of the total student population.

2. Hong Kong Academy for Performing Arts (APA)

APA was established by the Hong Kong government in 1984. Though Fine Arts programs are offered in some universities in Hong Kong, APA is the only tertiary institution which

provides professional education and training in the performing arts, theater technical arts, and film and television. Academic programs are offered from post-secondary Diploma level up to Bachelor Honors Degree level. APA was granted degree awarding status in 1992 by the HKCAA. There are five schools: dance, drama, film and television, music, technical arts, and Chinese traditional theater. There are over 700 full-time students, among which over 100 are enrolled in degree programs. APA also offers a variety of part-time junior programs, such as choirs, ensembles, and orchestras. These programs attract over 800 participants annually. APA is funded by the government, but not through UGC.

3. Hong Kong Baptist University (BU)

Founded in 1956 as the Hong Kong Baptist College, BU is the second-oldest institution of higher education in Hong Kong. In the early 1980s it was given permission to offer degree courses and since then has been funded by the UGC. The college was finally upgraded to university level in 1994. Among the eight UGC-funded higher education institutions, BU is the only one with a Christian education heritage. There are six faculties—arts, business, Chinese medicine, communication, science, and social sciences—and a School of Continuing Education. BU has a total of about 6,000 students, roughly 260 of which are research-based

postgraduates. The annual enrollment for part-time evening courses offered by the School of Continuing Education is over 50,000, one-fifth of which are at the undergraduate and postgraduate levels.

4. Lingnan University (LU)

Upgraded to university level in 1999, LU is the youngest university in Hong Kong in terms of title. But the former Lingnan College was established in 1967 with its history dating back to 1888 when its forerunner, the Lingnan University in Guangzhou, China, was founded. LU has been fully-funded by the UGC since 1992. There are about 2,200 students enrolled in three schools: arts, business, and social science. In 1995 LU moved from Hong Kong Island to its new campus in the outskirts of Kowloon Peninsula. The self-funded Lingnan Institute of Further Education (LIFE)—the continuing education branch of BU—was established in 2001 and The Community College was recently formed in 2003 offering one-year pre-associate degree and two-year associate degree programs on a full-time basis.

5. The Chinese University of Hong Kong (CU)

CU has its origin in three colleges: New Asia College (founded 1949), Chung Chi College (founded 1951), and United College (founded 1956). The three colleges were combined in 1963 to form The Chinese University of Hong

Kong and a fourth college—Shaw College—was added in 1986. Over 15,000 students are enrolled in seven faculties: arts, business administration, education, engineering, medicine, science, and social science. A new School of Law is scheduled to open in 2006. CU offers 54 full-time undergraduate programs, one part-time undergraduate program, 150 Master's programs, 28 postgraduate diploma programs, and 6 doctoral programs. It also boasts eleven research institutes and a university staff of 4,900 members, 1,800 of which are teaching and research staff.

6. The Hong Kong Institute of Education (IEd)

The IEd was formed in 1994 under the recommendation of the Education Committee by combining Northcote College of Education (founded 1939), Grantham College of Education (founded 1951), Sir Robert Black College of Education (founded 1960), the Hong Kong Technical Teachers' College (founded 1974), and the Institute of Language in Education (founded 1982). It is the only non-university funded by the UGC and is dedicated solely to the education and training of teachers. From 1994 to 1997 IEd operated from a main office on Hong Kong Island with seven campuses across the territory. The institute relocated to its new campus in the New Territories in 1997. IEd offers a wide range of pre-service and in-service teacher education programs at pre-primary, primary, and secondary levels in

full-time and part-time modes. There are four schools: School of Creative Arts, Sciences and Technology (SCAST, offers secondary and technical programs); School of Early Childhood Education (SECE, offers early childhood education programs); School of Languages in Education (SLE, offers language programs); and School of Foundations in Education (SFE, offers primary and special education programs). Total student population is around 8,000, roughly 3,200 of which study full-time. The number of students in Bachelor degree programs stands at around 3,400, full-time and part-time included. As for postgraduate studies, IEd offers only postgraduate diploma programs.

7. The Hong Kong University of Science and Technology (UST)

In terms of original commencement of the institution, UST is the youngest university in Hong Kong. The establishment of this modern university has been entirely government-led from beginning to end. Realizing Hong Kong's need for a university that could propel it toward a knowledge-based economy rich with innovations, official planning was started in 1986. Almost right from the beginning the initial projection date of opening was pushed forward three years from 1994 to 1991. Professor Dr Chia-Wei Woo, former head of San Francisco State University, was invited to become the first president of this new institution. The first phase of the construction was completed in 1991 and

commencement took place with about 2000 students. Today UST has over 400 regular teaching staff in four schools—science, engineering, business and management, and humanities and social science—with a total enrollment of about 8,500 students. UST is the only science and technology research university in Hong Kong, and the only one to offer an all-PhD faculty. The university has a high-speed fiber-optic campus network and in 1991 its library became the first with an OPAC boasting full Chinese capability.

8. The Open University of Hong Kong (OpenU)

Formerly the Open Learning Institute of Hong Kong, OpenU is the first university offering open and distance learning in Hong Kong. Funded by the government (but not through UGC), it was established in 1989 modeling on the U.K. Open University system, began offering accredited degree programs in 1993, moved to its permanent campus in Kowloon in 1996, and was upgraded to university level in 1997. The tagline for the university is 'Education for All'. OpenU adopts a flexible credit system where students can accumulate credits toward a degree. Its 'open' principle of student admission attracts a high number of mature students and non A-level applicants. Average student age is around 33 and about 75% of its students are non A-level entrants. The university launched the Electronic Library

in 1989 and opened its first off-campus learning center, Island Learning Center, close to the Central District on Hong Kong Island. A subsidiary of OpenU was established in Shenzhen, China, in 2000 to offer programs leading to degree qualifications. In 2001 OpenU began offering full-time face-to-face programs at the associate degree level and in 2003 also at the undergraduate level. There are four schools—arts and social sciences, business and administration, education and languages, science and technology—plus the Li Ka Shing Institute of Professional and Continuing Education, offering over 800 courses. Total student enrollment stands at about 22,000 (excluding professional and continuing education), roughly 1,300 of which are now in full-time face-to-face programs.

9. The University of Hong Kong (HKU)

HKU was officially opened in 1912 and is the oldest and most respected higher education institution in Hong Kong. It has ten faculties: 1. Medicine (with its most renowned alumnus, Dr Sun Yat-sen, 'the founder of modern China'), 2. Engineering, 3. Arts, 4. Science, 5. Social Sciences, 6. Dentistry (which is the only faculty in the territory producing dental professionals), 7. Architecture, 8. Education, 9. Law, and 10. Business and Economics. In 1956 a Department of Extra-Mural Studies was established to provide continuing adult education and in 1992 this

department became the School of Professional and Continuing Education (SPACE)—currently the largest tertiary-level institution for continuing education (around 2,700 undergraduate students and 2,300 taught postgraduate students). HKU has a student population of about 13,000 (regular degree programs), including 9,000 undergraduate students and 4,000 postgraduate students. About 6% of its total enrollment are international students. The university boasts a total stock of over 2.17 million bound books and journals in its library system. HKU has received around HK\$900 million (US\$117 million) in Research Grants Council grants since 1991, more than any other higher education institutions in the territory.

PURPOSE OF THE STUDY

In light of the changes occurring in both the trend of global development of higher education and the rapid expansion of higher education in Hong Kong, the author attempts to examine the general picture of student expectations in the context of Hong Kong higher education. To recapitulate the main points in the previous sections:

First, global political, economical, and social changes have led to new developments in higher education, such as massification of higher education on the one hand, and reduced public funding on the other hand. As a result the role as well as the management of university is being influenced more and more by market forces.

Second, mainly due to the massification of higher education, the student population in higher education has evolved greatly. Yesterday's traditional student is very likely, so to speak, today's exception. New generations of university entrants bring with them rather different expectations compared with those of the students in bygone years.

Third, concerning student expectations in the new millennium, four recurring themes emerge from the literature: 1. job-oriented curriculum design seems to be in high demand; 2. students welcome user-friendly course

delivery method—particularly the online learning mode; 3. opportunities for lifelong learning are important for the new generations; and 4. reduction of public expenditure on higher education and rising tuition fees have led to student consumerism, i.e., consumerist attitude displayed by students toward education.

Fourth, the higher education in Hong Kong went through dramatic changes in the years leading up to 1997 when China regained sovereignty over the territory. Today the university system and the makeup of the student population in Hong Kong are very different from that of the colonial era. Many of the changes there seem to be in step with the global trend of higher education development.

The author, who grew up and was trained as a high school teacher in Hong Kong, seeks to investigate the issues related to higher education student expectations in his home country. This is worth exploring because understanding student expectations helps ensure a better fit between the university-as-a-giver and the student-as-a-receiver, so to speak. Studies on student expectations can inform educators on the future direction of higher education development.

A search in the database Dissertation Abstract International carried out by the author in early 2004 reveals no studies on this topic. And so the research questions for 'Student Expectations in the New Millennium—

An Explorative Study of the Higher Education in Hong Kong' are as follows:

- What are the changing realities of today's university entrants in Hong Kong in terms of demographics?
- What are the main reasons for university entrants in Hong Kong for going to university?
- What do university entrants in Hong Kong value most about a university?
- How well do university entrants in Hong Kong think they can cope with university life?
- How much do university entrants in Hong Kong agree or disagree with student expectations in terms of: 1. job-oriented curriculum design, 2. user-friendly course delivery method, and 3. opportunities for lifelong learning?
- To what extent do university entrants in Hong Kong display student consumerism?
- To what extent do factors like gender, age, self-reported grade point average, majors in undergraduate programs, employment, and family income have an impact on the above variables?
- How do university entrants in nine particular higher education institutions in Hong Kong compare with one another in various variables?

This study will be a baseline quantitative-descriptive research. In other words, the main purpose is not to explain specific causes of certain student expectations in the context of Hong Kong or to measure the change in student expectations over a time period. Since this is probably the first quantitative research of this kind in the Hong Kong context, the author aims at providing a baseline study on which future research can build upon and against which future similar investigations can compare with.

METHOD

Participants

The author had aimed at sampling first-year undergraduate students from all degree-awarding higher education institutions in Hong Kong. However, only nine institutions eventually agreed to participate in the study. Seven of the institutions are universities and the other two—an academy for performing arts and an institute of education—offer accredited undergraduate programs among other non-degree level courses. Only first-year undergraduate students are targeted in this study. For the purpose of this study, the degree students from the two non-universities are treated as equivalent of other university students. Combined full-time first-year undergraduate intake of these nine institutions is around 13,000. 857 students participated in the study, which is about 6.6% of the total intake. Table 5 gives a break-down of the number of participants from the nine institutions (listed in alphabetical order).

Of the 821 respondents who have indicated their gender, 59.8% are females and 40.2% are males. Of the 824 respondents who have indicated their age (or age range), the mean is about 20, with 17 as the minimum and somewhere from 40-54 as the maximum.

Table 5. Number of Participants from Each Institution

Institution	Number of participants
1. City University of Hong Kong (CityU)	28
2. Hong Kong Academy for Performing Arts (APA)	88
3. Hong Kong Baptist University (BU)	91
4. Lingnan University (LU)	37
5. The Chinese University of Hong Kong (CU)	144
6. The Hong Kong Institute of Education (IEd)	84
7. The Hong Kong University of Science and Technology (UST)	174
8. The Open University of Hong Kong (OpenU)	74
9. The University of Hong Kong (HKU)	137
Total	857

Since the study involves nine institutions and that these institutions have rather different administration policies and procedures, it was decided that the convenient sample approach would minimize the disruption of the respective routines of the institutions. Therefore the sampling is not random in the strictest sense, but in most cases it was as random as the context would allow it.

Instrument

The author developed the Student Expectations Questionnaire specifically for the present study (see Appendix B). Instruments consulted include:

- College Student Survey (Higher Education Research Institute, UCLA, 2005),
- Your First College Year (Higher Education Research Institute, UCLA, 2004),
- Student Information Form (Higher Education Research Institute, UCLA, 2004),
- College Student Expectations Questionnaire (Kuh & Pace, 1998), and
- Student Satisfaction Inventory (Schreiner & Juillerat, 1993).

The Student Expectations Questionnaire has the following main sections:

- eleven items on reasons for going to university (1 - not important, 2 - somewhat important, and 3 - very important);
- one item on what students value about a university (respondents are asked to choose 3 out of 11 choices);
- five items on self-perception in coping with university life (1 - strongly disagree...5 - strongly agree);

- four scales (1 - strongly disagree...5 - strongly agree): job-oriented curriculum design (seven items), user-friendly course delivery method (five items), opportunities for lifelong learning (four items), and student consumerism (ten items); and
- background information, including self-reported academic grade average, employment status, family income, etc.

In early 2005 a first draft of the questionnaire was presented to a Ph.D. candidates' colloquium in the Department of Education, University of Munich. This first draft was also sent to all nine institutions participating in the study. Based on feedback and suggestions gathered in the colloquium and from the institutions, a second draft was again sent to the nine institutions. After receiving feedback from participating institutions, a third draft was penned.

The four scales in the questionnaire went through two pilot tests in Germany. The first pilot test took place in early June, 2005, in the University of Applied Management, Erding. Sixty-one 2nd semester Management major undergraduate students (24 female and 37 male) took part in the test. Their age ranges from 20 to 25, with a mean of 22.9. Tables 6 to 9 are the results of the reliability tests of the first pilot test.

Table 6. Scale: Job-oriented Curriculum Design (1st pilot test: $\alpha = .65$)

Code	Item	M	SD	$r_{j(t-j)}$	α if item deleted
cd1	Curricula in the university should be job-oriented.	4.25	.84	.38	.62
cd2	Curriculum designs in higher education as a whole need to fit better with the evolving needs of the labor market.	3.56	.65	.32	.64
cd3	It is important to design curricula that position students to adapt to the labor market.	3.81	.82	.30	.65
cd4	It matters to me whether curricula offered in the university are responsive to the trends of the labor market.	3.61	.74	.62	.50
cd5	Job-orientedness should play an increasing role in curriculum designs in higher education.	4.31	.70	.46	.58

Table 7. Scale: User-friendly Course Delivery Method (1st pilot test: $\alpha = .60$)

Code	Item	M	SD	$r_{j(t-j)}$	α if item deleted
dm1	I prefer courses that are delivered on-line to traditional classes because I can use my time more flexibly.	3.98	.87	.40	.53
dm2	I prefer flexible teaching methods (e.g., via electronic media) to conventional modes of instruction.	4.12	.83	.45	.50
dm3	Delivery of lessons and classes should be more 'user-friendly' so that students are not compelled to spend a fixed amount of hours on campus.	3.92	.83	.27	.59
dm4	Flexibility of teaching method is as important as the quality of the course contents.	3.90	.93	.21	.63
dm5	Most university students welcome on-line courses because they allow more flexible use of time.	4.02	.79	.51	.47

Table 8. Scale: Opportunities for Lifelong Learning (1st pilot test: $\alpha = .60$)

Code	Item	M	SD	$r_{j(t-j)}$	α if item deleted
111	The need for lifelong learning should be an integral part in the development of higher education.	3.89	.84	.55	.41
112	Universities can serve the society better by being more sensitive to the needs of mature students.	3.75	.68	.40	.52
113	The community as a whole is better off when the idea of lifelong learning is incorporated in higher education.	3.54	.67	.52	.46
114	Regarding admission to universities, work experience of competent professionals should be taken into consideration when they do not have the conventional academic qualifications.	3.39	.71	-.03	.73
115	More lifelong learning opportunities in higher education contribute to the betterment of the society such as increased equity and/or improved labor force competency.	3.43	.62	.42	.51

Table 9. Scale: Student Consumerism (1st pilot test: $\alpha = .67$)

Code	Item	M	SD	$r_{j(t-j)}$	α if item deleted
sc1	The relationship between a university and its students is similar to that of a service provider and its customers.	3.60	.89	.51	.62
sc2	I consider myself a 'customer' of the educational institution I am attending.	3.70	1.00	.45	.63
sc3	The more tuition fee I have to pay for higher education, the more I should have a say in various aspects of the system.	3.53	1.00	.10	.70
sc4	It is fair to pay more if one wants to study in a more prestigious university.	3.17	1.21	.31	.66
sc5	I would expect more from the university if I were required to pay a higher tuition fee.	3.68	1.19	.32	.66

Table 9 (cont'd). Scale: Student Consumerism (1st pilot test: $\alpha = .67$)

Code	Item	M	SD	$r_{j(t-j)}$	α if item deleted
sc6	Universities should pay more attention to the needs of students because they are the customers of higher education.	4.13	.85	.40	.64
sc7	I am willing to pay more money to earn a degree from a famous educational institution.	2.97	1.06	.27	.66
sc8	When higher education becomes more and more costly to students, they should be protected by consumer's law.	3.80	.82	.06	.70
sc9	It is appropriate to view university students as customers of their universities.	3.57	.89	.57	.61
sc10	As students are asked to contribute more to the cost of higher education, universities should become more 'consumer-friendly'.	3.92	.74	.48	.63

In order to improve the alpha-values of the cd-scale and the dm-scale, two extra items were added to each of the scale in the second pilot test. As for the ll-scale, though the alpha-value was only .60, it was due to one bad item, i.e., 114. If 114 was removed from the scale, the alpha-value would improve to .73, which is sufficient. So no changes were made to the ll-scale in the second pilot test (if the second pilot test confirms the weakness of item 114, it will then not be used in the final version of the questionnaire). Likewise, taking either sc3 or sc8 out would improve the alpha-value of the sc-scale to .70. So no changes were made to the sc-scale in the second pilot test.

The second pilot test of the four scales took place in mid July in the University of Munich. Participants were eighteen 2nd semester graduate students enrolled in an international psychology program. There were 14 women and 4 men with a mean age of 24.7. Tables 10 to 13 are the results of the reliability tests of the second pilot test.

Table 10. Scale: Job-oriented Curriculum Design (2nd pilot test: $\alpha = .85$)

Code	Item	M	SD	$r_{j(t-j)}$	α if item deleted
cd1	Curricula in the university should be job-oriented.	3.83	.71	.52	.84
cd2	Curriculum designs in higher education as a whole need to fit better with the evolving needs of the labor market.	4.00	.60	.57	.84
cd3	It is important to design curricula that position students to adapt to the labor market.	4.17	.79	.51	.84
cd4	It matters to me whether curricula offered in the university are responsive to the trends of the labor market.	3.89	.83	.49	.84
cd5	Job-orientedness should play an increasing role in curriculum designs in higher education.	3.94	.80	.73	.81
cd6	I value courses that are job-oriented.	3.83	1.04	.71	.81
cd7	Curriculum designs that are job-oriented appeal to me.	4.06	.73	.79	.80

Table 11. Scale: User-friendly Course Delivery Method (2nd pilot test: $\alpha = .82$)

Code	Item	M	SD	$r_{j(t-j)}$	α if item deleted
dm1	I prefer courses that are delivered on-line to traditional classes because I can use my time more flexibly.	2.89	.90	.57	.82
dm2	I prefer flexible teaching methods (e.g., via electronic media) to conventional modes of instruction.	3.67	.97	.67	.79
dm3	Delivery of lessons and classes should be more 'user-friendly' so that students are not compelled to spend a fixed amount of hours on campus.	3.78	.81	.61	.82
dm4	Flexibility of teaching method is as important as the quality of the course contents.	3.56	1.15	.69	.79
dm5	Most university students welcome on-line courses because they allow more flexible use of time.	3.78	.81	.69	.79
dm6	Courses that do not require a fixed amount of hours on campus appeal to me.	3.50	.62	.25	.84
dm7	Courses should be structured in such a way so that students can use their time more flexibly.	3.94	.73	.49	.81

Table 12. Scale: Opportunities for Lifelong Learning (2nd pilot test: $\alpha = .61$)

Code	Item	M	SD	$r_{j(t-j)}$	α if item deleted
l11	The need for lifelong learning should be an integral part in the development of higher education.	4.50	.51	.54	.51
l12	Universities can serve the society better by being more sensitive to the needs of mature students.	4.06	.87	.56	.44
l13	The community as a whole is better off when the idea of lifelong learning is incorporated in higher education.	4.11	.90	.11	.70
l14	Regarding admission to universities, work experience of competent professionals should be taken into consideration when they do not have the conventional academic qualifications.	3.94	.87	.25	.62
l15	More lifelong learning opportunities in higher education contribute to the betterment of the society such as increased equity and/or improved labor force competency.	4.11	.68	.55	.47

Table 13. Scale: Student Consumerism (2nd pilot test: $\alpha = .83$)

Code	Item	M	SD	$r_{j(t-j)}$	α if item deleted
sc1	The relationship between a university and its students is similar to that of a service provider and its customers.	2.88	1.36	.57	.81
sc2	I consider myself a 'customer' of the educational institution I am attending.	3.00	1.19	.37	.83
sc3	The more tuition fee I have to pay for higher education, the more I should have a say in various aspects of the system.	3.71	1.31	.59	.81
sc4	It is fair to pay more if one wants to study in a more prestigious university.	3.18	1.29	.51	.82
sc5	I would expect more from the university if I were required to pay a higher tuition fee.	4.12	1.22	.45	.82
sc6	Universities should pay more attention to the needs of students because they are the customers of higher education.	3.82	1.02	.52	.82
sc7	I am willing to pay more money to earn a degree from a famous educational institution.	2.65	1.17	.50	.82
sc8	When higher education becomes more and more costly to students, they should be protected by consumer's law.	3.35	1.06	.55	.81
sc9	It is appropriate to view university students as customers of their universities.	3.41	1.23	.56	.81
sc10	As students are asked to contribute more to the cost of higher education, universities should become more 'consumer-friendly'.	4.00	1.00	.61	.81

In the second pilot test the cd-scale, with two extra items, showed a strong alpha of .85. So it was decided that these seven items would be used for the final version of the questionnaire.

For the dm-scale, the alpha was .82—also good. The results showed, however, that the two new items had not added much to the coherence of the scale. The reliability

of this scale was then checked again by dropping the two extra items, and the alpha was improved by .02 to the level of .84. So it was decided that only the original five items would be used for the final version of the questionnaire.

The situation with the 11-scale was a bit complicated. 114—the weakest item in the first pilot test—was not the weakest one in the second pilot test. Instead, it was 113—had it been taken out, the alpha would have improved to .70. In order to find out whether 113 or 114 should be dropped from the scale, several possibilities of the 11-scale were compared:

- first pilot test: $\alpha = .60$;
- first pilot test without 114: $\alpha = .73$;
- second pilot test: $\alpha = .61$;
- second pilot test without 113: $\alpha = .70$;
- 1st pilot test + 2nd pilot test: $\alpha = .68$;
- (1st pilot test + 2nd pilot test) without 114: $\alpha = .75$; and
- (1st pilot test + 2nd pilot test) without 113: $\alpha = .62$.

Based on the above comparison, it was decided that item 114 would be dropped from the final version of the questionnaire. In other words, only four items will be used in the final 11-scale.

The sc-scale showed a strong alpha of .83 in the second pilot test. The results revealed no particularly weak items. Therefore the original ten items of the scale would stay intact.

To summarize, in the final version of the questionnaire (see Appendix B), the cd-scale has 7 items (cd1-cd7), the dm-scale has 5 items (dm1-dm5), the ll-scale has 4 items (ll1-ll3, and ll5), and the sc-scale has 10 items (sc1-sc10). All scales are Likert-type with 1=strongly disagree, 2=disagree, 3=neutral, 4=agree, and 5=strongly agree.

Procedure

Hoping to include all twelve degree-awarding higher education institutions in Hong Kong in the present study, in December, 2004, a letter explaining the purpose and scope of the project was sent to the head of each of these institutions. Two of the institutions chose not to participate in the study and a third one simply did not reply (after the formal letter and two follow-up email messages). The nine participating institutions are, in alphabetical order:

- City University of Hong Kong (CityU),
- Hong Kong Academy for Performing Arts (APA),
- Hong Kong Baptist University (BU),
- Lingnan University (LU),

- The Chinese University of Hong Kong (CU),
- The Hong Kong Institute of Education (IED),
- The Hong Kong University of Science and Technology (UST),
- The Open University of Hong Kong (OpenU), and
- The University of Hong Kong (HKU).

The target subjects of the study are first-year undergraduate students. The best time to 'catch' these university entrants was before or at the beginning of the fall semester. Administration of the questionnaires took place in different settings from August to November, 2005. The author flew back to Hong Kong to attend to matters related to the relevant data collection. The following is a summary and some highlights.

First, most data collection was carried out during new students registration. Since participation in the study is voluntary, the filling out of the questionnaire was not officially part of the registration. It was included as an option in the registration process and students were encouraged to participate.

Second, some institutions took an extra step to facilitate the administration of the questionnaire, for which the author was mostly grateful. In those cases the institutions provided staff to handle the giving out and collecting of questionnaires. The author was not required

to be on location. This had been a great help because the new students' registration dates of some institutions happened to clash and the author found it difficult to be at two or more institutions on the same day.

Third, in several institutions the administration of questionnaires took place at either registration-related or orientation-related student gathering. Students were also informed of the voluntary nature of participation in the study.

Fourth, in one case, the staff responsible for coordinating the project had left the institution without notifying the author in advance. Worse yet, the staff's responsibility thereof had not been duly designated to someone else. And so seven months after the author had first received permission to carry out the survey in this particular institution, he had to start from square one to make necessary arrangements for the administration of the questionnaires. As a result the author had missed the new students' registration. After much delay the administration of questionnaires was eventually arranged to take place during class sessions.

Fifth and last, in another case, though the author was allowed to enter the restricted registration area to give out the questionnaires, he was requested by the university authorities not to ask the students to fill out the

questionnaires on the spot—on the grounds that the flow of the registration should not be disrupted. Consequently the author had to resort to the freepost-service approach. In other words, each potential subject was given a self-addressed return-envelop with the questionnaire inside and was asked to fill out the questionnaire at home. The completed questionnaire could then be mailed back to the Central Post Office free of charge—postage would be paid by the author. Anticipating that the return rate of the freepost-service approach would not be so favorable, the author had printed around 250 envelopes and was ready to go over that when needed. However, due to some partial information given to the author concerning when the new undergraduate students would show up during the five days of registration, only 172 questionnaires had been given out. On the third day of registration the author spent basically the whole morning there but was able to find only two new undergraduate students—all the other students were registering for sub-degree programs. After one hour and talking to three different units of personnel, the author was finally informed that new undergraduate students were probably loaded on the first two days of registration. In other words, the window of opportunity had passed. Of the 172 freepost-service envelopes that were given out, 28 completed questionnaires were sent back to the author, which constitutes a 16.3% return rate (but represents less

than 2% of the institution's full-time undergraduate intake).

The computer program SPSS 12.0 is used to handle all data in the present study. Collected questionnaires were coded and data input was completed in November, 2005. All 857 questionnaires were brought back to the University of Munich and the SPSS data file was checked and input mistakes corrected in December, 2005. Preliminary results were presented in January, 2006, to the Ph.D. candidates' colloquium in the Department of Education, University of Munich.

RESULTS

Gender

Table 14 depicts the gender distribution in each institution as well as in the entire sample.

Table 14. Gender Distribution

Institution	Frequency		Total
	Female (%)	Male (%)	
CityU	16 (57.1)	12 (42.9)	28
APA	47 (53.4)	41 (46.6)	88
BU	34 (54.8)	28 (45.2)	62
LU	25 (67.6)	12 (32.4)	37
CU	81 (57)	61 (43)	142
IEd	70 (86.4)	11 (13.6)	81
UST	87 (50)	87 (50)	174
OpenU	31 (42.5)	42 (57.5)	73
HKU	100 (73.5)	36 (26.5)	136
Total	491 (59.8)	330 (40.2)	821

Missing: 36

The female-male ratio in the present sample is 6:4, which is similar to but a bit higher when compared with the figures given by the Commission on Youth (2003) where undergraduate student enrollment of UGC-funded programs showed a female-male ratio of 5.3:4.7.

Taking the 6:4 ratio as the standard, a binomial test was run on each institution's data to see if there is any significant deviation from the norm. Since the data sets are not large, the exact significance instead of asymptotic significance is being calculated. Four significant results emerged and they are shown on Table 15.

Table 15. Significant Results of Binomial Tests on Gender Distribution

Institution	Gender	N	Observed prop.	Test prop.	Exact sig. (1-tailed)
IEd	Female	70	.9	Female: .6 Male: .4	.000
	Male	11	.1		
UST	Female	87	.5		.005
	Male	87	.5		
OpenU	Female	31	.4		.002
	Male	42	.6		
HKU	Female	100	.7		.001
	Male	36	.3		

For IEd and HKU, the female-male ratio is higher than the norm. On the contrary, the norm is being reversed in the case of OpenU. As for UST, the distribution is a 50/50 split.

Age

Table 16 shows the mean age in each institution as well as in the entire sample.

Table 16. Age Mean

Institution	N	Mean	SD
CityU	28	20.18	1.59
APA	88	22.05	2.16
BU	63	20.25	1.61
LU	37	19.90	1.14
CU	142	19.54	1.35
IEd	82	19.83	3.19
UST	174	19.84	1.43
OpenU	74	21.14	3.86
HKU	136	20.17	2.78
Total	824	20.24	2.39

Missing: 33

APA has the highest age mean (22.05), followed by OpenU (21.14), while CU has the lowest (19.54). A one-way ANOVA was carried out to check for significant differences in the age means among the institutions. The result was positive: $F_{(8, 823)}=11.119$, $p<.001$ (2-tailed). The Levene test of homogeneity of variances suggested that the variances of the groups were unequal. Therefore Tamhane's T2 post-hoc test was carried out and the significant results are presented in Table 17. Student age in APA in general is significantly higher than that of the other institutions except OpenU. The student age in OpenU in general is significantly higher than that of CU.

Table 17. Significant Results of Tamhane's T2 Post-Hoc Test on Age Means

Institution		Mean diff.	Standard error	Sig.
APA	CityU	1.87**	.39	.000
	BU	1.80**	.31	.000
	LU	2.15**	.30	.000
	CU	2.51**	.26	.000
	IEd	2.22**	.42	.000
	UST	2.21**	.25	.000
	HKU	1.88**	.33	.000
OpenU	CU	1.59*	.46	.033

*The mean difference is significant at the 0.05 level.

**The mean difference is significant at the 0.01 level.

Next we take a look at the exact age distribution of the participants, which is shown in Table 18.

Table 18. Age Distribution of the Entire Sample

Age	Frequency	Percent	
17	2	0.2	51.8 (Group 1)
18	29	3.5	
19	396	48.1	
20	187	22.7 (Group 2)	
21-24	197	23.9	25.5 (Group 3)
25-29	8	1.0	
30-39	2	0.2	
40-54	3	0.4	
Total	824	100	

Missing: 33

The biggest group is age 19 (48.1%), followed by age 21-24 (23.9%), then age 20 (22.7%), age 18 (3.5%), age 25-29 (1%), age 40-54 (0.4%), age 17 (0.2%), and age 30-39 (0.2%). In order to facilitate more meaningful comparisons, age 17, age 18, and age 19 were combined to form one group; age 21 and above were also combined to form one group. Hence we have three age categories: 19 or below is Group 1 (51.8%), 20 by itself is Group 2 (22.7%), and 21 or up is Group 3 (25.5%). These group percentages were in turn rounded off to become 52%, 23%, and 25%. Together they formed a standard age distribution profile of 5.2:2.3:2.5, against which we could test whether any of the nine institutions revealed a significantly different profile.

Chi goodness-of-fit-tests were carried out and the significant results are presented in Table 19. Age distributions in five institutions—APA, LU, CU, IEd, and OpenU—were found to be significantly different from the norm profile at the 0.01 level. Age distributions in UST is significantly different from the norm profile at the .05 level. It seems that the biggest differences occur mostly in Group 1 (19 or below) and Group 3 (age 21 or up). APA (n=88) has perhaps the most striking results ($\chi^2=111.032$): it has both the largest positive residual (41 in Group 3) and negative residual (-39.8 in Group 1).

Table 19. Significant Chi Goodness-of-Fit-Tests of Age Distribution

Institution		Observed N	Expected N	Residual	1=19 or below, 2=20, 3=21 or up		
					Chi-square	df	Exact sig.
APA	1	6	45.8	-39.8	111.032	2	.000
	2	19	20.2	-1.2			
	3	63	22.0	41			
LU	1	16	19.2	-3.2	9.091	2	.01
	2	16	8.5	7.5			
	3	5	9.3	-4.3			
CU	1	100	73.8	26.2	20.705	2	.000
	2	25	32.7	-7.7			
	3	17	35.5	-18.5			
IEd	1	55	42.6	12.4	12.542	2	.002
	2	20	18.9	1.1			
	3	7	20.5	-13.5			
UST	1	105	90.5	14.5	6.024	2	.049
	2	38	40.0	-2.0			
	3	31	43.5	-12.5			
OpenU	1	21	38.5	-17.5	16.560	2	.000
	2	25	17.0	8.0			
	3	28	18.5	9.5			

As for gender-wise age difference in the entire sample, the mean for female is 20.20 (SD=2.70) and for male is 20.32 (SD=1.86). Though male students are on average older than female students, the difference is not statistically significant.

Nationality

Over 92% of the participants are Hong Kong Chinese (Table 20). For the other two groups, i.e., Mainland Chinese and other origins, there is no significant difference either in their gender distribution and age mean when compared with the Hong Kong Chinese group.

Table 20. Nationality of Participants

Nationality	Frequency	Percent
H.K. Chinese	761	92.5
Mainland Chinese	39	4.7
Other	23	2.8
Total	823	100

Missing: 34

Enrollment Status

Close to 100% of the participants are full-time students. The figures are shown in Table 21.

Table 21. Enrollment Status of Participants

Status	Frequency	Percent
Full-time undergrad	846	99.2
Part-time undergrad	7	0.8
Total	853	100

Missing: 4

Choice of Institution and Satisfaction

Most university entrants in Hong Kong apply for university programs through JUPAS—The Joint University Programmes Admissions System (the following information is taken from the JUPAS Website: www.jupas.edu.hk). JUPAS was first introduced in 1990-91 as an interim Joint University and Polytechnic Admissions Scheme which involved a two-stage process with firm or conditional offers made in two synchronized rounds at the end of Form 6 (i.e., the sixth grade in secondary school). The system was changed to its present form—a single process with offers after A-Level at the end of Form 7—for entrants in 1994-95 and succeeding years (UGC, 1996b). It is the main route of application designed to assist students with Hong Kong A-Level exam results to apply for admission to:

- full-time or sandwich bachelor's degree programmes offered by the eight JUPAS member-institutions which are funded by the Government of the Hong Kong through the UGC,
- government-funded full-time associate degree programmes offered by CityU, and
- government-funded full-time or sandwich higher diploma programmes offered by PolyU.

Applicants submit only one application to apply for all of the above programmes. Part-time and non-government funded programmes, however, are not covered under the JUPAS scheme, and applicants have to apply to the institutions directly. If applicants apply through JUPAS and to the institutions directly, their direct applications to the institutions will not be considered. Starting 2004 all applicants must submit their applications via the JUPAS website—paper form submission is no longer accepted. The application fee for the 2005 JUPAS is HK\$400 (roughly US\$52), is collected by the JUPAS Office on behalf of the 8 member-institutions and is not refundable or transferable to another year. In 2005, there were 31,821 applicants (including degree, associate degree, and higher diploma programs) and degree programs main round offers stood at 16,590 (52.13%).

In the present study the participants were asked to state whether the institution he/she was entering was his/her first, second, third, or less than third choice (the question is equally meaningful for those who have applied to the institutions directly without going through JUPAS). They also had to indicate how satisfied they were being able to attend that particular institution—not satisfied, somewhat satisfied, or very satisfied. First we take a look at the choice data, which are summarized in Table 22.

Table 22. Rank of Choice of Participants' Institutions

Choice	Frequency	Percent
First	538	63
Second	166	19.5
Third	72	8.4
< Third	78	9.1
Total	854	100

Missing: 3

Over 60% of the participants are able to attend their first choice institution and over 90% are able to attend at least their third choice institution. Table 23 shows the break-down of the data among the nine institutions.

Table 23. Rank of Choice of Participants' Institutions (by Institution)

Institution	1 st choice	2 nd choice	3 rd choice	< 3 rd choice
CityU	10 (35.7%)	12 (42.9%)	4 (14.3%)	2 (7.1%)
APA	77 (88.5%)	7 (8%)	3 (3.5%)	0
BU	44 (48.3%)	29 (31.9%)	10 (11%)	8 (8.8%)
LU	10 (27%)	4 (10.8%)	7 (18.9%)	16 (43.3%)
CU	115 (79.8%)	22 (15.3%)	6 (4.2%)	1 (0.7%)
IEd	20 (23.8%)	26 (31%)	18 (21.4%)	20 (23.8%)
UST	124 (71.7%)	33 (19.1%)	9 (5.2%)	7 (4%)
OpenU	15 (20.5%)	24 (32.9%)	11 (15.1%)	23 (31.5%)
HKU	123 (89.8%)	9 (6.6%)	4 (2.9%)	1 (0.7%)
Total	538 (63%)	166 (19.5%)	72 (8.4%)	78 (9.1%)

Missing: 3

This choice item is set up in a such a way that a 'first choice' answer is coded as '1', a 'second choice' answer as '2', a 'third choice' answer as '3', and a 'less than third choice' answer as '4'. Thus the item can be view as a scale where a lower number indicates a higher rank of choice. Table 24 presents the 'choice scale' (1=first choice...4=less than third choice) means of the nine institutions where a low mean indicates more students on average rank the institution as their better choice.

Table 24. Rank of Choice Mean by Institution

Institution	N	Mean	SD
CityU	28	1.93	.90
APA	87	1.15	.45
BU	91	1.80	.96
LU	37	2.78	1.27
CU	144	1.26	.56
IEd	84	2.45	1.10
UST	173	1.42	.77
OpenU	73	2.58	1.14
HKU	137	1.15	.48
Total	854	1.64	.97

Missing: 3

The data show that on average more students in APA and HKU (followed by CU and UST) are enrolled in their first choice institution compared with those in the other

universities. A one-way ANOVA was run to check for significant differences among the institutions. The result was found to be significant: $F_{(8,853)}=49.021$, $p<0.001$ (2-tailed). Table 25 is a summary of the Tamhane's T2 post-hoc test.

Table 25. Tamhane's T2 Post-Hoc Test: Rank of Choice of Institution
(showing only mean differences)

	CityU	APA	BU	LU	CU	IEd	UST	OpenU	HKU
CityU	--	.78**	.13	-.86	.67*	-.52	.512	-.65	.78**
APA	-.78**	--	-.65**	-1.63**	-.11	-1.30**	-.27*	-1.43**	.003
BU	-.13	.65**	--	-.98**	.54**	-.65**	.39*	-.77**	.66**
LU	.86	1.63**	.98**	--	1.53**	.33	1.37**	.21	1.64**
CU	-.67*	.11	-.55**	-1.53**	--	-1.20**	-.16	-1.32**	.11
IEd	.53	1.30**	.65**	-.33	1.20**	--	1.04**	-.12	1.31**
UST	-.51	.27*	-.39*	-1.37**	.16	-1.04**	--	-1.16**	.27**
OpenU	.65	1.43**	.77**	-.21	1.32**	.12	1.16**	--	1.43**
HKU	-.78**	-.003	-.66**	-1.64**	-.11	-1.31**	-.27**	-1.43**	--

*The mean difference is significant at the 0.05 level.

**The mean difference is significant at the 0.01 level.

Notice that a lower mean indicates a higher rank of choice of institution. Therefore, a positive mean difference tells us that the students' average rank of choice in the first institution is not as desirable as that of the second institution in the comparison. And the direction of comparison is from institutions in the rows to those in the columns. For instance, comparing CityU with APA, the mean

difference is .78. It tells us that students' average rank of choice of institution in CityU is not as desirable as that of APA. In other words, on average more students in APA are enrolled in their better choice institution compared with those in CityU. The lower diagonal is a mirror image of the upper diagonal with the +/- signs reversed.

To summarize, students' average rank of choice of institution in APA is significantly more desirable when compared with CityU (MD=-.78, SE=.18), BU (MD=-.65, SE=.11), LU (MD=-1.63, SE=.22), IEd (MD=-1.30, SE=.13), and OpenU (MD=-1.43, SE=.14). Students' average rank of choice of institution in BU is significantly more desirable when compared with LU (MD=-.98, SE=.23), IEd (MD=-.65, SE=.16), and OpenU (MD=-.77, SE=.17). Students' average rank of choice of institution in CU is significantly more desirable when compared with BU (MD=-.55, SE=.11), LU (MD=-1.53, SE=.21), IEd (MD=-1.20, SE=.13), and OpenU (MD=-1.32, SE=.14). Students' average rank of choice of institution in UST is significantly more desirable when compared with LU (MD=-1.37, SE=.22), IEd (MD=-1.04, SE=.13), and OpenU (MD=-1.16, SE=.15). Students' average rank of choice of institution in HKU is significantly more desirable when compared with CityU (MD=-.78, SE=.18), BU (MD=-.66, SE=.11), LU (MD=-1.64, SE=.21), IEd (MD=-1.31, SE=.13), UST (MD=-.27, SE=.07), and OpenU (MD=-1.43, SE=.14).

Next we take a look at satisfaction connected to attending a particular institution. Table 26 gives us an overall view. Students who are very satisfied or somewhat satisfied are both close to 50%; only 3.6% indicate that they are not satisfied being able to attend the institution they are enrolled in.

Table 26. Level of Satisfaction in Attending the Institution

Level	Frequency	Percent
Not satisfied	31	3.6
Somewhat satisfied	415	48.7
Very satisfied	406	47.7
Total	852	100

Missing: 5

Table 27 shows participants' level of satisfaction by rank of choice of institutions. It is interesting to note that some participants are not satisfied even when they are enrolled in a first choice institution while others are very satisfied even when they are enrolled in a less than third choice institution. The 1st choice group is the only group with the highest percentage of 'very satisfied'. As a whole, rank of choice of institution and satisfaction are correlated and a significant correlation (.419) is found at the 0.01 level (2-tailed). This positive correlation is quite strong.

Table 27. Level of Satisfaction by Rank of Choice of Institutions

Rank of choice	Level of satisfaction	Frequency	Percent
1 st choice	Not satisfied	8	1.5
	Somewhat satisfied	189	35.2
	Very satisfied	340	63.3
2 nd choice	Not satisfied	5	3
	Somewhat satisfied	116	70.3
	Very satisfied	44	26.7
3 rd choice	Not satisfied	4	5.6
	Somewhat satisfied	55	76.4
	Very satisfied	13	18.1
< 3 rd choice	Not satisfied	14	18.2
	Somewhat satisfied	54	70.1
	Very satisfied	9	11.7

A summary of satisfaction mean (1=not satisfied, 2=somewhat satisfied, and 3=very satisfied) by institution is presented in Table 28. A one-way ANOVA was carried out to check for significant differences among the institutions. The result was found to be significant: $F_{(8, 851)}=20.309$, $p<0.001$ (2-tailed). Tamhane's T2 post-hoc test showed significant differences for HKU-OpenU (MD=.73, SE=.06, $p<0.01$), HKU-LU (MD=.57, SE=.08, $p<0.01$), HKU-IEd (MD=.56, SE=.08, $p<0.01$), HKU-CityU (MD=.49, SE=.16, $p<0.01$), HKU-APA (MD=.29, SE=.07, $p<0.01$), HKU-BU (MD=.27, SE=.07,

$p < 0.01$), CU-OpenU (MD=.63, SE=.06, $p < 0.01$), CU-LU (MD=.46, SE=.08, $p < 0.01$), CU-IEd (MD=.45, SE=.08, $p < 0.01$), UST-Open (MD=.60, SE=.06, $p < 0.01$), UST-LU (MD=.43, SE=.08, $p < 0.01$), UST-IEd (MD=.42, SE=.08, $p < 0.01$), BU-OpenU (MD=.46 SE=.07, $p < 0.01$), BU-IEd (MD=.29, SE=.09, $p < 0.05$), and APA-OpenU (MD=.44, SE=.07, $p < 0.01$). The data reveal that in general participants enrolled in HKU, CU, and UST are more satisfied with their respective institutions.

Table 28. Satisfaction Mean by Institution

Institution	Mean	SD
CityU	2.21	.57
APA	2.41	.52
BU	2.43	.54
LU	2.14	.42
CU	2.60	.52
IEd	2.14	.58
UST	2.57	.55
OpenU	1.97	.41
HKU	2.70	.49
Total	2.44	.57

Self-Reported Grade Average

Participants were asked to estimate the grade average of his/her most recently completed academic term instead of public exam (e.g., A-Level). This is because there may be mature students in OpenU or APA who have not taken the 'normal' route to secure a place in higher education. Grade average of one's most recently completed academic term can flexibly refer to either Form 5, Form 6, Form 7, or other level of study prior to entering university.

Table 29 provides data on participants' self-reported grade average. There are six categories ranging from 'A' down to 'C- or below'. To check the relationships between self-reported grade average, rank of choice of institution, and level of satisfaction in being able to attend the institution, a Pearson's test of correlation was carried out and the results are presented in Table 30. All three correlate positively with one another and the correlations are significant at the 0.01 level. However, self-reported grade average correlates rather weakly with rank of choice and satisfaction—0.132 and 0.136 respectively. On the other hand, a much stronger positive correlation—0.419—exists between rank of choice of institution and level of satisfaction in being able to attend the institution.

Table 29. Self-Reported Grade Average

Grade	Frequency	Percent
A	31	4.7
A-/B+	187	28.2
B	257	38.7
B-/C+	106	16
C	51	7.7
C- or below	31	4.7
Total	663	100

Table 30. Correlations between Self-reported Grade Average, Rank of Choice of Institution, and Satisfaction

		Self-reported grade average	Rank of choice of institution	Satisfaction
Self-reported grade average (1=A, 2=A-/B+, 3=B, 4=B-/C+, 5=C & 6=C- or below)	Pearson's r	--	.132*	.136*
	N	663	660	660
Rank of choice of institution (1=first choice, 2=second choice, 3=third choice, & 4=less than third choice)	Pearson's r	.132*	--	.419*
	N	660	854	851
Satisfaction in being able to attend the institution (1=very satisfied, 2=somewhat satisfied, & 3=not satisfied)	Pearson's r	.136*	.419*	--
	N	660	851	852

*Correlation is significant at the 0.01 level (2-tailed).

Fields of Study

To facilitate more meaningful comparisons, participants' majors (i.e., their intended fields of study) are grouped into ten broad categories (Table 31).

Table 31. Ten Categories of Majors

Category	Frequency	Percent
Fine arts	41	5.1
Arts & Humanities	161	20.2
Social Science	127	15.9
Education	96	12.0
Communications	37	4.6
Business	98	12.3
Science	114	14.3
Engineering	41	5.1
Technical (e.g., mechanics)	55	6.9
Professional (e.g., medicine, law, architecture)	29	3.6
Total	799	100

Missing: 58

Referring back to Table 14 where the distribution of gender of the entire sample is shown, the ratio of female to male is about 6:4. We used this as the norm and ran binomial tests to see if there is any deviation from this gender profile. Significant results are shown in Table 32.

Table 32. Significant Results of Binomial Tests on Gender Distribution by Major

Majors	Gender	N	Observed prop.	Test prop.	Exact sig. (1-tailed)
Arts & Humanities	Female	106	.7	Female: .6 Male: .4	.019
	Male	49	.3		
Education	Female	79	.9		.000
	Male	13	.1		
Science	Female	56	.5		.016
	Male	57	.5		
Engineering	Female	12	.3		.000
	Male	29	.7		
Technical	Female	16	.3		.000
	Male	38	.7		

There are significantly more female students in Arts & Humanities, and even more so in Education, with a 9:1 female to male ratio. Significantly more male students are majoring in Engineering and Technical. In Science the gender distribution is a 50/50 split.

To see if differences of self-reported academic grade average exist among the majors, a one-way ANOVA was carried out. The result was significant: $F_{(9,620)}=3.544$, $p<0.001$ (2-tailed). The Levene test of homogeneity of variances showed that the groups displayed equal variances. Employing the Scheffe post-hoc test, however, failed to yield any significant result. So a less conservative

procedure—the Turkey HSD post-hoc test—was used to pinpoint significant differences (Table 33).

Table 33. Significant Results of Turkey HSD Post-Hoc Test on Self-Rep. Gr. Av.

Major		Mean diff.	Standard error	Sig.
Science	Arts & Humanities	.62*	.16	.004
	Technical	.76*	.21	.011

*The mean difference is significant at the 0.05 level.

Science majors are found to have lower self-reported grade average than students majoring in Arts & Humanities and Technical (1=A...6=C- or below, so a higher mean indicates inferior grade average), and the difference is significant at the 0.05 level.

Marital Status

Almost 100% of the participants are single (Table 34).

Table 34. Marital Status

Status	Frequency	Percent
Single	817	99.4
Married with no children	1	0.1
Married with children	3	0.4
Single parent	1	0.1
Total	822	100

Missing: 35

Employment Status

54.8% of the participants did not work, 40.3% worked part-time, and 4.9% had full-time jobs (Table 35). Those who worked part-time were also asked to indicate how many hours they worked per week on average. Table 36 shows work hours per week of those who had part-time jobs.

Table 35. Employment Status

Status	Frequency	Percent
Full-time job	40	4.9
Part-time job	331	40.3
Not working	451	54.8
Total	822	100

Missing: 35

Table 36. Work Hours Per Week of Participants with Part-time Jobs

Hours per week	Frequency	Percent
1-5 hrs	94	28.6
6-10	86	26.1
11-15	65	19.8
16-20	37	11.2
≥21 hrs	47	14.3
Total	329	100

Missing: 2

Who Pays for Subjects' Higher Education

Participants were asked to indicate who pays for their higher education tuition—whether it is mostly with own savings, with loans and grants, with scholarship, or by parents (Table 37). Participants who are supported by scholarships are rare in our sample—an insignificant 0.6%. Those who pay for higher education with own savings are also low in numbers—only 40 (about 5%). Close to 40% of the participants receive government loans and grants to pay for university tuition. For the largest group in the sample (over 55%), however, their university tuitions are paid by parents.

Table 37. Who Pays for Participants' Higher Education?

Category	Frequency	Percent
Mostly own savings	40	4.9
Mostly loans and grants	304	37.2
Mostly scholarship	5	0.6
Mostly parents	463	56.7
Others	5	0.6
Total	817	100

Missing: 40

In order to investigate if there is a relationship between participants' employment status and how their university tuition is being paid, a multi-dimensional Pearson chi-square test was carried out. To facilitate the

analysis, the employment status item was recoded into 1=work (i.e., full-time plus part-time) and 2=no work; the 'who pays' item was recoded into 1=own savings, 2=loans & grants, and 3=parents ('scholarship' and 'others' are statistically insignificant and therefore excluded). Hence we have a 2*3 chi-square exploring the association between employment status (2 categories: yes, or no) and how tuition is paid (3 categories: own savings, loans and grants, or parents).

Table 38. Crosstabulation: Employment Status * Who Pays for Higher Education

		'Who pays'			Total
		Own savings	Loans & grants	Parents	
Employment status: Work	Count	29	149	185	363
	Expected count	18.0	136.9	208.1	363
	% within employment status	8.0%	41.0%	51.0%	100%
	% within 'who pays'	72.5%	49.0%	40.0%	45.0%
	% of total	3.6%	18.5%	23.0%	45.0%
Employment status: No work	Count	11	155	277	443
	Expected count	22.0	167.1	253.9	443
	% within employment status	2.5%	35.0%	62.5%	100%
	% within 'who pays'	27.5%	51.0%	60.0%	55.0%
	% of total	1.4%	19.2%	34.4%	55.0%
Total	Count	40	304	462	806
	Expected count	40	304	462	806
	% within employment status	5.0%	37.7%	57.3%	100%
	% within 'who pays'	100%	100%	100%	100%
	% of total	5.0%	37.7%	57.3%	100%

There is a relationship between participants' employment status and how university tuition is paid ($\chi^2=18.783$, $df=2$, $p<0.001$). Referring to Table 38, within participants whose university tuition is paid by loans and grants, percentage of those who work and those not working are almost the same—just a difference of 2%. But for those who have parents paying for their higher education, 40% are working while 60% are not. The biggest difference occurs in the paid-by-own-savings group where 72.5% of the participants work and 27.5% do not.

Family Income

Table 39. Participants' Family Monthly Income

Income (HK\$)	Frequency	Percent
<10,000	256	32.1
10,000-19,999	261	32.7
20,000-29,999	143	17.9
30,000-39,999	58	7.3
40,000-49,999	30	3.8
50,000-59,999	21	2.6
60,000-69,999	8	1.0
$\geq 70,000$	21	2.6
Total	798	100

Missing: 59

Participants' were asked to estimate their individual family's monthly income in 2005. The results are shown in Table 39 (HK\$10,000 is about US\$1,300). The majority in the sample—82.7%—have a family monthly income ranging from <HK\$10,000 to HK\$29,999 (<US\$1,300-3,900). And exactly 10% of the participants have a family monthly income of HK\$40,000 (US\$5,200) or more. Over 80% of the parents in the HK\$30,000 or more family income group pay for their children's higher education—that is 31.5% more than those in the lower family income group (Table 40).

Table 40. 'Who Pays for Your Higher Education' by Two Income Groups

Family income (HK\$)	Who pays for your higher education?			Total
	Own savings	Loans & grants	Parents	
<10,000-29,999	33 (5.1)	285 (43.6)	333 (51.3)	649 (100)
30,000 or more	6 (4.5)	17 (12.7)	111 (82.8)	134 (100)

()=%

Parents' Highest Level of Formal Education

There was an item in the questionnaire requesting participants to provide information about the highest level of formal education obtained by their parents (considering only the higher of the two). Results are displayed in Table 42. The two biggest groups are 'some secondary school' (26.8%) and 'secondary school graduate' (29.7%). Only 4.3%

are undergraduates, while graduate degree holders are more than double of that: 9.8%. The non-degree total is 84.7% and degree total is 15.3%. So the majority of participants come from families where the parents are not degree holders.

Table 42. Parents' Highest Level of Formal Education

Qualification	Frequency	Percent	
Elementary school or less	130	16.0	Non-degree subtotal: 84.7
Some secondary school	218	26.8	
Secondary school graduate	242	29.7	
Post-secondary school other than university	53	6.5	
Some university	46	5.7	
Undergraduate degree	35	4.3	Degree subtotal: 15.3
Some graduate school	10	1.2	
Graduate degree	80	9.8	
Total	814	100	

Missing: 43

Personal Academic Aspiration

Personal academic aspiration is simply operationalized as the highest academic degree a participant intends to obtain—bachelor, master, or doctorate (plus an 'undecided' option). The figures (Table 42) reveal that 27.1% of the participants plan to go no further after the undergraduate level. More than one-third of the university entrants, however, aspire to get a master's degree and about 10% are aiming at a

doctoral degree. In other words, slightly over 50% of the participants are planning to go beyond the bachelor level. Those who are currently undecided amount to 22.8%.

Table 42. Academic Aspiration

Level aspired	Frequency	Percent
Bachelor	221	27.1
Master	321	39.3
Doctorate	89	10.9
Undecided	186	22.8
Total	817	100

Missing: 40

Table 43. Correlations between Self-Reported Grade Average, Parents' Highest Level of Education, and Personal Academic Aspiration

		Self-reported grade av.	Parents' highest level of ed.	Academic aspiration
Self-report grade average	Pearson's r	--	.036	.183**
	N	663	629	500
Parents' highest level of ed.	Pearson's r	.036	--	.080*
	N	629	814	626
Academic aspiration	Pearson's r	.183**	.080*	--
	N	500	626	631

*Correlation is significant at the 0.05 level (2-tailed).

**Correlation is significant at the 0.01 level (2-tailed).

Participants' personal academic aspirations are correlated with both their self-reported grade average (which was recoded for the correlation test: 1=C- or below ... 6=A) and parents' highest level of education (Table 43). The correlation between academic aspiration and self-reported grade average is significant at the 0.01 level; the correlation between academic aspiration and parents' highest level of education is significant at the 0.05 level. The correlations are positive, but rather weak.

To test whether there is a gender difference in academic aspiration, a multi-dimensional Pearson chi-square test was carried out. Excluding the 'undecided' option in the aspiration item, we have a 2*3 chi-square exploring the association between gender (2 categories: female or male) and academic aspiration (3 levels: bachelor, master, or doctorate). Referring to Table 44, 35.5% of the female and 33.7% of the male aim at bachelor; 53.7% of the female and 47% of the male aim at master. So for the bachelor and master levels, female is 8.5% higher than male in percentage within gender. But when it gets up to the doctoral level, however, male has a higher within gender percentage (19.3%) than female (10.8%). The chi-square test revealed that the gender difference in academic aspiration is significant ($\chi^2=111.032$, $df=2$, $p=0.01$).

Table 44. Crosstabulation: Gender * Academic Aspiration

		Academic aspiration			Total
		Bachelor	Master	Doctorate	
Gender: female	Count	135	204	41	380
	Expected count	132.3	193.9	53.8	380
	% within gender	35.5%	53.7%	10.8%	100%
	% within aspiration	61.6%	63.6%	46.1%	60.4%
	% of total	21.5%	32.4%	6.5%	60.4%
Gender: male	Count	84	117	48	249
	Expected count	86.7	127.1	35.2	259
	% within gender	33.7%	47.0 %	19.3%	100%
	% within aspiration	38.4%	36.4%	53.9%	39.6%
	% of total	13.4%	18.6%	7.6%	39.6%
Total	Count	219	321	89	629
	Expected count	219	321	89	629
	% within gender	34.8%	51.0%	14.1%	100%
	% within aspiration	100%	100%	100%	100%
	% of total	34.8%	51.0%	14.1%	100%

Reasons for Going to University

There was one item that asked the participants: In deciding to go to university, how important to you was each of the following reasons? Participants were asked to rate each of the eleven reasons on a 3-point scale. The results are displayed in Table 45.

Table 45. Reasons for Attending University

Reason	Not important	Somewhat important	Very important
1. To learn more about things that interest me. (N=855)	8 (0.9)	221 (25.9)	626 (73.2)
2. To gain a general education and appreciation of ideas. (N=853)	14 (1.6)	387 (45.4)	452 (53.0)
3. To be able to get a better job. (N=852)	21 (2.5)	314 (36.8)	517 (60.7)
4. To get training for a specific career. (N=855)	42 (4.9)	359 (42.0)	454 (53.1)
5. To prepare myself for graduate or professional school. (N=854)	42 (4.9)	415 (48.6)	397 (46.5)
6. To be able to make more money. (N=855)	95 (11.1)	482 (56.4)	278 (32.5)
7. To make me a more cultured person. (N=852)	40 (4.7)	352 (41.3)	460 (54.0)
8. To increase my social status. (N=855)	110 (12.9)	444 (51.9)	301 (35.2)
9. To find my purpose in life. (N=853)	68 (8.0)	336 (39.4)	449 (52.6)
10. My parents wanted me to go. (N=854)	440 (51.5)	319 (37.4)	95 (11.1)
11. Most of my friends are going. (N=854)	531 (62.2)	277 (32.4)	46 (5.4)

() = %

More than 50% of the participants rated reason 1, 2, 3, 4, 7, and 9 as very important. The three reasons with the highest percentage are 'to learn more about things that interest me' (73.2%), 'to be able to get a better job' (60.7%), and 'to make me a more cultured person' (54%). Independent t-tests were carried out to check for gender differences in these three reasons for going to university (Table 46).

Table 46. Independent t-Tests on Gender Differences in Three Top Reasons for Attending University

Reason	t	df	Sig. (2-tailed)
To learn more about things that interests me	-.898	817	.369
To be able to get a better job	1.336	658.753	.182
To make me a more cultured person	3.093	649.054	.002*

*The mean difference is significant at the 0.01 level.

A significant result was only found in the reason 'to make me a more cultured person' ($t=3.093$, $df=649.054$, $p<0.01$, 2-tailed) where female has a slightly higher mean.

Only two reasons are rated by over fifty percent of the participants as somewhat important: 'to be able to make more money' (56.4), and 'to increase my social status' (51.9%). There is no significant gender difference.

Two reasons stand out as being rated not important by participants: 'most of my friends are going' (62.2%) and 'my parents wanted me to go' (51.1%). There is also no significant gender difference.

One-way ANOVAs were carried out to check for difference between majors in each of the eleven reasons and either the Turkey HSD (for equal variances) or Tamhane's T2 (for unequal variances) post-hoc test was used for multiple comparisons. Significant results are shown in Table 47.

Table 47. Significant Post-Hoc Tests Results on Major Difference in Reasons for Attending University

Reason	Major		MD	SE	Sig. (2-tailed)
To learn more things that interest me ¹	Fine arts	Business	.28	.08	.042*
	Arts & Humanities		.24	.07	.017*
	Communicat ⁿ		.34	.08	.001**
To be able to get a better job ¹	Business	Communicat ⁿ	.41	.11	.032*
To get training for a specific career ²	Fine Arts	Arts & Humanities	.47	.08	.000**
	Education		.33	.07	.001**
	Business		.27	.08	.015*
	Professional		.48	.09	.000**
	Fine Arts	Social Science	.44	.09	.000**
	Education		.30	.08	.010**
	Professional		.46	.10	.001**
	Fine Arts	Science	.36	.09	.003**
Professional	.37		.10	.011*	
To be able to make more money ²	Business	Communicat ⁿ	.44	.12	.011*
		Science	.028	.09	.040*
		Professional	.48	.13	.011*
To make me a more cultured person ¹	Fine arts	Engineering	.44	.13	.045*
	Arts & Humanities	Business	.30	.07	.003**
		Engineering	.52	.11	.001**
To find my purpose in life ¹	Education	Business	.31	.09	.025*
		Engineering	.38	.12	.045*
My parents wanted me to go ¹	Education	Communicat ⁿ	.53	.13	.003**
My friends are going ²	Education	Science	.33	.08	.005**
	Business		.33	.08	.001**

¹Turkey HSD

²Tamhane's T2

*The mean difference is significant at the 0.05 level.

**The mean difference is significant at the 0.01 level.

The reason 'to get training for a specific career' yields the highest number of significant results. Participants who are majoring in Arts & Humanities, Social Science, and Science appear to view this reason as less important compared with students in other majors. Business majors, on the other hand, seem to view 'job', 'money', and 'career' as important reasons for going to university. For participants majoring in Fine Arts and Arts & Humanities, 'learning' and 'culture' appear to be of high value.

What Participants Value about a University

One item asked the participants what they valued about a university. Eleven choices were provided (including an open response) and participants were asked to choose what they personally believed to be the three most important ones. Participants were not required to rank the three choices. It is acceptable to choose less than three choices; but whenever more than three were checked, the response was treated as invalid. The results are shown in Table 48. Notice that the percentages do not add up to 100 because each choice is rated separately. Each figure simply means that out of the 829 valid responses, that percentage of the participants have checked that choice as one of the three most important things about a university. Response to the 'others' option is statistically insignificant and therefore excluded from the analysis.

Table 48. What Participants Value about a University

1. Facilities are good	36.3%
2. Tuition fee is comparatively low	7.5%
3. Campus/social life is rich	39.3%
4. Learning atmosphere is competitive	28.7%
5. Provides learning opportunities for mature and/or non-traditional students/learners	31.5%
6. Professors are well-known scholars	13.9%
7. Professors are effective teachers	32.8%
8. Flexible curriculum designs and innovative course delivery methods to accommodate students' needs	36.8%
9. Responsive to students' ideas and suggestions	21.4%
10. Graduates are generally successful in finding employment	40.8%
11. Others	0.6%

'Graduates are generally successful in finding employment' (40.8%) and 'campus/social life is rich' (39.3%) are the two top choice values and they are separated by only 1.5%. The next two choices are even closer percentage-wise—a mere difference of 0.5%. They are 'flexible curriculum designs and innovative course delivery methods to accommodate students' needs' (36.8%) and 'facilities are good' (36.3%). The three lowest percentages are 'tuition fee is comparatively low' (7.5%), 'professors are well-known scholars' (13.9%), and 'responsive to students' ideas and suggestions' (21.4%).

Table 49. 'What Participants Value about a University' by Major

Major	What participants value about a university (in %)									
	1	2	3	4	5	6	7	8	9	10
Fine Arts	48.7	10.3	28.2	35.9	23.1	35.9	35.9	41.0	12.8	23.1
Arts & Hum.	37.2	4.5	39.7	27.6	26.3	13.5	21.8	51.9	23.1	42.9
Social Sc.	32.5	7.3	44.7	27.6	31.7	10.6	29.3	46.3	22.8	39.8
Education	24.2	5.5	47.3	22.0	30.8	12.1	42.9	37.4	19.8	51.6
Commu.	30.6	8.3	27.8	30.6	36.1	8.3	28.9	27.8	47.2	30.6
Business	22.1	8.4	42.1	21.1	35.8	17.9	32.6	43.2	15.8	49.5
Science	44.6	4.5	47.3	35.7	36.6	11.6	28.6	25.9	17.0	37.5
Engineer.	41.0	15.4	35.9	30.8	25.6	10.3	38.5	25.6	10.3	51.3
Technical	46.3	3.7	31.5	33.3	31.5	5.6	35.2	29.6	27.8	40.7
Profession.	50.0	7.1	17.9	46.6	39.3	21.4	42.9	10.7	10.7	39.3

Table 49 gives an overview of what participants value about a university by major (the highest percentage for each major is highlighted). The following are the top choice values of different majors:

- Fine Arts: Facilities are good
- Arts & Humanities: Flexible curriculum designs and course delivery methods to accommodate students' needs
- Social Science: Flexible curriculum designs and course delivery methods to accommodate students' needs
- Education: Graduates are generally successful in finding employment

- Communications: Responsive to students' ideas and suggestions
- Business: Graduates are generally successful in finding employment
- Science: Campus/social life is rich
- Engineering: Graduates are generally successful in finding employment
- Technical: Facilities are good
- Professional: Facilities are good

To summarize, Fine Arts, Technical, and Professional majors share the same top choice value: 'facilities are good'. Education, Business, and Engineering majors share the same top choice value: 'graduates are generally successful in finding employment. Arts & Humanities and Social Science majors share the same top choice value: 'flexible curriculum designs and course delivery methods to accommodate students' needs'.

Self-Perception of Ability to Cope with University Life

In order to explore how well the participants as university entrants believed they could adapt to and cope with the upcoming campus life, five 5-point Likert-type items were designed to gauge their self-perception in this area. Table 50 summarizes participants' responses to the

question: Looking ahead to your university life, how true is each of the following statements?

Table 50. Self-Perception of Ability to Cope with University Life

Item	Percent				
	strongly disagree	disagree	neutral	agree	strongly agree
1. I have a clear picture of what university life is about. (N=854)	1.6	12.8	51.5	30.1	4.0
2. I can adapt to campus life easily. (N=850)	0.8	8.7	44.5	41.3	4.7
3. I can handle most academic work well. (N=852)	0.5	9.5	52.8	34.6	2.6
4. I will enjoy university life as a whole. (N=853)	0.6	4.0	32.1	51.2	12.1
5. I did some informal inquiries and I know quite well already what studying in this institution will be like. (N=850)	0.8	10.0	51.4	34.3	3.5

Though most of the highest percentages load on the 'neutral' option (which is not uncommon in a 5-point scale), participants in general seem to have a positive perception of their ability to cope with university work and campus life. Responses to the five self-perception items have a similar skew toward the 'neutral' or 'agree' side. When the author first developed the questionnaire, these five items were not meant to form a scale. But after data collection was completed and analysis had begun, it was noticed that these five self-perception-or coping-items correlate positively among themselves, with Pearson's r

ranging from .346 to .474 (Table 51). All correlations are positive and are significant at the 0.01 level. In order to investigate the possibility of a potential coherent scale, two more procedures were employed for confirmation purposes.

Table 51. Correlations among the Self-Perception Items

		1	2	3	4	5
1. Have a clear picture of uni life	Pearson's r	--	.459*	.384*	.367*	.422*
	N	854	850	852	853	850
2. Can adapt to campus life easily	Pearson's r	.459*	--	.435*	.474*	.346*
	N	850	850	849	850	847
3. Can handle academic work well	Pearson's r	.384*	.435*	--	.412*	.359*
	N	852	849	852	852	849
4. Will enjoy uni life	Pearson's r	.367*	.474*	.412*	--	.367*
	N	853	850	852	853	850
5. Did some informal inquiries about this uni	Pearson's r	.422*	.346*	.359*	.367*	--
	N	850	847	849	850	850

*Correlation is significant at the 0.01 level (2-tailed).

First, a reliability test was carried out. As can be seen from Table 52, all the item-total correlations are .50 or more and the Cronbach's alpha is a sufficient .77. If any of the items were taken out, the overall alpha would suffer. So considering both the $r_{j(t-j)}$ and 'alpha if item deleted', there is no bad item within this 'scale'. Even the weakest item has an item-total correlation of .50.

Table 52. Reliability Test on Self-Perception Items ($\alpha = .77$)

Item	M	SD	$r_{j(t-j)}$	α if item deleted
I have a clear picture of what university life is about.	3.22	.78	.55	.73
I can adapt to campus life easily.	3.40	.75	.58	.71
I can handle most academic work well.	3.29	.69	.53	.73
I will enjoy university life as a whole.	3.70	.75	.54	.73
I did some informal inquiries and I know quite well already what studying in this institution will be like.	3.30	.73	.50	.74

Next a principal component factor analysis was carried out on the five items. One factor indeed emerged with an eigenvalue of more than 2.6 and which alone accounted for over 52% of the variance (Table 53). The loadings of the five items were .729, .760, .716, .726, and .680 respectively.

Table 53. Principal Component Factor Analysis on Five Self-Perception Items

Component	Initial eigenvalues		Extraction sums of squared loadings	
	Total	% of variance	Total	% of variance
1	2.611	52.210	2.611	52.210
2	.704	14.084		
3	.612	12.231		
4	.595	11.893		
5	.479	9.582		

In view of (1) the high inter-correlations of the five items, (2) a sufficient coefficient alpha from the reliability test, and (3) confirmation from a principal component factor analysis, these five items are grouped to form a new scale. Since all five items deal with participants' self-perceived ability to cope with university life, it seems appropriate to name the scale: Self efficacy in university life. The items are assigned the new codes 'ef1', 'ef2', 'ef3', 'ef4', and 'ef5' respectively. With the emergence of this new scale, analysis hereafter will not focus on the original separate self-perception items, but instead on a coherent self efficacy scale.

The relationship between self-efficacy in university, self-reported academic grade average, rank of choice of institution, and academic aspiration are shown in the correlation matrix in Table 54. To facilitate the analysis, rank of choice of institution has been recoded into 1=less than 3rd choice...4=1st choice; self-reported grade average has also been recoded into 1=C- or below...6=A. All correlations are positive. Of the significant relationships, self-efficacy in university has the strongest correlation with self-reported grade average (.245). No significant relationship is found between rank of choice of institution and personal academic aspiration.

Table 54. Correlations between Self-Efficacy in University Life, Self-Reported Grade Average, Rank of Choice of Institution, and Academic Aspiration

		1	2	3	4
Self-efficacy in university life (1)	Pearson's r	--	.245*	.161*	.184*
	N	846	660	844	624
Self-reported grade average (2)	Pearson's r	.245*	--	.132*	.183*
	N	660	663	660	500
Rank of choice of institution (3)	Pearson's r	.161*	.132*	--	.039
	N	844	660	854	629
Academic aspiration (4)	Pearson's r	.184*	.183*	.039	--
	N	624	500	629	631

*Correlation is significant at the 0.01 level (2-tailed).

Table 55. Self-Efficacy in University Life Scale Mean by Major

Major	N	M	SD
Fine arts	40	3.69	.675
Arts & Humanities	159	3.44	.51
Social Science	125	3.34	.49
Education	96	3.29	.59
Communications	36	3.55	.45
Business	97	3.33	.47
Science	113	3.43	.53
Engineering	41	3.28	.57
Technical	55	3.37	.53
Professional	28	3.20	.48
Total	790	3.39	.53

Table 55 shows the self-efficacy in university life scale mean by major. Fine Arts has the highest mean, followed by Communications. To check for efficacy in university life scale mean differences among majors, a one-way ANOVA was carried out. There were significant mean differences among the groups: $F_{(9,789)}=3.262$, $p<0.01$ (2-tailed). The result of Levene test of homogeneity of variances was affirmative. Running the Scheffe post-hoc test, however, failed to reveal significant differences. The less conservative Turkey HSD test was thus carried out and the significant results are presented in Table 56. Interestingly enough, significant mean differences were found only between Fine Arts and five other majors. In all five comparisons participants majoring in Fine Arts have on average a higher mean than the others.

Table 56. Significant Results of Turkey HSD Post-Hoc Test on 'Self-Efficacy in University Life' Scale Mean Differences among Majors

Major		MD	SE
Fine arts	Social Science	.34*	.10
	Education	.40**	.10
	Business	.36*	.10
	Engineering	.41*	.12
	Professional	.49**	.13

*The mean difference is significant at the 0.05 level (2-tailed).

**The mean difference is significant at the 0.01 level (2-tailed).

Lastly, a MANOVA was conducted with gender and age group as main effects and self-efficacy in university life and self-reported grade average as dependent variables. The multivariate effect of gender was not significant (Wilks' $\lambda = .993$, $F = 2.22$, $p = 0.109$). The multivariate effect of age group, on the other hand, was significant (Wilks' $\lambda = .965$, $F = 5.553$, $p < 0.001$). No interaction effect was detected. Regarding age group difference, both the univariate F tests for self-efficacy in university life ($F = 6.92$, $p < 0.01$) and self-reported grade average ($F = 6.913$, $p < 0.01$) were significant. However, they both have the same and very small partial eta squared—.022. The Scheffe post-hoc test was used for multiple comparisons and significant results were shown for 'age 21 or above'-'19 or below' in self-efficacy in university life ($MD = .19$, $SE = .05$, $p < 0.01$) and for 'age 21 or above'-'19 or below' in self-reported grade average ($MD = .41$, $SE = .11$, $p < 0.01$).

The Four Scales

First we look at the cd-scale which has a good Cronbach's alpha of .83 (Table 57).

Table 57. Scale: Job-Oriented Curriculum Design ($\alpha = .83$)

Code	Item	M	SD	$r_{j(t-j)}$	α if item deleted
cd1	Curricula in the university should be job-oriented.	3.01	.88	.57	.81
cd2	Curriculum designs in higher education as a whole need to fit better with the evolving needs of the labor market.	3.48	.70	.53	.82
cd3	It is important to design curricula that position students to adapt to the labor market.	3.53	.69	.59	.81
cd4	It matters to me whether curricula offered in the university are responsive to the trends of the labor market.	3.34	.74	.58	.81
cd5	Job-orientedness should play an increasing role in curriculum designs in higher education.	3.39	.77	.62	.81
cd6	I value courses that are job-oriented.	3.21	.85	.60	.81
cd7	Curriculum designs that are job-oriented appeal to me.	3.22	.77	.60	.81

Independent t-tests were carried out to compare gender difference as well as employment status difference in cd-scale mean (Table 58). Participants who are employed (full-time or part-time) value job-oriented curriculum design significantly more than those who are not employed ($t=2.248$, $df=799$, $p<0.05$, 2-tailed). There is no significant gender difference.

Table 58. Independent t-Tests of Gender Difference and Employment Status Difference in cd-Scale Mean

Groups	t	df	Sig. (2-tailed)
Gender: female - male	.970	604.165	.332
Employment status: work - no work	2.248	799	.025

One-way ANOVAs were performed to check for age group, institution, and major mean differences in the cd-scale. The results are presented in Table 59 which shows that there are significant group differences in all the factor variables. Scheffe post-hoc test revealed a significant mean difference for: 'age 21 or above'-'age 19 or below' at the 0.05 level (MD=.14, SE=.05); UST-HKU (MD=.28, SE=.06), and UST-CU (MD=.27, SE=.06), both at the 0.05 level; and Business-Arts & Humanities (MD=.37, SE=.07) at the 0.01 level.

Table 59. One-Way ANOVAs of Age Group, Institution, and Major Differences in cd-Scale Mean

Groups	F	df	Sig.
Three age groups	4.841	2-802	.008
Nine institutions	5.216	8-803	.000
Ten majors	3.504	9-755	.000

Next we take a look at the data related to the dm-scale. The Cronbach's alpha for this scale is a bit disappointing—it is a little shy of the 0.6 level (Table 60). None of the items has an item-total correlation reaching the 0.5 level. The data reveal that dm4, with a .25 $r_{j(t-j)}$, is probably a bad item. But deleting this item does not improve the coefficient alpha of the scale.

Table 60. Scale: User-friendly Course Delivery Method ($\alpha = .58$)

Code	Item	M	SD	$r_{j(t-j)}$	α if item deleted
dm1	I prefer courses that are delivered on-line to traditional classes because I can use my time more flexibly.	2.86	.93	.39	.53
dm2	I prefer flexible teaching methods (e.g., via electronic media) to conventional modes of instruction.	3.47	.89	.45	.46
dm3	Delivery of lessons and classes should be more 'user-friendly' so that students are not compelled to spend a fixed amount of hours on campus.	3.59	.74	.40	.53
dm4	Flexibility of teaching method is as important as the quality of the course contents.	3.65	.80	.25	.57
dm5	Most university students welcome on-line courses because they allow more flexible use of time.	3.29	.84	.33	.53

Independent t-tests were carried out to compare gender difference as well as employment status difference in dm-scale mean (Table 61). Females on average value user-friendly course delivery method less than males do ($t = -2.040$, $df = 800$, $p < 0.05$, 2-tailed). There is no significant difference between the 'work' and 'no work' groups.

Table 61. Independent t-Tests of Gender Difference and Employment Status Difference in dm-Scale Mean

Groups	t	df	Sig. (2-tailed)
Gender: female - male	-2.040	800	.042
Employment status: work - no work	.572	732.594	.568

One-way ANOVAs were performed to check for age group, institution, and major mean differences in the dm-scale. The results are presented in Table 62 which shows that there are significant group differences only within the nine institutions. Scheffe post-hoc test failed to pinpoint where the significant difference(S) occurs. The Turkey HSD post-hoc test revealed a significant mean difference for UST-HKU (MD=.19, SE=.06) at the 0.05 level. The exact significance is 0.048—just 0.002 less than 0.05— which is probably why the conservative Scheffe test did not show the significant result.

Table 62. One-Way ANOVAs of Age Group, Institution, and Major Differences in dm-Scale Mean

Groups	F	df	Sig.
Three age groups	1.655	2-804	.192
Nine institutions	2.333	8-805	.018
Ten majors	1.014	9-757	.427

We now move on to the 11-scale. The Cronbach's alpha for this scale is .67, with item-total correlations ranging from .37 to .56 (Table 63).

Table 63. Scale: Opportunities for Lifelong Learning ($\alpha = .67$)

Code	Item	M	SD	$r_{j(t-j)}$	α if item deleted
111	The need for lifelong learning should be an integral part in the development of higher education.	3.76	.73	.56	.55
112	Universities can serve the society better by being more sensitive to the needs of mature students.	3.66	.64	.37	.65
113	The community as a whole is better off when the idea of lifelong learning is incorporated in higher education.	3.51	.70	.48	.58
115	More lifelong learning opportunities in higher education contribute to the betterment of the society such as increased equity and/or improved labor force competency.	3.52	.72	.42	.62

Independent t-tests were carried out to compare gender difference as well as employment status difference in 11-scale mean (Table 64). There is no significant result.

Table 64. Independent t-Tests of Gender Difference and Employment Status Difference in 11-Scale Mean

Groups	t	df	Sig. (2-tailed)
Gender: female - male	.074	633.034	.941
Employment status: work - no work	-.778	716.939	.437

One-way ANOVAs were performed to check for age group, institution, and major mean differences in the ll-scale. The results are presented in Table 65 which shows that there are significant group differences only among institutions. Scheffe post-hoc test revealed a significant result for HKU-OpenU (MD=.29, SE=.07) at the 0.05 level.

Table 65. One-Way ANOVAs of Age Group, Institution, and Major Differences in ll-Scale Mean

Groups	F	df	Sig.
Three age groups	1.655	2-804	.192
Nine institutions	3.843	8-803	.000
Ten majors	1.017	9-754	.424

We now turn to the sc-scale—the last scale in the questionnaire. With a Cronbach's alpha of .76, this scale has the second best alpha among the four scales. As can be seen from Table 66, item-total correlations of the items are quite even except for two outstanding ones in opposite ends. sc9 has an $r_{j(t-j)}$ of .56, while that of sc7 is only .30. With the lowest item-total correlation, sc7 is the weakest item in the scale. The overall alpha of the scale would remain at the .76 level if sc7 were deleted from the scale. On average participants seem to score lower in the sc-scale than in the other three scales.

Table 66. Scale: Student Consumerism ($\alpha = .76$)

Code	Item	M	SD	$r_{j(t-j)}$	α if item deleted
sc1	The relationship between a university and its students is similar to that of a service provider and its customers.	2.78	.85	.48	.74
sc2	I consider myself a 'customer' of the educational institution I am attending.	2.57	.86	.49	.73
sc3	The more tuition fee I have to pay for higher education, the more I should have a say in various aspects of the system.	2.98	.87	.42	.74
sc4	It is fair to pay more if one wants to study in a more prestigious university.	3.02	.94	.38	.75
sc5	I would expect more from the university if I were required to pay a higher tuition fee.	3.48	.91	.34	.75
sc6	Universities should pay more attention to the needs of students because they are the customers of higher education.	3.32	.91	.48	.73
sc7	I am willing to pay more money to earn a degree from a famous educational institution.	3.14	.89	.30	.76
sc8	When higher education becomes more and more costly to students, they should be protected by consumer's law.	3.27	.83	.38	.75
sc9	It is appropriate to view university students as customers of their universities.	2.77	.86	.56	.72
sc10	As students are asked to contribute more to the cost of higher education, universities should become more 'consumer-friendly'.	3.17	.73	.46	.74

Independent t-tests were carried out to compare gender difference as well as employment status difference in sc-scale mean (Table 67). Results suggest that significant group difference occurs only in the gender variable.

Females in general have a lower consumerist orientation than males (MD=-.12, SE=.04) and the difference is significant at the 0.01 level.

Table 67. Independent t-Tests of Gender Difference and Employment Status
Difference in sc-Scale Mean

Groups	t	df	Sig. (2-tailed)
Gender: female - male	-3.287	792	.001
Employment status: work - no work	1.862	793	.063

One-way ANOVAs were performed to check for age group, institution, and major mean differences in the sc-scale. The results are presented in Table 68 which shows that there are significant group differences among institutions and within majors. Scheffe post-hoc test revealed significant results for: APA-IEd (MD=.34, SE=.07) at the 0.01 level; APA-CU (MD=.28, SE=.07) at the 0.05 level; and APA-HKU (MD=.27, SE=.07) at the 0.05 level. As for within majors comparisons, Scheffe post-hoc test failed to pinpoint the result. Using the less conservative Turkdy HSD test, a significant result was found for Fine Arts-Education (MD=.29, SE=.09) at the 0.05 level. The exact significance is 0.047—only 0.003 less than 0.05—which is probably why the Scheffe test did not give a significant result.

Table 68. One-Way ANOVAs of Age Group, Institution, and Major Differences in sc-Scale Mean

Groups	F	df	Sig.
Three age groups	1.655	2-804	.192
Nine institutions	4.968	8-797	.000
Ten majors	2.234	9-749	.018

To summarize, Cronbach's alphas of the four scales are: cd-scale (seven items), $\alpha = .83$; dm-scale (five items), $\alpha = .58$; ll-scale (four items), $\alpha = .67$; and sc-scale (ten items), $\alpha = .76$. The means of the four scales are shown in Table 69. ll-scale has the highest mean (3.62) and sc-scale has the lowest (3.05).

Table 69. Descriptive Statistics (with α s) of the Four Scales

Scale	N*	α	M	SD
Job-oriented curriculum design (cd)	804	.83	3.32	.55
User-friendly course delivery method (dm)	806	.58	3.37	.52
Opportunities for lifelong learning (ll)	804	.67	3.62	.49
Student consumerism (sc)	798	.76	3.05	.49

*Listwise: 767

DISCUSSION

Gender

Referring back to Table 14, the female-male ratio in the present sample is 6:4, which is similar to the figures given by the Commission on Youth (2003). In 1996-97 the female-male ratio of student enrollment in UGC-funded undergraduate programs was 5:5. It is quite obvious that the number of female degree students is on the rise. This trend can also be confirmed by looking at the gender distribution in the total degree-holding population. The Hong Kong 1981 census showed that the female-male ratio of those who had attained undergraduate degree or above (earned local or overseas) was 3:7 (Census and Statistics Department, 1990). In 1993 it was roughly 4:6 and in 2003 it was getting close to 5:5 (Census and Statistics Department, 2004). The total degree student enrollment (undergraduate and above) in UGC-funded programs in 1996-97 had a female-male ratio of 4.6:5.4; in 2002-03 it was 5.2:4.8 (Commission on Youth, 2003).

The participants in the present study are first-time university entrants. The female-male ratio of 6:4 reflects the trend of increasing female presence in the higher education arena.

Binomial tests reveal that the gender distribution in four of the institutions respectively differs significantly from the norm female-male ratio (Table 15). First, the female-male ratio in HKU is 7:3. This is probably a result of unbalanced sampling because none of the participants in the HKU sample is Science or Business major. Most of them major instead in Arts & Humanities (68.4%) or Social Science (22.8%), both of which are traditionally female-dominant.

Second, the female-male ratio in IEd is an extreme 9:1. This is understandable because IEd is specifically a teacher-training institution that normally attracts more female students. Previous annual student statistics of IEd showed a roughly 8:2 female-male ratio.

Third, the female-male ratio in UST is 5:5. Most of the participants in the UST sample are either Science (44.3%) or Business (21.6%) major, both of which are traditionally male-dominant fields. Yet of the 74 Science majors, 38 are women and 36 are men; of the 36 Business majors, 25 are women and 11 are men. This seems to be quite a nice counter-balance of the traditional 'male-skewed' situation.

Fourth and last, the female-male ratio in OpenU is 4:6—an exact opposite of the norm ratio. This is probably due to the fact that 60% of the participants from OpenU are Business majors, a traditionally male-dominant field.

Age

Of the 824 respondents who have indicated their age (or age range), 3.7% are 18 years old or younger, 48.1% are 19 years old, 22.7% are 20 years old, 23.9% are between 21-24, and 1.6% are 25 year old or above (Table 18). The mean age is 20.24 (Table 17). APA and OpenU have the two highest age means—22.05 and 21.14 respectively. APA is, as clearly stated by its name, an academy for performing arts. Admission into its degree programs depends not so much on A-Level results as on the applicant's level of artistic proficiency. As a result, it provides more room for mature applicants. Post-hoc tests reveal that APA has a higher age mean than all other institutions except OpenU and the differences are all significant at the 0.01 level.

As for OpenU, it has always been a popular higher education option for mature students. According to its annual report 2003-04 (The Open University of Hong Kong, 2004), average student age was 33.9. Normally speaking OpenU should have a higher age mean than APA. However, in the present study, participants from OpenU are all full-time face-to-face program students and they do not reflect the typical mature student profile of OpenU. This is probably the reason why in this study OpenU has a lower age mean than APA.

In any rate, among the nine participating institutions, APA and OpenU are the two that accept relatively more mature students who may not have gone through the normal A-Level route to reach higher education. This may account for their higher age means.

CU, on the other hand, has the lowest age mean (19.54). It may be due to the fact that CU accepts relatively more students through the Early Admissions Scheme which recruits outstanding Secondary 6 students (i.e., one year prior to A-Level).

Analysis of the age distribution in the above three institutions also reveals interesting structures. Chi goodness-of-fit-tests show that APA, OpenU, and CU (together with LU, IEd, and UST) differ from the age distribution profile of the entire sample (Table 18). This is of course related to the different age means of these three institutions. Since participants from APA are on average older, it is therefore not surprising that with $n=88$, APA has a big negative residual (-39.8) in the '19 or below' age group and at the same time a big positive residual (41) in the '21 or up' group. OpenU ($n=74$) has a similar but less extreme structure: residual for the '19 or below' age group is -17.5 and that for the '21 or up' group is 9.5. As for CU, due to its relatively younger students, the age distribution structure is quite the opposite from

APA and OpenU. With $n=142$, CU has a positive residual of 26.2 for the '19 or below' age group and a negative residual of -18.5 for the '21 or up' group. The chi-square results of these three institutions are all significant at the 0.01 level.

Choice of Institution and Satisfaction

Among the nine institutions, four stand out in terms of having a significant percentage of students getting their 1st choice placement. The four institutions are HKU (89.8% 1st choice), APA (88.5%), CU (79.8%), and UST (71.7%). HKU, CU, and UST are often regarded as the three top-tier universities in Hong Kong (Postiglione, 2000). It is therefore no surprise that most of their first-year undergraduate students get 1st choice placement.

APA, on the other hand, is publicly funded but not through the UGC and also not part of JUPAS (Joint University Programmes Admissions System). Although some universities offer degree programs in music, APA is the only academy in Hong Kong offering specialized degree courses in performing arts. Students getting into APA usually have rather specific focus on the area of performing arts they want to study. Students getting into a regularly university, however, may hop around for a year before declaring their major. So in comparison with the

average university goer, APA students tend to have a clearer picture of what they are getting into when they decide to enrol in APA. After all, there are several universities in Hong Kong but there is only one academy for performing arts. This explains why APA also has a high percentage of incoming freshmen getting 1st choice placement. The above reasoning is confirmed by data from one of the 'self-perceived ability to cope with university life' items. Item 22 of the questionnaire asks participants to rate from 1 (strongly disagree) to 5 (strongly agree) the statement, 'I did some informal inquiries and I knew quite well already what studying in this institution will be like'. Descriptive statistics are shown in Table 70.

Table 70. Descriptive Statistics of Item 22 by Institution

Institution	Mean	SD
CityU	2.98	.84
APA	3.61	.80
BU	3.39	.75
LU	3.11	.57
CU	3.29	.71
IEd	3.13	.67
UST	3.24	.73
OpenU	3.09	.67
HKU	3.45	.67

It can be seen that APA has the highest mean (3.61), confirming the fact that its students are more certain about their decision to enrol in APA. Consequently this contributes to its high percentage of 1st choice placement. Furthermore, referring back to Table 22, APA has 0% '3rd choice of less', while even HKU and CU both have 0.7% '3rd choice of less'.

When we look at satisfaction in being able to attend a particular institution (Table 28), again, HKU (2.70), CU (2.60), and UST (2.57) stand out with the highest means (1=not satisfied, 2=somewhat satisfied, and 3=very satisfied). Although APA has 88.5% 1st choice placement, it ranks fifth in satisfaction mean with 2.41, preceded by BU with 2.43. It is interesting to note that BU has only 48.3% 1st choice and 31.9% 2nd choice placement, yet it has a slightly higher satisfaction mean than APA (the difference is, however, not significant statistically).

OpenU has the lowest satisfaction mean (1.97). There may be several reasons for this. First, many people perceive OpenU as a 'lesser' university because of its comparatively more inclusive admissions requirements. Second, as a more generic higher education institution OpenU does not have the same kind of specialized 'edge' attached to APA. Third, in the present study, participants from OpenU are all from face-to-face degree programs which are still in their early

years of development. It is possible that students are sceptic about these newly developed full-time degree programs in an institution which specializes in more open distance learning.

A low satisfaction mean may have some bearing on student counselling and academic advising. Since satisfaction is often linked to motivation, students who are studying in a lesser choice institution may need extra encouragement and affirmation. Otherwise lack of motivation will lead to low school performance which in turn may contribute to academic disengagement and attrition.

Self-Reported Grade Average

Positive correlations are found between self-reported grade average and rank of choice of institution (.132), and self-reported grade average and satisfaction in being able to attend the institution (.136). Both correlations are rather weak but significant at the 0.01 level (Table 30). The correlation between grade average and rank of choice of institution, in particular, is weaker than expected. One explanation is that the questionnaire asks the participants to estimate the grade average of his/her most recently completed academic term instead of public exam (e.g., A-Level). And since universities mostly base their admissions screening on A-Level results, self-reported

school grade average, therefore, correlates not as strong with rank of choice of institution as would average public A-Level grade average.

This probably also explains the weak correlation between self-reported grade average and satisfaction in being able to attend the institution. Since the goal of most senior secondary students is to secure a place in a university—or better yet, a good university—school exam or public exam is basically a means to an end. Satisfaction will depend on one's school or public exam grades insofar as the grades will lead to placement in a better choice institution. A rather strong correlation (.419) is indeed found between rank of choice of institution and satisfaction in being able to attend the institution, significant at the 0.01 level (Table 30).

It should also be pointed out that satisfaction in being able to attend the institution depends on a student's **personal** rank of choice of the institution. To illustrate this, we refer back to Table 28. HKU, CU, and UST have the highest satisfaction means, while OpenU, IEd, and LU have the lowest (1=not satisfied, 2=somewhat satisfied, and 3=very satisfied). But when we compare the 1st choice satisfaction means of OpenU (2.07), IEd (2.75), and LU (2.40) with the 3rd choice satisfaction means of HKU (2.00), CU (2.50), and UST (2.33), it becomes clear that

participants' personal rank of choice of the institution is the key to satisfaction in being able to attend the institution. IEd, for instance, has a 1st choice satisfaction mean of 2.75, which is higher than the 3rd choice satisfaction means of HKU, CU as well as UST.

Comparing self-reported grade average among majors reveals unexpected results. Based on a recoded item 17 (1=C- or below...6=A), the means of the majors are as follows (in decreasing order): Technical (3.16), Arts & Humanities (3.09), Fine Arts (3.05), Business (3.02), Communications (2.99), Social Science (2.87), Engineering (2.8467), Education (2.8460), Science (2.80), and Professional (2.78). It is surprising to find that self-reported grade average of Professional and Science majors are the lowest. In the school system in Hong Kong, students have to choose basically between a science and an arts track as they finish junior secondary and are preparing to go into senior secondary school. Traditionally most students think that a science track will lead to a better career future and as a result those with better grades are more likely to end up in the science track (Leung, 1999). As for Professional majors (which in the present study include medicine, law, architecture, etc), the competition is usually even keener due to the relatively smaller number of undergraduate places offered

by the universities. And so normally speaking, students majoring in Science or Professional have relatively higher academic achievements. But somehow the opposite is true in the sample of the present study.

One possible explanation is that under JUPAS (Joint Universities Programmes Admissions System) there is a sub-system for School Principal's Nominations and also a Self Recommendation Scheme. The main objective of the School Principal's Nominations Sub-system is, according to the JUPAS Website, "to give due recognition to students who have contributed to social services or made outstanding achievements in non-academic areas such as sports, music, social services, other cultural activities, or who have demonstrated leadership abilities. It is hoped that this Sub-system will also encourage schools to provide opportunities for their students to participate in different areas of non-academic activities, and students to make good use of these opportunities. The Sub-system can also provide universities, schools, and students with experience which will be useful in the possible development of a more flexible admissions sub-system in Hong Kong which does not over-rely on public examination results." As for the Self Recommendation Scheme, it encourages students to actively participate in extra-curricular activities and to compile a portfolio of such outstanding achievements for

consideration by the institutions. JUPAS clearly states that applicants' A-Level and O-Level grades alone do not determine whether they will enter an institution of their choice. "Other factors come into consideration such as information contained in your application form, and for some programmes, interview(s) and/or test(s), overall grades achieved by other applicants in the current year, and the number of applicants applying to the programme, etc. It is therefore not appropriate to only compare grades between applicants."

In light of this, it seems possible that today securing a place in a university in Hong Kong—even in the fields of Science and Professional—does not depend entirely on grades as it used to be. The possible development of a more flexible admissions sub-system in Hong Kong which does not over-rely on public examination results may help explain why the Science and Professional majors in the present study do not have the highest self-reported grade average means.

Fields of Study

The majors that amount to more than 10% of the total sample include Arts & Humanities (20.2%), Social Science (15.9%), Science (14.3%), Business (12.3%), and Education (12.0%). According to the Hong Kong Census and Statistics

Department 2003 figures (Census and Statistics Department, 2004, which includes PolyU but excludes APA and OpenU), the percentages of the above majors among total undergraduate students are roughly as follows: Arts & Humanities (14.3%), Social Science (11.0%), Science (12.2%), Business (21.7%), and Education (4.5%). So in the sample of the present study Arts & Humanities, Social Science, Science, and Education are over-represented, while Business is under-represented.

In 1980, while there were only two universities in Hong Kong and with only 9051 undergraduate students in total, the percentages of the above majors were roughly (Census and Statistics Department, 1990): Arts (23.8%), Social Science (22.6%), Science (20.8%), Business (10.0%), and Education (0%). Comparing figures in 1980 and 2003, there is a decrease of 9.5% in Arts & Humanities, 11.6% in Social Science, 8.6% in Science, an increase of 11.7% in Business, and an increase of 4.5% in Education. Obviously, with the expansion of higher education in Hong Kong, choice of undergraduate major has also expanded and students are no longer loaded overwhelmingly on those traditionally 'big' disciplines like Arts, Social Science, and Science. The field of Business has seen the biggest expansion and it fits well with the increasing emphasis on international trade and global marketization.

Using the female-male 6:4 ratio of the entire sample as the norm, binomial tests show that there are significant differences in the gender profile in Arts & Humanities, Education, Science, Engineering, and Technical (Table 32). The female-male ratios in Arts & Humanities and Education are 7:3 and 9:1 respectively. This is not surprising since these two majors, together with some other Social Science majors, are traditionally female dominant. Snyder & Hoffman (2000), for example, reported that women were over-represented in fields like early childhood education and nursing—89% of majors in these fields were women. In Abouchedid & Nasser's study (2000), both females and males rated Social Science and Humanities (except Economics and Political Science) as feminine. Chemistry, Physics, Computer Studies, and Engineering were rated significantly as masculine. Gender role identifications are influential in students' choice of fields of study. A feminine orientation was associated with choice of a helping profession major, whereas a masculine orientation was associated with choice of a science major. Therefore it seems that traditional sex-role stereotypes are still operative in students' choice of major decision making (Lackland & De Lisi, 2001). It is, therefore, also no surprise that in the present study both Engineering and Technical have a female-male ratio of 3:7. These two have been traditionally male-dominant disciplines.

Science majors in this study, however, present a rather surprising and at the same time welcoming 5:5 female-male ratio. In the U.S., for instance, women constitute almost half the employees, yet they are under-represented in science, math, and engineering fields, holding only 9% of engineering positions, and 22% of physical science positions (Lackland & De Lisi, 2001; National Science Board, 2000). With more women entering the science, mathematics, and engineering fields and possibly reaching higher level positions within these fields, future generations of young women will then have visible female models in these traditionally male fields (Nauta & Epperson, 2003). Since choice of college majors is an important factor in career development and vocational choice (Turner & Bowen, 1999), more females majoring in science disciplines will hopefully begin to reduce the gender imbalance that favors men in graduate programs and in employment that requires advanced training in engineering and the physical sciences.

Employment Status, Family Income, and How Tuition Is Paid

Less than 50% of the participants have jobs (Table 35). The proportion is similar to the statistics in the United States. According to *The American Freshman: National Norms for Fall 2004* (Higher Education Research Institute (HERI), 2004), 47.7% of the incoming freshmen believe there is a very good chance that they will work during college. In a

smaller study in the U.S., Martin and Hanrahan (2004) found that 65% of the incoming freshmen indicated that they would be employed and 52% indicated that they would be working no more than 20 hours per week. Not surprisingly, students from lower and middle-income families are more likely to anticipate working while in school. In the present study, 47.2% of those with family monthly income <HK\$10,000-29,999 (US\$1,300-3,900) are working, while only 40.6% of those with family monthly income HK\$30,000 or more are working. Participants in the former category constitute 82.7% of the present sample (Table 39).

Based on a database that covered 7,000 young Australians in Year 10, 11, and 12 (James et al., 1999), James (2002) reported that their aspirations and intentions regarding higher education are strongly influenced by socio-economic background, gender, and geographical location. Socio-economic background is the major factor affecting students' perspectives on the value and attainability of higher education. Nearly 70% of students from higher socio-economic background were confident that they would secure a path to university study. Only 16% of students from lower socio-economic background reported they hoped to go to university but believed they would not be able to do so.

In comparison, students in Hong Kong are more advantaged when it comes to financing higher education. In 2004 only

18.1% of the incoming freshmen in the U.S. expected to receive over US\$10,000 in family support for their first year in college (HERI, 2004). In the present study 56.7% of the participants indicate that their higher education tuition will be covered mostly by their parents (Table 37). Annual tuition for undergraduate programs is about HK\$42,000 (roughly US\$5,500). It is not uncommon in Hong Kong—or in most Chinese communities—for parents to pay for their children's entire higher education.

To summarize, 56.7 % of the participants' tuition will be paid mostly by parents, and 40% of the students within this group are working. 37.2% of the participants' tuition will be paid mostly by loans and grants, and 49% of the students within this group are working. 4.9% of the participants' tuition will be covered mostly by own savings, and 72.5% of the students within this group are working. It seems obvious that when participants rely less on parents or loans, the more likely they will need to work.

For those who work part-time, 19.8% work 11-15 hours per week, 11.2% work 16-20 hours, and 14.3% work over 20 hours (Table 36). For incoming freshmen in the U.S. (HERI, 2004), 14.4% work 11-15 hours per week, 17% work 16-20 per week, and 20 % work over 20 hours per week. So in comparison, university entrants in Hong Kong spend less time overall in part-time job than their counterparts in the U.S.

A uniform fee for undergraduate programs was introduced in Hong Kong in 1974-75 for fear that student preference for low cost subjects would affect manpower provision in the territory. The Government asked the UGC to reconsider the position in 1990 and the latter advised against any change (UGC, 1996). In its 1996 report, UGC pointed out that "the government provides 94% of the cost of educating a medical student, but only 70% of the cost of educating a humanities student"—a fact that seemed to be "near the limits of toleration in terms of equity, particularly when bearing in mind future earning potential". The Committee went on to state that it would not oppose to a simple fee differentiation scheme as long as it was accompanied by appropriate measures, such as "non-means-tested student loans, to ensure that no qualified student would be denied access to tertiary education through lack of means" (UGC, 1996).

The costs of higher education have increased significantly in most countries (Mayhew et al., 2004). There is no exception in the case of Hong Kong. In the early 1990s, the Hong Kong Government decided to recover 18% of the costs of university through tuition (Education Commission, 1996). As a result, from 1992-93 undergraduate tuition went up from HK\$11,600 to about HK\$31,000. In 2005 it is about HK\$42,000 per year, which is higher than most developed countries including U.S. public universities

(US\$4,200 on average, roughly HK\$32,000), Canada (Can\$3,800 on average, roughly HK\$25,000), England public universities (£1,100 on average, roughly HK\$15,000), and Australia (Aus\$5,000 on average, roughly HK\$28,000) (Swail & Heller, 2004). In the present study, over half of the participants' tuition will be paid mostly by parents. The second biggest group is those whose tuition will be paid mostly by loans and grants (37.2%, Table 37). The development of the loans and grants scheme in Hong Kong can be divided into three periods: before 1970, 1980-1990, and 1990 onwards (Chung, 2003).

Before 1970, financial assistance was allocated based on need so that no student who was accepted to a university would have to give up the opportunity due to lack of means. Means testing was used as the gate-keeping mechanism and in general needier student would gain a higher share from the central fund. Grants did not have to be repaid and loans were interest-free. From 1980-1990 the Government made the loans and grants scheme 'open-ended' by lifting the limit of the central fund. This reflected the Government's improved ability to monitor the financial needs of students enrolled in all eligible institutions. More stringent vetting and authentication procedures were introduced and the interest-free loan was finally replaced by a low-interest loan (2.5% per annum, commencing on graduation).

Then in 1990 the Student Financial Assistance Agency (SFAA) was established which marked a new phase of the student loan scheme in Hong Kong (Chung, 2003). As university tuition increased and also due to the rapid expansion of higher education in the territory, the number of students receiving government loans jumped from around 8,000 in 1989 to more than 28,000 in 1994. According to the Hong Kong Student Financial Assistance Agency Report (1996), two-thirds of the revenue generated from the policy of tuition fees cost-recovery had been offset by the increase in student loans and grants expenditure in 1992-93 to 1994-95. In 1998 a comprehensive non-means-tested loans scheme was introduced to supplement the regular loans and grants. Grants are intended to cover tuition, academic expenses, and student union fees, while loans are to provide for the living and personal expenses of students. The maximum amount of grant varies with different courses and levels of studies, ranging from HK\$18,100 (US\$2,350) to HK\$66,860 (US\$8,680) for undergraduate students in 2000-01. The maximum amount of loan is the same for all eligible student—HK\$33,450 (US\$4,340) in 2000-01. The amount of maximum grant and loan is adjusted annually. By and large Hong Kong seems to have a rather equitable and efficient student loans scheme with adequate funds from the government (Chung, 2003). And so with government subsidies and availability of loans and grants, and also considering

that fact many parents are willing (and able) to pay for their children's higher education, university students in Hong Kong in general do not seem to have to worry too much about paying for their degree programs.

Parents' Highest Level of Formal Education and Personal Aspiration

84.7% of the participants' parents (either father or mother) have not attained degree level education (Table 41). Only 15.3% of the participants have at least one parent who has obtained undergraduate or above qualification. This percentage is much lower compared with that in the U.S. where an average of 60% of mothers and 70% of fathers of freshmen having gone to college (O'Heron, 1997). The high percentage of first generation students (i.e., the first generation in one's family to go to university) in the present sample has important implications for student counseling. First generation students do not have parents who have university experience to advise them on academic matters or campus issues. The problem may intensify if students feel that they are not even getting emotional support from parents who are unfamiliar with university life. Student counseling services and student support programs thus become crucial in helping these students make a better transition from high school to university (O'Heron, 1997).

Close to 40% of the participants plan to get a master's degree and more than 10% are aiming at the doctoral level (Table 42). The proportions are clearly higher compared with that among the freshmen in the U.S. where only 20.2% intend to obtain a master's degree and a mere 2.6% plan to get a doctoral degree (HERI, 2004). International comparisons showed that Hong Kong has high level of student achievements (Postlethwaite, 1988; OECD, 2003; Education Commission, 2004). Though Friederichs' (1991) assessment of Hong Kong students' mindset and world outlook was a bit harsh, he admitted nevertheless that under the British rule students had grown to be competitive. Cheng (1998) shared his insights into the characteristics of the competitiveness of Hong Kong's students in an article written after the 1997 handover. Here are some of his main points. First, parents regard education as the proper and almost unique route for upward social mobility. The aspiration for education is internalized in most people's minds and often requires no concrete economic justifications. It is therefore rather unusual that a student would give up any opportunity to study in the university (which is not uncommon in the West). Second, competition in the society is viewed as normal and different respect given to people of different levels of educational background is accepted. Competition among students is also part of the culture where public exams are

everything, so to speak. Third, the educational system is dominated by a main stream leading to university education. Technical education and vocational training in Hong Kong are often seen as a secondary option. Fourth, there is an apparent emphasis on effort as opposed to talent. Failure in school achievements is often attributed to 'laziness' rather than to problems in ability.

A positive but weak correlation (.08, significant at the 0.05 level) is found between parents' highest level of education and participants' academic aspirations (Table 43). In comparison, participants' self-reported grade average is a stronger predictor for personal academic aspirations (Pearson's $r=.183$, significant at the 0.01 level). In other words, academic aspiration depends more on a student's actual academic ability. Among those who aspire to do a doctorate, 58.9% reported a grade average of B+ or above, while for those who plan to do a master's degree, only 32%.

Regarding gender difference, 53.7% of the female intend to do a master's degree, compared with only 47% of the male (Table 44). However, when it comes to aspirations to attain the doctoral level, only 10.8% of the female have such plans, compared with 19.3% of the male. These results partly confirm the figures given by the Commission on Youth (2003) in Hong Kong. In 2002-03, student enrolment of UGC-

funded programs by gender (scaled by population of enrolment per 100 people) revealed the following percentages: at the undergraduate level, 53.3% female and 46.7% male; at the taught postgraduate level, 48.5% female and 51.5% male; at the research postgraduate level, 39.4% female and 60.6% male. It is obvious that female students outnumbered male students in undergraduate programs, while the opposite was true in postgraduate programs, particularly in research programs. This phenomenon has been indirectly confirmed by some studies where girls perform as well as boys in varied academic tasks but nevertheless report lower self-efficacy, especially at higher academic levels (Pajares & Miller, 1995; Pajares & Johnson, 1996).

Reasons for Going to University

The top three reasons rated very important by the participants are (Table 45): 1. to learn more about things that interest me (73.2%), 2. to be able to get a better job (60.7%), and 3. to make me a more cultured person (54%). The other three reasons with more than half of the participants rated as very important include: 'to get training for a specific career' (53.1%), 'to gain a general education and appreciation of ideas' (53.0%), and 'to find my purpose in life' (52.6%). Significant gender difference is found only in 'to make me a more cultured person'

($t=3.093$, $df=649.054$, $p<0.01$, 2-tailed) where female participants on average rate this reason as more important (Table 46). Reynolds & Pemberton (2001) report that high school girls have significantly higher expectations about obtaining a college education than boys, whereas Martin & Hanrahan (2004) find that young women have higher expectations about the nature of the college environment, their own involvement in that environment, and the quality of interactions with both peers and faculty.

According to The American Freshman: National Norms for Fall (HERI, 2004), very important reasons for deciding to go to college include 'get training for a career' (78.4%), 'to make more money' (73.8%), 'to get a better job' (73.8%), and 'prepare myself for graduate school' (52.9%). Higgins et al. (2002) find in their study that a majority of students claim to be at university to gain qualifications (92%) and also because they enjoy learning (72%). Eskilson & Wiley report that the five individual goals rated most highly by both women and men include 'to have a warm caring relationship with another adult', 'to acquire mastery of skills for their occupation', 'to have a secure financial future', 'to have a comfortable relationship with their original family', and 'to be physically fit'. Women rate the family, social/political, spiritual, and support-by-spouse domains as more important than do men. Women

students are much more likely than men to consider attaining family goals as key to their future life satisfaction. Women are no different than men in their desire for economic success.

In the present study, only two reasons are rated by over fifty percent of the participant as somewhat important: 'to be able to make more money' (56.4%) and 'to increase my social status' (51.9%). Recall that 60.7% of the participants rate 'to be able to get a better job' as a very important reason to get a university education. Therefore, students in the present sample as a whole seem to have an instrumentalist view of higher education. This fits well with Cheng's (1998) observation that competition in the Hong Kong society and different respect given to people of different levels of educational background are generally accepted. The high salary differentials in Hong Kong make higher education a significant factor contributing to lifelong income differences. International comparisons show that Hong Kong is among the highest in terms of rate of return for higher education (Psacharopoulos, 1994). However, the expansion of higher education has reduced the relative income of graduates. But higher education will continue to be in demand with the overall upgrading of Hong Kong's work force.

When comparing differences among majors in reasons for attending university (Table 47), several points are worth mentioning. First, Fine Arts, Education, and Professional stand out as rating 'to get training for a specific career' generally more important than do Arts & Humanities, Social Science, and Science. The reason for this must be that students in the first group of majors usually have specific career goals such as being music performers, teachers, lawyers, or physicians. The latter group of majors, on the other hand, seems to have less specific—and therefore more varied—career options. Second, Business majors rate 'to be able to get a better job' and 'to be able to make more money' generally more important than do some other majors. Business is often associated with market, job, profit, and money. To study and learn about business is a natural way to secure a job and to make money. It is, therefore, highly probable that Business majors focus more on job and money. Third, Fine Arts and Arts & Humanities majors rate 'to learn more things that interest me' and 'to make me a more cultured person' higher than do one or two other majors. The association between Fine Arts and culture or between Arts & Humanities and learning seems rather natural. It is, therefore, not surprising that students majoring in Fine Arts or Arts & Humanities are more interested in personal development, learning, and culture.

What Participants Value about a University

Regarding the three top choices of what the participants value about a university, the results are not so clear-cut (Table 48). Out of the ten elements/values listed in the questionnaire, the top two choices are very close: 'graduates are generally successful in finding employment' (40.8%) and 'campus/social life is rich' (39.3%). The third one is 'flexible curriculum designs and innovative course delivery methods to accommodate students' needs' (36.8%), which is only 0.5% more than the fourth one, 'facilities are good' (36.3%). And so it seems that instead of three top choices, four comparatively more important choices have emerged.

Interesting similarities and differences exist among the majors (Table 49). First, the overall top choice value, 'graduates are generally successful in finding employment', is the top choice for Education, Business, and Engineering. Recall that one of the reasons for getting a university education is 'to be able to get a better job'. Within Education majors, 31.3% rate this reason as somewhat important and 67.7% very important. Within Business majors, 25.5% rate this reason as somewhat important and 72.4% very important. Within Engineering majors, 34.1% rate this reason as somewhat important and 63.4% very important. This probably explains why 'graduates are generally

successful in finding employment' is most important for these three groups of majors.

Second, the overall second choice value, 'campus/social life is rich', is top choice only for Science. This is somewhat surprising because one would have thought that 'facilities are good' (which comes in second for Science) should be more important to science students.

Third, the overall third choice value, 'flexible curriculum designs and innovative course delivery methods to accommodate students' needs', is top choice for Arts & Humanities and Social Science. This is also a bit surprising because these two groups of majors have relative lower user-friendly-course-delivery-method scale means compared with most of the other majors.

Fourth, the overall fourth choice value, 'facilities are good', is the top choice for Fine Arts, Technical, and Professional. The reason is likely that Fine Arts students need musical- or performance-related equipments, Technical students need hardware and machinery, and Professional students (e.g., medicine) need adequate laboratory facilities and apparatus. This value is second choice for Science and Engineering.

Fifth, the overall eighth choice value, 'responsive to students' ideas and suggestions', is top choice only for Communications. Second choice for Communications is

'provides learning opportunities for mature and/or non-traditional students/learners'. It may be that students studying Communications are more interested in interaction and negotiation among different ideas and opinions and therefore they tend to put more emphasis on students' needs.

Some gender differences are also note-worthy (Table 71). First, top three choices for female are 'graduates are generally successful in finding employment' (46.3%), 'flexible curriculum designs and innovative course delivery methods to accommodate students' needs' (42.8%), and 'campus/social life is rich' (39.0%). But for male the top three are 'facilities are good' (44.0%), 'campus/social life is rich' (39.6%), and 'graduates are generally successful in finding employment' (34.2%)—with a close fourth, 'professors are effective teachers' (33.9%). Second, there are four elements/values that have more than a 10% difference between female and male. A much higher percentage within female participants value 'flexible curriculum designs and innovative course delivery methods to accommodate students' needs' (15.0% more than the percentage within male), 'graduates are generally successful in finding employment' (12.1% more), and 'provides learning opportunities for mature and/or non-traditional students/learners' (10.9% more). A much higher percentage within male value 'facilities are good' (13.1% more than the percentage within female).

Table 71. What Participants Value about a University: Gender Percentage

Element	% within female	% within male
1. Facilities are good	30.9	44.0
2. Tuition fee is comparatively low	6.7	9.2
3. Campus/social life is rich	39.0	39.6
4. Learning atmosphere is competitive	26.3	32.3
5. Provides learning opportunities for mature and/or non-traditional students/learners	35.3	24.4
6. Professors are well-known scholars	13.2	14.9
7. Professors are effective teachers	33.0	33.9
8. Flexible curriculum designs and innovative course delivery methods to accommodate students' needs	42.8	27.8
9. Responsive to students' ideas and suggestions	18.2	24.4
10. Graduates are generally successful in finding employment	46.3	34.2

Differences among the majors and between the sexes have some implications for university student services including counseling. For example, employment issues are most likely very important for female Engineering students because 'graduates are generally successful in finding employment' is both top choice value for Engineering majors and for female students. Male Technical students, on the other hand, most likely concern themselves with matters related to campus or faculty facilities because 'facilities are good' is both top choice value for Technical majors and for male students.

Self-Efficacy in University Life

Concerning participants' self-efficacy in university life (Table 50), several points are worth mentioning. First, 'I will enjoy university life as a whole' is the only item where the majority of participants (51.2%) give an 'agree' response. Considering that the majority of participants give a 'neutral' response to the other four items, they may seem a bit over-confident in predicting that they will enjoy university as a whole. Krallman & Holcomb (1997), for example, found that incoming students often have unrealistic academic, personal, and social expectations.

Second, the majority of participants give a 'neutral' response to the following four items: 'I have a clear picture of what university life is about' (51.5%), 'I can adapt to campus life easily' (44.5%), 'I can handle most academic work well' (52.8%), and 'I did some informal inquiries and I know quite well what studying in this institution will be like' (51.4%). This is somewhat worrying because it reflects that most of the university entrants in the present sample are not too sure of their ability to cope with university life. If this is the case, then academic advising and student-support services become doubly crucial in helping students make a better transition from secondary school to university life. Third, several studies suggest that most students are over-confident about

their academic capabilities (Pajares, 1996; Pajares & Miller, 1994; Backett & Betz, 1989). In the present study this is only partially confirmed. Responding to the item 'I can handle most academic work well', 34.6% of the participants agree and 2.6% strongly agree, which are clearly higher than those who disagree (9.5%) and strongly disagree (0.5%). However, 52.8%—the majority—choose the 'neutral' response. Incoming freshmen in this study do not seem to be distinctly over-confident about their academic capabilities in the university.

Self-efficacy in university is found in the present study to be positively and significantly correlated with self-reported grade average, rank of choice of institution, and academic aspiration (Table 54). In academic setting, self-efficacy research tends to focus mostly on two major areas (Pajares, 1996): 1. the relationships among efficacy beliefs, related psychological constructs, and academic motivation and achievement (Bandura, 1993; Lent et al., 1986; Lent et al., 1984), and 2. the link between efficacy beliefs and college major and career choices (Farmer et al., 1995; Bores-Rangel et al., 1990). Bandura (1986) proposed that efficacy beliefs mediate the effect of skills or other self-beliefs on subsequent performance by influencing effort, persistence, and perseverance (Bouffard-Bouchard, 1990). In investigations in which self-efficacy closely

corresponds to the criterial task (instead of globally assessed) correlations between self-efficacy and academic performances have ranged from $r=.49$ to $r=.70$ (Pajares, 1996). Studies have shown that self-efficacy is a powerful motivation construct that works well to predict self-beliefs and performances at varying levels (Bandura, 1993).

In a study using cross-lagged panel design, Nauta et al. (2002) found that the results from the 3-month and 7-month time periods showed that relationship between career interests and self-efficacy is bidirectional. The results from the 4-month lag period, on the other hand, revealed a significantly stronger 'interest'-to-'self-efficacy' pathway (but the magnitude of the effect was small). According to Tracey (1998), interests may influence self-efficacy development in a motivational capacity. Studies by Lackland & De Lisi (2001), Trusty & Ng (2000), and Bergeron & Romano (1994) pointed out that rather than academic ability, students' perceptions or beliefs about their own abilities and their feelings of self-efficacy play a role in college major choice.

Comparisons of self-efficacy in university life scale means among the ten groups of majors in the present study (Table 55) reveal interesting results: significant mean differences are only found between Fine Arts and five other majors (Table 56). Lackland & De Lisi (2001) found that

English and helping profession majors generally scored higher than mathematics and science majors on academic self-concept, academic affective memories, satisfaction with major, expected graded in major, and intrinsic interest in subject matter. They concluded that the measures of academic self-evaluation and performances were higher in the majors that have a predominance of female to male students. In the present study, Fine Arts has the highest self-efficacy in university life scale mean; second is Communications and third is Arts & Humanities. In our sample female students are dominant in Fine Arts (70%) and Arts & Humanities (68.4%), but not in Communications (only 48.4%). Education has the highest percentage of female students (85.9%) and yet its self-efficacy in university life scale mean is the third lowest among the nine categories of majors. So at least in our Hong Kong sample high self-efficacy in university life is not distinctly gender related. This has been confirmed by the not-significant multivariate effect of gender (Wilks' $\lambda = .993$, $F = 2.22$, $p = 0.109$).

It should be pointed out that over 70% of the Fine Arts majors are music students and over 75% of the music students are from APA (Hong Kong Academy for Performing Arts). APA students are first in rank of choice of institution mean (tied with HKU, Table 24), fifth in

satisfaction mean (Table 28), second in self-reported grade average mean, and first in self-efficacy in university life scale mean. They compare surprisingly well with students from the top-tier universities in Hong Kong.

Lastly, the self-efficacy in university life scale mean difference between the age groups '21 or above' and '19 or below' is found to be significant (Scheffe, MD=.19, SE=.05, $p < 0.01$). In the present sample older participants as a whole are more confident in their ability to cope with university life. Recall that APA has the highest age mean (22.05, Table 16) and indeed, as pointed out earlier, APA ranks first in self-efficacy in university life scale mean.

Job-Oriented Curriculum Design

Referring back to Table 58, participants who are employed (full-time or part-time) value job-oriented curriculum design more than those who are not employed ($t = 2.248$, $df = 799$, $p < 0.05$, 2-tailed). This result is most logical in view of the former group of participants' work-related needs. It is safe to assume, therefore, that the more a student has to work, the more he/she will value job-oriented curriculum design in higher education. Close to 100% of the participants in the present study are full-time students. The cd-scale mean of the entire sample is 3.32 on a 5-point Likert-type scale (1=strongly disagree...

5=strongly agree). If a study were to be done on mostly part-time students, cd-scale sample mean should be comparatively higher. According to Hong Kong Annual Digest of Statistics 2004 (Census and Statistics Department, 2004), number of part-time undergraduate students in UGC-funded institutions were 4,687 in 1993, 3,759 in 1998, 3,258 in 2001, 3,501 in 2002, and 3,527 in 2003. The continuous drop from 1993 to 2001 was due to the expansion of full-time undergraduate programs which is evident in the growing number of full-time undergraduate students, from 36,295 in 1993 to 46,602 in 2003. The number of part-time undergraduate students has been on the rise again since 2002 despite the fact that undergraduate programs have not stop expanding. With more and more students working part-time while studying, job-oriented curriculum design becomes an increasingly relevant issue in higher education.

Referring back to Table 59, a significant cd-scale mean difference is found between 'age 21 or above' and 'age 19 or below' at the 0.05 level (Scheffe, MD=.14, SE=.05). One possible explanation for this is that older students are on average more likely to have part-time jobs. Within the 'age 19 or below' group, 39.3% are working while 60.7% are not. Within the 20 years old group, 44.9% are working while 55.1% are not. Within the 'age 21 or above' group, on the other hand, 57.1% are working while 42.9% are not.

So it seems that it is through its relationship to work status that age difference has a bearing on difference in cd-scale mean.

There is a significant cd-scale mean difference between UST and HKU (Scheffe, $MD=.28$, $SE=.06$) and between UST and CU (Scheffe, $MD=.27$, $SE=.06$), both at the 0.05 level. To see if employment status has a relationship with the mean differences among these three institutions, we check the relevant percentages: for UST, 40.8% of the participants are working and 59.2% are not; for HKU, 40.4% are working and 59.6% are not; for CU, 35.2% are working and 64.8% are not. Compared with CU, UST does clearly have a higher percentage of students working; when compared with HKU, however, the numbers are basically the same. So in this case, the cd-scale mean difference cannot be explained by the difference in employment status situation. Next we try to check if the students' response to the job-related item in 'reasons for going to university' has anything in common with the cd-scale mean results. Recall that one of the listed reasons for going to university is 'to be able to get a better job'. For UST, 66.7% of the participants rate it as very important and 32.2% rate it somewhat important; for HKU, 55.5% very important and 42.3% somewhat important; for CU, 57.7% very important and 39.4% somewhat important. We can see that UST has an obvious higher percentage of

students rating 'to be able to get a better job' as a very important reason for going to university. So it seems that students' employment status does influence their attitude toward job-oriented curriculum design, and their job-oriented motivation to attend university also may have a bearing on the extent to which they value job-oriented curriculum design.

Lastly, the cd-scale mean difference between Business majors and Arts & Humanities majors is also significant at the 0.01 level (Scheffe, $MD=.37$, $SE=.07$). To look for possible explanations for the difference, we compare the age distribution, employment status, and response to the 'to be able to get a better job' item of the two groups of majors (Table 72).

Table 72. Some Comparisons between Business and Arts & Humanities

Area of comparison		Business (%)	Arts & Humanities (%)
Age groups	19 or below	55.7	55.5
	20 years old	21.6	21.9
	21 or above	22.7	22.6
Employment status	Work	42.3	42.6
	No work	57.7	57.4
'To be able to get a better job'	Not important	2.0	2.5
	Somewhat important	25.5	41.0
	Very important	72.5	56.5

Business and Arts & Humanities have very similar—almost identical—age group distribution as well as employment status profiles. The big difference occurs in their response to 'to be able to get a better job' as a reason for going to university. 72.5% of the participants majoring in Business rate 'to be able to get a better job' as very important, whereas only 56.5% in Arts & Humanities do so. This confirms that there is a relationship between students' job-oriented motivation to attend university and their attitude toward job-oriented curriculum design in higher education. Indeed positive correlations are found between cd-scale mean, 'to be able to get a better job', and 'to get training for a specific career' (Table 73).

Table 73. Correlations between cd-Scale Mean, 'To be Able to Get a Better Job', and 'To Get Training for a Specific Career'

		cd-Scale mean	'To be able to get a better job'	'To get training for a specific career'
cd-Scale mean	Pearson's r	--	.351*	.295*
	N	804	799	802
'To be able to get a better job'	Pearson's r	.351*	--	.367*
	N	799	852	852
'To get training for a specific career'	Pearson's r	.295*	.367*	--
	N	802	852	855

*Correlation is significant at the 0.01 level (2-tailed).

Universities will value job-oriented curriculum design more and more as industries and employers are increasingly looking for graduates with market-sensitive knowledge and skills. UNESCO's 1995 Policy Paper for Change and Development in Higher Education (UNESCO, 1995) cited two parallel trends that determine the relationship between higher education and the world of work. First, higher education is moving toward massification as modern economies become increasingly knowledge-intensive and therefore depend more on graduates of higher education. Second, the increased likelihood of job change will be a reality and graduates must be ready to update their knowledge and learn new skills. Continuous partnerships with the private sector must be integrated into the overall activities of higher education.

The 1995 Report continued to point out that new conditions in the world of work have a direct influence on the aims of teaching and training in higher education. Merely increasing curriculum content and students' workload is not enough. Preference should be given to subjects that "develop students' intellectual capacity and allow them to deal judiciously with technological, economic and cultural change and diversity, equip them with qualities such as initiative, an entrepreneurial attitude and adaptability, and allow them to function with greater

confidence in a modern work environment." In light of this, higher education must develop responsive and pro-active attitudes toward the labor market. It has to be alert to changes in major market trends so as to "adapt curricula and the organization of studies to shifting circumstances and thus ensure greater chances of employment for graduates."

As evident in the present study, employment is of great concern to university entrants. The more intense this concern is, the more will students value and demand curricula that are job-oriented or market-sensitive. This in turn will result in higher education institutions seeking closer partnerships with the private sector. Caution must be taken, however, when higher education is caught up in the trend of marketization. Tasker & Packham (1993) stress the importance of understanding the different values between the higher education arena and the industrial sector. The purpose of higher education is to generate knowledge through collaboration between scholars in such a way that society as a whole benefits. The purpose of industry, on the other hand, is to generate profit for private gain, usually in competition with other companies. Such private profit may or may not benefit society and more often than not the concept of public good is not central to industrial operations.

Bottery (1999) also concurs that the core mission of an educational institution is different from that of the business community and education should not be seen as just a vehicle for wealth generation. Furthermore, the very purposes of educational management may be different from those of the business sector. To blindly borrow ideas and practices from the business world may not be beneficial to healthy development of higher education. Higher education is moving closer to corporate patterns of organization involving senior management teams, strategic plans, line managers, and accountable cost centers (Jarratt Report, 1985). The language of business and technology—such as 'marketing', 'customer', 'management by objective', and 'quality control'—is already accepted in the higher education arena. Educators and institutional leaders need to be aware of the unintended implications of these business terms and industrial metaphors and not lose sight of the most important characteristic of education: "that our material is living and thinking students who act and react, a fact that demands more dynamic evaluation and development procedures than routine quality control and prescribed assurance procedures can bring about" (Bauer, 1992).

User-Friendly Course Delivery Method

Continuous advancement in information technology has resulted in the integration of various forms of media into the instructional and learning experience. Computers and Web-based instruction have already made online and virtual learning possible. Though traditional face-to-face teaching is still the dominant mode of instruction in the academic world as a whole, information technology has given educators some alternative options of course delivery. IT technology-based instructional methods are often considered more user-friendly in the sense that learning no longer has to take place in a fixed location or at a prescribed time. With the dawning of the Internet age, the development of online programs has become an important issue in higher education. The idea of online learning often creates an impression of state-of-the-art technology and innovative teaching method (Szeto, 2000). Despite the fact that some institutions may use Internet learning as an image-building gimmick, it is nonetheless a technology as well as educational reality with which higher education players must grapple.

Gender difference in attitude toward computer and Web-based learning has been explored in various studies (Jiang & Ting, 1998; Smith & Necessary, 1996; Price & Winiecki, 1995). Moon (1994) found gender difference favoring men.

Bunderson & Christensen (1995) also reported a relatively lower level of female participation or persistence in courses and careers related to computer technology. Koohang (1989) as well as Siann et al. (1990) found that children at all levels perceived computers as a male-domain with beliefs more pronounced in the adolescent years. Newman et al. (1995) also discovered that girls were less likely than boys to view computers as part of their own group. Young (2000) reported that by 1996 figures, the percentage of women attaining degrees in computer science in the U.S. was less than 20% and women made up only about 35% of the high-tech work force.

Though most of the research on IT-related gender difference has results that favor men, there are studies that suggest otherwise. Hunt & Hohlin (1993), for example, found no relationship between gender and computer attitude. And contrary to most other studies, Sanders & Morrison-Shetlar (2001) found that females have a more positive attitude toward Web-enhanced instruction. In Young's (2000) study, though boys were more likely to claim computers as a male area, it was the females who viewed computers more useful for school and careers.

Results from the present study do confirm the findings of most studies on IT-related gender difference. Referring back to Table 61, females on average value user-friendly

course delivery method less than males do ($t=-2.040$, $df=800$, $p<0.05$, 2-tailed). Regarding the relation between employment status and dm-scale, it is natural to assume that participants who are employed will value user-friendly course delivery method more than those who are not working. The rationale is that students who work either full-time or part-time probably welcome the convenience and flexibility offered by user-friendly course delivery method a bit more. However, no significant difference was found between the 'work' and 'no work' group' (Table 61). Likewise no significant difference in dm-scale mean is found among age groups and among the ten categories of majors (Table 62). A marginal but significant difference is found between UST and HKU (Turkey HSD, $MD=.19$, $SE=.06$) at the 0.05 level. The difference is marginal because the conservative Scheffe post-hoc test failed to show a significant result; only by employing the more liberal Turkey HSD was it able to pinpoint the significant difference.

The dm-scale mean of the entire sample is 3.37 with a standard deviation of .52. This is not a high figure on a 5-point scale. This moderate figure does not, however, indicate that IT is not well-developed in Hong Kong's education system. According to the numbers given by the Education Commission (2004), 99% of Hong Kong's senior secondary students have knowledge of using computer and the

average duration of using computer per week is 23.8 hours. The three major purposes of using computer are Internet services, word processing, and playing computer game (offline). According to the Commission on Youth (2003), 91.9% of Hong Kong people aged 10-14 and 91.9% of those aged 15-24 had used Internet service in the past twelve months. On the other hand, teachers in Hong Kong public schools as a whole are also well-trained in IT (Education Commission, 2004). In 2002-03, 100% of the teachers had attained basic IT competency (knowledge of general computer skills and capability to operate readily available educational software), 75% had attained intermediate level (capability to use IT tools and teaching resources in classroom teaching and lesson preparation), 25% had attained upper intermediate level (capability to handle computer networking, resolve simple hardware and software problems, make use of authoring tools for lesson preparation and understand the characteristics and uses of different IT tools and resources), and 6.7% had attained advanced level (capability to advise on a wide range of matters relating to the use of IT in teaching, promote an IT culture in the school, develop school-based IT plans or teaching software, and manage the school's IT system).

So the reason for an only moderate dm-scale sample mean is not the overall lack of IT or awareness thereof in Hong

Kong higher education. Rather, there is probably a twofold explanation that has to do with the students on the one hand, and the institutions on the other. First, in Mistic's (2001) study of student attitudes toward online learning in a university in Hong Kong, students showed a slight preference for traditional classroom instruction over online lectures. Their preference for the traditional approach to learning was also confirmed by the fact that the majority of the respondents preferred to have printed lecture notes even though they can access the online lectures any time. In another study by Ha (2001), however, it was found that for those who were enrolled in online courses, most of the respondents preferred online learning to face-to-face setting. If online learning offers flexibility and convenience, then why were there still at least 25% of the respondents favored the traditional approach? The reasons for those who preferred face-to-face learning include: 1. attending lectures gives them a clue how much has been covered in the course, and whether they are lagging behind in their study; 2. the instructor is usually able to judge from students' non-verbal cues if they understand the materials or not and proceed to take necessary remedial measures (in an online lecture, this will never happen); and 3. in a lecture, if students encounter something they do not understand, they can always consult their neighbors—so even in a 'quiet' class, there

can still be immediate interaction among the students. Ha went on to conclude that students in his study were moderately receptive toward the Web as a medium for learning. However, he also cautioned that "most of the students at our university have been educated in the traditional face-to-face mode for years before they got into university, classroom learning is naturally something they are very accustomed to". Actually in the Hong Kong society as a whole, Internet-based instruction is also not yet a popular mode of continuing education. Based on a 1999 survey of 542 households, Shen et al. (2002) reported that only 3% of those who were aware of the existence of online-courses actually participated in them. When asked whether they would be interested in doing so in the future, 72.5% chose 'not interested'.

Second, on the institution side, implementation of online learning in Hong Kong higher education still has much room for improvement. Yeung (2001) investigated whether the quality benchmarks identified in the Web-based learning literature were valid in the higher education sector in Hong Kong. His study focused on the perspective of academic staff who have been involved in managing, developing, monitoring or teaching Web-based courses in local tertiary institutions. The overall outcome was that the institutions basically identified with most of the

benchmarks for quality assurance of Web-based learning. However, there was an obvious gap between acknowledging the importance of those benchmarks and actually implementing what was important. Chiu (2001) also did a small study on teaching staff's attitudes toward IT implementation in two universities in Hong Kong. 75% of the respondents indicated that their main difficulty in developing Internet materials is lack of time and 50% of them cited the lack of manpower support from the institution. Szeto (2000) interviewed a group of thirty-four Internet education stakeholders in Hong Kong (from six tertiary institutions and two commercial providers) and concluded that the skill competency level, technology infrastructure and social acceptance were quite mature. However, universities would adopt Internet learning only if it fits their traditional culture as well as meeting a cost-effective standard. Heavy workload in preparing online learning material was also cited as one of the major problems. Furthermore, most of the respondents denied that there is a direct relation between using Internet learning and students' learning performance.

University students in Hong Kong in general are still more accustomed to the traditional approach to learning. The implementation of IT in teaching in higher education in Hong Kong, on the other hand, is not as smooth as one would

have expected. With the exception of OpenU, perhaps, most of the higher education institutions in Hong Kong still have much ground to cover with regard to integrating online learning into the mainstream course delivery mode. It is somewhat of a surprise that OpenU participants in the present study do not have a higher dm-scale average mean. In fact, with a dm-scale mean of 3.33, they rank only sixth among the nine institutions. It may have to do with the fact that all participants from OpenU in this study are enrolled in face-to-face programs. UST, on the other hand, came out on top with a dm-scale mean of 3.47. According to Ha (2001), the Center for Enhanced Learning and Teaching (CELT) at UST, in partnership with the associate deans of four UST Schools received funding from a University Grants Committee Teaching Development Grant to implement an easy-to-use Web-based course delivery platform to support different faculty at different levels of adoption across various disciplines. Since December 1999 a total of 200 courses have been created using one of the two Web-based learning management systems available at UST, namely WebCT and LearningSpace. This may account for the more positive attitude of the UST sample toward user-friendly course delivery method.

We must always remember that though IT technology and the Internet certainly makes course delivery more user-friendly,

they are only tools. More than twenty years ago Richard Clark (1983) had already cautioned that the content and the way in which it is presented to students is the essential element in learning, not the medium through which instruction is delivered. The mere presence of technology does not imply learning. Mellon (1999) said it with insight that "caught up in the joy of seemingly limitless multimedia capabilities, learner motivation often gets lost". No matter how much IT has made learning convenient for us, ultimately it is the learner's willingness or ability to learn that is most important. Besides, the learning styles literature has informed us that there is no single method of instruction that is best for everyone (Morgan, 1997; Sims & Sims, 1995). In addition, no matter how valuable IT is in the education arena, it must be aptly employed by teachers and instructors. Technology is no substitute for effective teachers and teachers vary in their teaching approach and enthusiasm toward IT. Making teachers use technology without adequate training and support will not improve student performance. To conclude with the words of Mellon (1999), "technology cannot guarantee learning, students cannot be forced to learn, learning styles differ widely, and teachers are more important than even the most sophisticated educational tools".

Opportunities for Lifelong Learning

The 11-scale sample mean of 3.62 (SD=.49) is the highest among the three expectations scales (Table 69). It shows that university entrants in the present study as a whole have higher expectations in opportunities for lifelong learning in higher education compared with their expectations in job-oriented curriculum design and user-friendly course delivery method. There is no significant result when comparing 11-scale mean differences between sexes, between employment status, among age groups, and among majors. The only significant result is found for HKU-OpenU (Scheffe, MD=.29, SE=.07) at the 0.05 level (Table 65). This is somewhat puzzling for two reasons. First, though there is no significant age group 11-scale mean difference, older participants do, as expected, have a slightly higher average mean: 3.61 (SD=.48) for age 19 or below, 3.62 (SD=.49) for 20 years old, and 3.63 (SD=.53) for age 21 or above. The mean age for OpenU is 21.14 and for HKU is 20.17. Despite its older students, OpenU has a lower 11-scale mean (3.47, SD=.47) than HKU (3.76, SD=.44). Second, recall that one of the elements that participants value about a university is 'provides learning opportunities for mature and/or non-traditional students/learners'. It seems natural that if students value this element more, they should have higher

expectations in opportunities for lifelong learning in higher education. 38.6% of OpenU participants have chosen this element as one of the three most important things they value about a university, while only 25.9% of HKU participants do so. In other words, compared with HKU, OpenU has 12.7% more students who value learning opportunities for mature learners in the university. In fact, OpenU has the highest percentage among the nine institutions and HKU has the second lowest. But surprisingly OpenU does not have a comparatively high 11-scale mean—on the contrary, it has the lowest among the institutions! HKU, on the other, has the second highest 11-scale mean.

One possible explanation for the significant 11-scale mean difference between HKU and OpenU may have to do with participants' academic aspirations. Among HKU participants, 54.6% intend to attain the master's level and 15.5% aim a doctorate. Among OpenU participants, only 40.6% aspire to earn a master's degree and 10.9% a doctorate. It is possible that in students' mind, the higher the academic level (in terms of postgraduate degrees) one aspires, the more years one must spend in the academia, and hence one tends to value lifelong learning more. Although lifelong learning means much more than simply earning progressive academic degrees, the above reasoning seems to make sense

in view of the present data. Furthermore, the significant correlation between academic aspiration and 11-scale mean (Pearson's $r=.202$, $p<0.01$, $N=616$) does confirm this observation.

The Education Commission's report, *Learning for Life, Learning through Life: Reform Proposals for the Education System in Hong Kong* (2000), marked a conspicuous beginning of official emphasis on lifelong learning in Hong Kong. Citing changes around the world as background to the proposed education reform, the report stated, "Most jobs require a considerable amount of knowledge which needs to be constantly updated. As the job requirements change, people nowadays need to master knowledge in different domains. Therefore, in a knowledge-based society, people must keep on learning. Many countries have already adopted 'life-long learning' as their national policies and have made it their priority task to provide life-long learning opportunities for their people." Concerning the new role and functions of education, the report continued to say, "In the tide of changes, everyone has to meet new challenges. Adaptability, creativity and abilities for communication, self-learning and cooperation are now the prerequisites for anyone to succeed, while a person's character, emotional qualities, horizons and earning are important factors in achieving excellence. 'Lifelong

Learning and All-round Development' is our expectation of everyone in this era. Education is infinitely important for everyone".

The Education Commission's report 2000 envisaged a diversified higher education system that comprises universities (degree-awarding educational institutions), post-secondary colleges (institutions which offer courses above secondary school level), and continuing education institutions (those continuing education institutions which provide different types of courses above secondary school level). This system should contain the following features:

- (1) Student-focused: students can choose learning modes and channels according to their abilities and needs, rather than being determined by teacher's arrangements or administrative convenience of the institutions;
- (2) Flexible academic structure: to facilitate the individual development of students and cater for the ever-changing needs of society;
- (3) A transferable credit unit and qualification system: tertiary institutions should work toward a transferable credit unit and qualification system among themselves so that credit units and qualifications acquired by students in different institutions will be duly recognized;
- (4) Diversity: tertiary institutions should develop their strengths into areas of excellence (some may focus more on employment-related education while others on

students' development in other areas) so as to promote diversity in the mode of education and participation of different sectors; (5) Multiple entry and exit points: so that students can join, suspend or continue their higher education studies at any stage in their life according to their own needs and circumstances—and the credits they have accumulated from completed learning units will be duly recognized when they resume relevant studies in future.

The guidelines adopted by the Education Commission seem to echo the criteria conducive to the participation of non-traditional students summarized by Schuetze & Slowey and share similarities with Dunkin & Lindsay's proposed institutional strategies for the implementation of lifelong learning policies. Schuetze & Slowey's (2000) criteria are drawn from case studies of ten countries including Austria, Germany, Ireland, Sweden, U.K., Canada, U.S., Australia, Japan, and New Zealand. (1) Governance and control: decentralization of decision-making from central state bureaucracy and an increase of institutional autonomy will enhance institutional flexibility in organization of study, curriculum design, fine-tuning of institution's profile and emphasis, as well as service to the community. (2) Institutional differentiation: increasing differentiation contributes to greater specialization. With institutional differentiation traditional research universities can

choose to concentrate on their traditional missions of research, leaving the task of catering for non-traditional students to newer, more vocational- and practice-oriented institutions. (3) Flexible (open) admissions criteria: to provide special entry routes for non-traditional students which grant admission either on the grounds of specific characteristics of learners (e.g., their work experience) or on the basis of specific entrance examinations or requirements. (4) Participation and mode of study: the existence of modes of study that accommodate the particular needs of non-traditional learners is important for their actual participation, e.g., open/distance learning possibilities, Web-based instruction, modular courses, credit transfer, and part-time study. (5) Financial and other support: to encourage participation of non-traditional learners, funding should be available for studying in a part-time mode or at a distance, for short-term vocational programs, for those living in rural areas, for the disabled, and also childcare for single parents. (6) Continuing education opportunities: lifelong learners often seek shorter courses or non-credit programs and there is a trend for the provision of professional continuing education moving away from the periphery of the institutions toward core units.

Dunkin & Lindsay (2001) listed four common strategies for higher education institutions to implement lifelong learning policies. (1) Focusing on graduate attributes: institutions are specifying desired attributes (or student outcomes) for their graduates, usually by drawing on standard formulations of generic skills such as communication, enquiry and research, critical thought and analysis, problem-solving, teamwork, numeracy, information literacy, and effective use of technology. (2) Greater flexibility in awards: the traditional broad degree structures in arts, science and business have been complemented by more specialist 'tagged' degrees (i.e., specifying the special area of study in parenthesis, such as Bachelor of Arts (Cultural Studies)) or specialist degree titles such as the Bachelor of Educational Psychology. As for graduate programs, specialist certificates and diplomas as well as professionally oriented master's courses are increasingly more common. (3) Greater flexibility in delivery: most adult learners have family and work responsibilities and the reduction or removal of requirements for attendance or time schedules will directly encourage their participation in lifelong learning at higher education institutions. Advancement in IT has made Web-based and real-time distance learning possible which offers the flexibility and convenience

valued by non-traditional learners. (4) Using cooperative alliances to enhance competitiveness: the development of sophisticated interactive learning packages often requires levels of investment that are beyond the resources of a single institution. Cooperative alliances between institutions can better meet the diverse needs of a wide range of student backgrounds. This will also facilitate the development of a system of credit transfer among consortium members.

Kehm (2001) observes that in most European countries institutions tend to react to the new challenges related to lifelong learning implementation in two ways. First, the talk of lifelong learning has become a politically-correct issue but institutions in general have to struggle with the lack of structures, funds, and incentives. As a result the demand to reform "is often met by rhetoric and a simple replacement of the term 'continuing education' by that of 'lifelong learning' without any change in practices and provisions". Second, some pilot projects and new models are integrating the concept of lifelong learning into university programs, notably in the U.K., France, and Germany. Efforts like this have contributed to the ongoing reform agenda in Europe.

Regarding the development of lifelong learning in Hong Kong, Kennedy (2002) concluded his article on the

convergence of higher and continuing education (for lifelong learning) in Hong Kong with these words, "If the latest Education Commission proposals for educational reform in Hong Kong are to be realized, the relationship between higher education and continuing education will need to be reframed. I have touched on three possible frameworks for change: the construction of a qualifications ladder for post-secondary education in Hong Kong, a reappraisal of traditional academic identities and a reformulation of organizational structures for tertiary education. The opportunity now exists for continuing education and higher education providers to join forces and help realize a vision of Hong Kong as a lifelong learning community".

In a more recent article, Kennedy (2004) argues that the issue of lifelong learning has been used by the Hong Kong government "to make it appear decisive in the face of rising youth unemployment, to expand post-secondary education without increasing public spending, and to justify the introduction of a qualifications framework that, as a policy instrument, will give the government greater control over post-compulsory education and training in Hong Kong". Kennedy makes it clear that he is not suggesting that the government plotted in advance how the issue of lifelong learning might be advantageously deployed; rather,

by reacting to the growing global demand for lifelong education, the Hong Kong government has taken the opportunity to use continuing education as a 'Trojan horse' for changes that are now applied to public-funded educational institutions in Hong Kong. Kennedy further points out that lifelong education has been deemed important for the entire Hong Kong education system, but continuing education is still at the end of the government's priority list: "The fact that chapters on continuing education appear at the end of government reports is not merely a matter of sequencing—it reflects a view of continuing education as an afterthought, to be addressed after 'mainstream' education has been dealt with".

As of 2004, higher education institutions are offering 542 open education programs at tertiary levels for school leavers and adult learners in Hong Kong (Zhang et al., 2004). According to Zhang et al, the major suppliers of such programs include OpenU (115 programs), HKU (39 programs), CU (68 programs), PolyU (25 programs), CityU (35 programs), and BU (39 programs). Data on lifelong learning in Hong Kong can only be gleaned from statistics relating to continuing education. In their article 'A Profile of Hong Kong Adult Learners: A Survey of the Demand for Continuing Education in Hong Kong', Shen et al. (2002) reported some results based on a 1999 survey of 542

households. The overall percentage of respondents who had experienced continuing education was 45% in 1999, compared with 42.8% in 1991. The two most significant increases were in degree courses (from 4.2% to 8.2%) and post-graduate courses (from 1.4% to 4.5%). Clearly, more adult learners in Hong Kong are pursuing higher-level continuing education qualifications than before. Computer courses were the most popular—increased from 15.3% in 1991 to 25% in 1999. Regarding the profiles of the continuing education participants, they were in general younger, better educated, more likely to be female, and had a higher income than the sample population. The falling participations rates of the lower educated and lower income groups in the population cause concerns. Results of the survey suggest that those in the lower strata of the society are not benefiting from continuing education—this will lead to further widening of the knowledge gap. The top motivation for continuing education participation was 'to improve job skills/competitiveness' (increased from 33.1% in 1991 to 38.9% in 1999). Obviously continuing education or lifelong education in Hong Kong has become more career-oriented. In 1991, only 19.4% of the respondents cited 'course fee too high' as a deterrent to engaging in continuing education. But in 1999, the percentage jumped to 43%. This may reflect the impact of the post-1997 economic downturn in Asia. Shen et al. also

inferred, based on respondents' expenditure on courses, the market size of continuing education in 1998-99 to be from HK\$6.8 to HK\$9.3 billion (US\$0.9 to US\$1.2 billion). Now with the Hong Kong economy on the rise again, the total annual expenditure on continuing education is likely to pass the HK\$10 billion mark.

Student Consumerism

Females in the present study in general have a lower consumerist orientation than males ($MD = -.12$, $SE = .04$) and the difference is significant at the 0.01 level. Recall that females rate 'to make me a more cultured person' significantly more important as a reason to attend university than do males (Table 46). As for the reason 'to find my purpose in life', also a higher percentage in females (54%) than in males (50.9%) rate it very important. And though there are more females rating 'to be able to get a better job' as very important, it is the men who are more concerned about money: 36.4% of the males rate 'to be able to make more money' as a very important reason to go to university, while only 30.7% of the females think likewise. It may be argued, therefore, that male students in general put more emphasis on the pragmatic aspects of higher education, while female students stress more on self-development aspects. In addition, male students (24.4%) value 'responsive to student's ideas and suggestions' as an

important element in a university more than do female students (18.2%). It seems that males want institutions to accommodate their wishes more. In this regard, they may be more likely to adopt the get-what-one-pays-for attitude of consumers.

When comparing among institutions, APA stands out with significantly higher sc-scale mean than IEd, CU as well as HKU. Though not significantly higher than other institutions, OpenU ranks second in sc-scale mean ($M=3.23$, $SD=.42$), preceded by APA ($M=3.28$, $SD=.48$). APA and OpenU are the only two institutions in this study that are not funded through the UGC (but they are still funded by the government). Though not a UGC-funded institution, APA nonetheless follows the advice given by UGC to charge about HK\$42,000 tuition for its degree programs in 2005. The tuition fees for face-to-face undergraduate degree programs in OpenU are basically the same as in UGC-funded institutions, except that for Year 3 and Year 4 the annual tuition is about HK\$49,000 instead of HK\$42,000 (also, some programs, such as BSc in Applied Science, cost just a little bit more). And so tuition does not seem to be the reason for a comparatively higher sc-scale mean among APA and OpenU participants. Perhaps it is possible that being not UGC-funded institutions they give people the *impression* that somehow these two institutions may be more accountable

to fee-paying students than to some overseeing government agencies. This may then lead to APA and OpenU students' inclination toward viewing themselves as 'customers' of these two institutions rather than recipients of government-aided higher education.

When comparing among categories of majors, a marginally significant sc-scale mean difference was found for Fine Arts-Education (Table 68). It was a marginal case because Scheffe post-hoc test failed to pinpoint the significant results. It was only by using the less conservative Turkey HSD test that the significant difference between Fine Arts and Education was identified. The exact significance is 0.047, which is only 0.003 less than 0.05. In the present study, over 70% of the Fine Arts majors are music students and over 75% of the music students are from APA. As stated in the previous paragraph, APA ranks first in sc-scale mean among the institutions. It is, therefore, not a surprise that Fine Arts ranks first in sc-scale mean among the various majors.

The sc-scale mean of the entire sample is 3.05 (SD=.49), which is lower than all three expectations scales (cd-scale mean: 3.32, dm-scale mean: 3.37, and ll-scale mean 3.62). 3.05 is very close to the middle (i.e., 'neutral') on a 5-point scale. It seems that participants in this study are somewhat ambivalent about the 'student consumerism' concept.

This becomes clearer when we take a look at the statistics of some individual items of the sc-scale. For item sc1 ('the relationship between a university and its students is similar to that of a service provider and its customers'), the results are: 4.2% strongly disagree, 34.8% disagree, 41.3% neutral, 18.3% agree, and 1.4% strongly agree. For item sc2 ('I consider myself a 'customer' of the educational institution I am attending'), the results are: 9.7% strongly disagree, 38.2% disagree, 38.6% neutral, 12.7% agree, and 0.8% strongly agree. These two items put forth the notion 'students-as-customers' explicitly and we notice that clearly more participants are on the 'disagree' side than on the 'agree' side. For item sc8 ('when higher education becomes more and more costly to students, they should be protected by consumer's law'), the results are: 2.2% strongly disagree, 12.1% disagree, 49.4% neutral, 30.1% agree, and 6.2% strongly agree. For item sc10 ('as students are asked to contribute more to the cost of higher education, universities should become more 'consumer-friendly)'), the results are: 1.7% strongly disagree, 11.5% disagree, 57% neutral, 27.4% agree, and 2.4% strongly agree. These two items deal explicitly with the costs of higher education and in both of them 'students-as-customers' is only implied. Contrary to the statistics in sc1 and sc2, now a lot more participants are on the 'agree' side.

By looking at the statistics of the four sc-items above, it seems that most participants do not agree with the **explicit** view that students are customers of higher education institutions or that students are consumers of higher education. But when the rising costs of higher education to students are factored into the equation, most participants tend to identify with the **implicit** view that students can be seen as consumers of higher education. This may account for the 'neutral' tendency of the entire sample in the sc-scale when the statistics of the individual sc-items are even out.

Davies (2002), citing Graham (1998), summarizes what today's customers are looking for: accurate information that enhances their understanding; flexibility and choice/options; communication with service-providers and consulting; single source service; cutting edge technology; creativity and innovation; and honesty and authenticity. He warns that if higher education institutions follow an overly commercial 'customer service focus', the values and objectives of academics will be diluted or simply lost.

The 'students-as-customers/consumers' terminology has already appeared in articles that deal with higher education in Hong Kong. Zhang et al. (2004) described the development of an academic program preference inventory in their article, 'Research Collaboration between Open

Education Providers and Consumers in Developing an Academic Programme Preference Inventory in Hong Kong'. Mok's (1999), 'The Cost of Managerialism: The Implications for the 'McDonaldisation' of Higher Education in Hong Kong', talked about how strong market forces had caused universities to become more concerned with employable graduates to suit employers' demands and how higher education institutions were re-orienting themselves to be more sensitive to market needs and treating students as clients or customers.

To view education as a marketplace requires that university staff and faculty maintain satisfied customers (Delucchi & Smith, 1997b). It may be difficult, Higgins et al. (2002) argue, for students not to have a 'consumerist awareness' in light of rising costs of higher education and increasing competitiveness for graduate jobs. But it is wrong to assume that today's students are simply market-driven 'consumers' of higher education. Higgins et al.'s study suggested that students may have a consumerist awareness alongside intrinsic motivation and that they do enjoy learning in universities while concerning about employment. Besides, unlike a conventional customer, universities students do not have full freedom of choice with the product (i.e., education); in fact, they might not even be 'qualified' to buy the 'product' (Pitman, 2000). Sharrock (2000) said it with much wit, "whether students

pay fees or not, calling them customers obscures the fact that 'going to university' isn't the same thing as going to McDonald's, or staying at the Hilton. The analogy doesn't work because in the marketplace, there's no-one at the door to assess whether you're qualified to eat those fries, or rent that room. And when you leave, no-one assess whether you're now qualified to go and practice what you've learned. In this respect universities aren't just service providers, but regulators and standard-setters. They incur risks when they underplay these roles. If you call students customers, charge them full fees, then fail them, there's a fair chance that they'll sue you—especially if the teaching falls short of their expectations".

Along the line of Sharrock's argument, Delucchi & Korgen (2002) are also the opinion that while material objects such as dormitories and student centers may be made more 'consumer friendly', the classroom should not be judged by such standards because the teacher-student relationship is not intrinsically economic. Shepperd (1997) proposes to view students as junior partners in the enterprise against ignorance. Riesman (1980) concurs by pointing out that students are, as a matter of fact, both the producers and the consumers of their own educational development—they don't 'buy' an education in the way we buy a car. If students are encouraged to view themselves as consumers of

higher education, their behavior as comparison shoppers in an academic supermarket will eventually lead to possible irresponsibility. There is also the danger that an undue emphasis on customer service in higher education inverts the professor-student relationship by vesting authority in students as consumers who want to be served and pleased (Long & Lake, 1996). As a result, professors may be reluctant to hold students to high standards of performance and those instructors who refuse to give easy grades may be unfairly penalized.

Market forces are forever shifting and changing. Entrepreneurs must always keep focus on who the customers are and what they want (or how their preferences can be influenced by marketing). In higher education, however, the direct users—i.e., the students—may not be the only beneficiaries. Higher education exists not just as a tool of the society for economic ends, but, more importantly, for the cultural as well as spiritual growth of the community. Societies need scientists, businessmen as well as historians and poets. There is no doubt that higher education needs to adapt to the changing environment and constantly examine its role in the society, but adaptations should be negotiated instead of simply 'go with the flow' (Sharrock, 2000). Furthermore, it is absurd to determine the relative worth of different forms of knowledge by

"adding up their intrinsic virtues, their social benefits, their market value and their economic utility, subtracting the associated costs, and comparing results (Sharrock, 2000). The challenge for universities is to learn from the disciplines of business without becoming one. For sure we need money to run a university, but financial considerations are not everything and the 'customers' (students) are not always right (Scott, 1999). Running a higher education institution as though operating a business will likely sacrifice the ultimate mission of the university—teaching and challenging young people to become knowledgeable, creative, and constructive citizens.

CONCLUSION

Based on data from 857 first-year undergraduate university entrants from nine higher education institutions, a general picture of today's full-time undergraduate students in Hong Kong and their certain expectations of higher education can be described as follows:

- Over 90% of the students are local Chinese. Gender distribution of the student population is 60% female and 40% male. The majority of the students are 19 years old and the second biggest group is those who are between 21-24 years old (closely followed by the 20 years old group). Almost 100% of the students are single.
- 32% of the students have family monthly income less than HK\$10,000, 33% from HK\$10,000 to HK\$19,999, 18% from HK\$20,000 to HK\$29,999, and 17% from HK\$30,000 up. 57% of the students' parents are paying for their higher education and 37% of the students rely mostly on loans and grants. About 45% of the students are employed (mostly part-time). For those who have part-time jobs, they work on average 5 hours per week. Students with lower family income and those who rely on loans and grants are more likely to have part-time jobs.

- 63% of the students obtain first-choice institution placement. About 50% of all the students are very satisfied with being able to attend the institutions to which they are assigned. 39% of the students report to have an average academic grade of B and 29% A-/B+.
- 85% of the students are first generation students (i.e., the first generation in one's family to go to university). 39% of the students plan to study for a master's degree and 11% aspire to get a doctorate. Most of the students plan to enroll in the following five categories of majors: Arts & Humanities, Social Science, Science, Business, and Education.
- The three top very important reasons for going to university are: (1) to learn more about things that interest me, (2) to be able to get a better job, and (3) to make me a more cultured person. The three top somewhat important reasons are: (1) to be able to make more money, (2) to increase my social status, and (3) to prepare myself for graduate or professional school.
- The four things that the students value most about a university are: (1) graduates are generally successful in finding employment, (2) campus/social life is rich, (3) flexible curriculum designs and innovative course delivery methods to accommodate student's needs, and (4) facilities are good.

- As a whole the students have moderate self-confidence in adapting to university life. On a scale from 1 (strongly disagree) to 5 (strongly agree), the mean score for 'I have a clear picture of what university life is about' is 3.22., yet the mean score for 'I will enjoy university life as a whole' is 3.70. This discrepancy indicates that students in general may have over-estimated their ability to cope with university life. Older students tend to have higher self-efficacy in university life. Fine Arts students also believe they can adapt to university life better than students in other majors.
- Students have moderate expectations regarding job-oriented curriculum design in higher education. Students who have jobs or are older have higher expectations than those who are not employed or younger. Students with job-oriented motivation to attend university also have higher expectations. Students majoring in Business value job-oriented curriculum design relatively more.
- Students have moderate expectations regarding user-friendly course delivery method in higher education. Male students tend to have higher expectations than female students.

- Students have moderate to high expectations regarding opportunities for lifelong learning in higher education. Students with higher academic aspirations seem to value opportunities for lifelong learning more.
- Students as a whole are ambiguous toward the concept of student consumerism. They do not agree with the explicit idea of students-as-customers/consumers in higher education. But they seem to identify with an implicit consumerist attitude when students have to bear increasing costs in higher education. Male students on average display more consumerist attitude toward higher education. Fine Arts students also score relatively higher in the student consumerism scale compared with students in other majors.
- UST students have relatively higher expectations in job-oriented curriculum design as well as user-friendly course delivery method in higher education. HKU students have relatively higher expectations in lifelong learning opportunities in high education. APA students have relatively higher self-confidence in adapting to university life and they also score higher in the student consumerism scale.
- Students from the three top-tier universities (CU, HKU, and UST) in general score higher in rank of choice of institution, level of satisfaction in being able to

attend the institution, and self-reported academic grade average. Students from APA also have rather competitive scores on average.

Understanding who the students are and what they are like is the first step in ensuring quality higher education. Student expectations in the context of institutional services can be categorized into two groups: academic factors (such as teaching quality, course content, and teaching method) and non-academic factors (such as health service, financial service, and accommodation). A study by Hill (1995) suggests that with respect to academic-related factors, student expectations appear to be fairly stable, whereas for non-academic factors, their expectations tend to increase over time. Sometimes new university entrants, however, do not know what to expect in university life. Sometimes they might have unrealistic expectations or preferences. Our job is, then, to sensitively manage these expectations or preferences to more appropriate levels (Sander et al., 2000).

Competition among higher education institutions for students is already a reality. Vigorous marketing by these institutions is affecting student expectations and there seems to be a danger of 'over-selling' an institution (James, 2002). But No matter how much or how little we talk about meeting students' needs, to facilitate genuine

student learning should always be the primary goal of higher education institutions. The challenge for higher education institutions is to strike a balance between concern for performance and concern for the students (Boyd, 1999). The purpose of higher education—or education in general, for that matter—is more than sustaining economic growth of the society. Higher education needs to emphasize the overall development of students, including their attitudes, values, and intellectual development (Romainville, 1999).

To monitor, respond to, and shape students expectations requires conscious efforts from the teaching staff as well as the student support team. Removing the barriers between traditional academic and student administration worlds can help foster better collaborative efforts in meeting students' needs (McInnis, 2003; Kezar, 2001). Inter-institution collaborative development of student affairs in Hong Kong is an encouraging step forward in student support services (Wong, 1999).

In 1993, the working group behind *An American Imperative* (Johnson Foundation, 1993) said that to achieve both domestic tranquility and economic prosperity, they must educate more people and educate them far better. Given the diversity of American higher education, there could be no single formula for change common to all, but

they believed that there were at least three fundamental issues common to all 3,400 colleges and universities: (1) taking values seriously, (2) putting student learning first, and (3) creating a nation of learners.

This is also true in the context of today's higher education in Hong Kong. Student expectations in the new millennium will continue to evolve and there is no single formula to deliver the best higher education for the students. Change brings uncertainty as well as opportunity. As long as higher education institutions are constantly sensitive and responsive to the concerns and expectations of students, parents, and other stake holders, higher education in Hong Kong will continue to contribute significantly to the betterment of the community in the new millennium.

LIMITATIONS

Concerning Sampling

First, the present study focuses only on degree-awarding institutions. Higher education in Hong Kong, however, comprises more than the institutions included in this study. Results from this study cannot be generalized to other higher education institutions that do not offer degree programs.

Second, though the author attempted to include all twelve degree-awarding higher education institutions in Hong Kong in the present study, only nine are willing to participate. In other words, this study covers 75% of degree-awarding educational institutions. Though rather representative in terms of percentage of degree-awarding higher education institutions in Hong Kong, the coverage is nonetheless not comprehensive.

Third, subjects in the study are incoming freshmen in the fall semester of 2005. Therefore results of the study speak only of university undergraduate entrants and are not readily applicable to other senior university students, those enrolled in graduate schools, and students in sub-degree programs.

Fourth, almost 100% of the subjects in the study are full-time students. Full-time students and part-time

students probably—and understandably—differ from one another both in their demographic characteristics, learning profiles (e.g., learning strategies and motivational issues) as well as attitudes and expectations. Conclusions from the present study may provide insights into the expectations of part-time undergraduate students, but they are drawn primarily with reference to full-time undergraduate freshmen.

Fifth, due to the scope of this study—i.e., involving nine higher education institutions—and the resulting administrative and procedural complexity, random sampling have not been ensured. Instead, convenient samples were obtained so as to minimize disruption of respective institution's student registration and orientation. Hence the selection of subjects may have bias in terms of demographics and students' fields of study.

Sixth, sample sizes of the participating institutions differ quite a bit. For instance, the two biggest institution-wise samples are 174 and 144 respectively, while the two smallest ones are only 28 and 37. Unequal group sizes are not at all ideal for quantitative analysis. In chi-square tests, for example, a small group is more likely to yield cells with expected count less than 5, which makes a chi-square not valid. In such cases, collapsing the data into fewer categories may solve the

problem, but then the analysis becomes less specific compared with previously planned comparisons. In any event, precautions and legitimate adjustments have been made to avoid as much as possible statistical problems related to unequal data sets.

Seventh, cautions must be taken when interpreting data from CityU, BU, and OpenU. For CityU, the author was not successful in obtaining a bigger and more representative sample. The sample size is 28 which constitutes less than 2% of the institution's intake of full-time undergraduate students. For BU, over 30% of the participants did not—or forgot—to fill out the back side of the questionnaire (which is printed on both sides of an A4 paper). As a result there is much missing information. For example, of the 91 questionnaires received, there are 28 missing age and 29 missing gender. In addition, out of 91 questionnaires, only an average of 60 are valid for analyses relating to the four scales. So although there are 91 BU participants in this study, around 60 of them (roughly 4% of the intake of full-time undergraduate students) actually completed the entire questionnaire. As for OpenU, after some hindrances and delay the questionnaires were administered during class sessions. Participants from OpenU were from full-time face-to-face programs. Resulting analyses, therefore, should not be

generalized to the majority of students in OpenU who are enrolled in the distance learning mode or in blended learning settings. Furthermore, 60% of the OpenU participants in this study are Business majors.

Concerning Instrument

First, item 17 of the questionnaire asks participants to estimate the grade average of their most recently completed academic term. Somehow many participants did not quite understand this item and chose not to respond. A total of 194 students (over 22% of the entire sample) skipped this item. The most probable explanation is that they thought the item was referring to the academic term in the university. Since the administration of the questionnaires took place prior to the commencement of classes or right at the beginning of the semester, many participants probably thought they had no grade to report yet. That must have been the reason why some participants put a question mark next to the item. As a result, only around 77% of the questionnaires are valid for analyses relating to self-reported grade average.

Second, item 53 of the questionnaire asks participants to indicate their employment status—full-time employed, part-time employed, or not employed. Of the 822 valid responses, 40 participants (i.e., 4.9% of those who have responded)

reported that they worked full-time. Despite their full-time jobs, these 40 participants are also full-time students. This seems a bit difficult to understand. It is possible that they work mostly in the evening, but then where do they find the time to handle university course works? It is simply unlikely that so many participants are in the same full-time work and study situation. A more plausible explanation may have to do with the timing of the administration of the questionnaires. Most of the questionnaires were administered during university entrants' registration period which was in the first two weeks of August. In other words, most of the participants were still in summer holidays. It is very common for students to work during summer and many of them even have temporary full-time jobs in summer holidays. Since item 53 of the questionnaire does not specifically ask whether the respondent is employed during the semester, some participants might have reported their employment status at the time they were filling out the questionnaire. By the same token, for those participants who have checked the 'part-time employed' option, it is almost possible that they are referring to their employment status at the time they were filling out the questionnaire. For this reason, data concerning participants' employment status may not reveal their actual employment status during the semester. However, assuming the above explanation to be correct, one

thing regarding participants' employment status can be quite certain: during the semester less participants than what has been shown by the data would be full-time employed or working part-time.

Third, the four scales—cd, dm, ll, and sc—developed by the author are used for the first time. They are helpful in quantitative research on student expectations, but they need further validation in future studies. The context of the present study is higher education institutions in Hong Kong and the target subjects are undergraduate university entrants. It is not certain how well the four scales will work among more senior university students or subjects in a cross-cultural context. The dm-scale in particular needs revising in view of a not satisfactory coefficient alpha (.58) and an item (dm4) with a $r_{j(t-j)}$ of .25. The ll-scale, on the other hand ($\alpha = .67$), probably needs to be expanded and improved. Though with only four items, the ll-scale actually works quite well in the present study. More work is called for to raise the strength of its reliability to the .70 level.

BIBLIOGRAPHY

- Abouchedid, K. & Nasser, R. (2000). External and internal social barriers in stereotyping university majors. *Current Research in Social Psychology*, 5: 151-169.
- Agbo, S. (2000). Heterogeneity of the student body and the meaning of 'non-traditional' in U.S. higher education. In H. Schuetze & M. Slowey (Eds.), *Higher Education and Lifelong Learners: International Perspectives on Change* (pp. 149-160). London and N.Y.: Routledge Falmer.
- Alley, L.R. (1999). Diverting a crisis in global human and economic development: a new transnational model for lifelong continuous learning and personal knowledge management. *Higher Education in Europe*, 24(2): 187-195.
- Anderson, E.L. (2003). Changing U.S. demographics and American higher education. In J.E. King, E.L. Anderson & M.E. Corrigan (Eds.), *Changing Student Attendance Patterns—Challenges for Policy and Practice*. New Directions for Higher Education, 121: 3-12.
- Backett, G. & Betz, N.E. (1989). An exploration of the mathematics self-efficacy/mathematics performance correspondence. *Journal for Research in Mathematics Education*, 20: 261-273.
- Bandura, A. (1986). *Social foundations of thought and action a social cognitive theory*. Englewood Cliffs, NJ: Prentice Hall.
- Bandura, A. (1993). Perceived self-efficacy in cognitive development and functioning. *Educational Psychologist*, 28: 117-148.

- Bauer, M. (1992). Evaluation criteria and evaluation systems: reflections on developments in Sweden and some other OECD countries. In A. Craft (ed.), **Quality Assurance in Higher Education** (pp. 133-139). Proceedings of an International Conference Hong Kong, 1991. London: The Falmer Press.
- Bellah, R.N. (1999). Freedom, coercion, & authority. **Academe**, January-February: 16-21.
- Bergeron, L. M. & Romano, J. L. (1994). The relationships among career decision-making self-efficacy, educational indecision, vocational indecision, and gender. **Journal of College Student Development**, 35: 19-24.
- Bleiklie, I. (1999). The university, the state, and civil society. **Higher Education in Europe**, 24(4): 509-526.
- Bleiklie, I. et al. (2000). **Policy and Practice in Higher Education**. Higher Education Policy Series 49. London: Jessica Kingsley.
- Blumberg, R.B. (2000). Lessons from consumerism: A note for faculty thinking about technology. **The Teaching Exchange**, January. http://www.brown.edu/Administration/Sheridan_Center/pubs/teachingExchange/jan2000/TE_consumerism.shtml
- Blumenstyk, G. (1998). Leading community colleges go national with new distance learning network. **The Chronicle of Higher Education**, July 10. Online serial, available: <http://chronicle.com>
- Board of Education. (1994). **Report of the Ad Hoc Sub-Committee on Pre-Primary Education**. H.K.: Hong Kong Government Printing Press.

- Bores-Rangel, E., Church, A.T., Szendre, D. & Reeves, C. (1990). Self-efficacy in relation to occupational consideration and academic performance in high school equivalency students. *Journal of Counseling Psychology*, 37: 407-418.
- Boretz, E. (2004). Grade inflation and the myth of student consumerism. *College Teaching*, 52(2): 42-46.
- Bottery, M. (1999). Global forces, national mediations and the management of educational institutions. *Educational Management & Administration*, 27(3): 299-312.
- Bouffard-Bouchard, T. (1990). Influence of self-efficacy on performance in a cognitive task. *Journal of Social Psychology*, 130: 353-363.
- Boyd, W.L. (1999). Environment pressures, management imperatives, and competing paradigms in educational administration. *Educational Management & Administration*, 27(3): 284-297.
- Bui, Khanh Van T. (2002). First-generation college students at a four-year university: background characteristics, reasons for pursuing higher education, and first-year experiences. *College Student Journal*, 36(1): 3-11.
- Bunderson, E. & Christensen, M. (1995). An analysis of problems for female students in university computer science programs. *Journal of Research on Computing in Education*, 28(1): 1-18.
- Candy, P., Crebert, G. & O'Leary, J. (1994). *Developing Lifelong Learners through Undergraduate Education*. Commissioned Report no. 28, National Board of Employment, Education and Training. Canberra: Australian Government Publishing Service.

- Census and Statistics Department. (1990). *Hong Kong Annual Digest of Statistics, 1990*. H.K.: The Government Printer.
- Census and Statistics Department. (2004). *Hong Kong Annual Digest of Statistics, 2004*. H.K.: The Government Printer.
- Cheng, K.M. (1998). The education system. In G.A. Postiglione & W.O. Lee (Eds.), *Schooling in Hong Kong: Organization, Teaching and Social Context* (pp. 25-41). H.K.: Hong Kong University Press.
- Chiu, S.K. (2001). The difficulty of taking the initiative in online teaching in Hong Kong. In *Teaching Innovations: Fostering a Creative and Collaborative Learning Environment* (pp. 106-118), Proceeding of summary papers presented at the First Teaching and Learning Symposium by the teaching community of HKUST. H.K.: HKUST.
- Christensen, E.W., Anakwe, U.P. & Kessler, E.H. (2001). Receptivity to distance learning: The effect of technology, reputation, constrains, and learning preferences. *Journal of Research on Computing in Education*, 33(3): 263-279.
- Chuang, A.S.L. & Leong, J.C.Y. (1998). The control of non-local courses offered to Hong Kong by overseas institutions. *Society for Research into Higher Education International News*, 36: 5-6.
- Chung, Y.P. (2003). *The Student Loans Scheme in Hong Kong*. Bangkok: UNESCO Bangkok/International Institute for Educational Planning.
- Clark, B.R. (1983). *The Higher Education System: Academic Organization in Cross-national Perspective*. Berkeley: University of California Press.

- Clark, R.E. (1983). Reconsidering research on learning from media. *Review of Educational Research*, 53(4): 445-459.
- Coaldrake, P. (2002). Institutional responses to changing student expectations: Project overview. In *Responding to Student Expectations*. Paris: OECD Publications.
- Coates, J.F., Jarratt, J. & Mahaffie, J.B. (1990). *Future Work: Seven Critical Forces Reshaping Work and the Work Force in North America*. San Francisco: Jossey-Bass.
- Commission on Youth. (2003). *Youth in Hong Kong: A Statistical Profile 2003*. H.K.: Social Science Research Centre, HKU.
- Cowen, R. (1995). The management and evaluation of the entrepreneurial university: the case of England. *Higher Education Policy*, 4(3): 9-13.
- Davies, S. (2002). Marketing in higher education: Matching promises and reality to expectations. In *Responding to Student Expectations* (pp. 103-114). Paris: OECD Publications.
- Delucchi, M. & Korgen, K. (2002). We're the customer-we pay the tuition": Student consumerism among undergraduate sociology majors. *Teaching Sociology*, 30(1): 100-107.
- Delucchi, M. & Smith, W.L. (1997a). A postmodern explanation of student consumerism in higher education. *Teaching Sociology*, 25: 322-327.
- Delucchi, M. & Smith W.L. (1997b). Satisfied customers versus pedagogic responsibility: Further thoughts on student consumerism. *Teaching Sociology*, 25(4): 336-337.
- Department of Education and Science. (1987). *Higher Education: Meeting the Challenge*. London: HMSO.

- DETYA. (1998). ***The Characteristics and Performance of Higher Education Institution***. Occasional Paper Series, Higher Education Division. Canberra: Australian Government Publishing Service.
- Dunkin, R. & Lindsay, A. (2001). Universities as centers for lifelong learning: Opportunities and threats at the institutional level. In D. Aspin, J. Chapman, M. Hatton, & Y. Sawano (Eds.), ***International Handbook of Lifelong Learning*** (Part II). Dordrecht, Holland: Kluwer Academic Publishers.
- Edmundson, M. (1997). On the uses of a liberal education: as lite entertainment for bored college students. ***Harper's***, September: 39-49.
- Education Commission. (2000). ***Learning for Life, Learning through Life: Reform Proposals for the Education System in Hong Kong***. H.K.: Education Commission.
- Education Commission. (2004). ***Education Statistics***, December 2004. Hong Kong: H.K. Government Printing Press.
- Endacott, G.B. (1964). ***A History of Hong Kong***. H.K.: Oxford University Press.
- Eskilson, A. & Wiley, M.C. (1999). Solving for the X: aspirations and expectations of college students. ***Journal of Youth and Adolescence***, 28(1): 51-70.
- European Commission. (1995). ***Teaching and Learning: Towards the Learning Society***. Luxembourg: Office for Official Publications of the European Union.
- Farmer, H.S., Wardrop, J.L., Anderson, M.Z. & Risinger, R. (1995). Women's career choices: focus on science, math, and technology careers. ***Journal of Counseling Psychology***, 42: 155-170.

- Flacks, R. & Thomas, S.L. (1998). Among affluent students, a culture of disengagement. *Chronicle of Higher Education*, November 27, p. A48.
- French, N.J. (1999). Transnational education—competition or complementarity: the case of Hong Kong. *Higher Education in Europe*, 24(2): 219-223.
- Friederichs, J.O. (1991). Whose responsibility? The impact of imminent socio-political change on Hong Kong education. *International Review of Education*, 37(2): 193-209.
- Gabriel, Y. & Lang, T. (1995). *The Unmanageable Consumer*. London: SAGE.
- Gellert, C. (Ed.). (1999). *Innovation and Adaptation in Higher Education: the Changing Conditions of Advanced Teaching and Learning in Europe*. London: Jessica Kingsley.
- Gellman-Danley, B. & Fetzner, M.J. (1998). Asking the really tough questions: Policy issues for distance learning. *Online Journal of Distance Learning Administration*, 1(1). Online serial, available: www.westga.edu/~distance/danley11.html.
- Gorham, J. (1999). Diversity in classroom dynamics. In A.L. Vangelisti, J.A. Daly & G.W. Friedrich (Eds.), *Teaching communication: Theory, Research and Methods* (2nd ed., pp. 257-268). Mahwah, NJ: Lawrence Erlbaum.
- Graham, J.R. (1998). What today's customers expect. *American Salesman*, Vol. 44(4): 15-23.
- Guernsey, L. (1998). Colleges debate the wisdom of having on-campus students enroll in online classes. *The Chronicle of Higher Education*, March 27. Online serial, available: <http://chronicle.com>

- Ha, T.S. (2001). Students' views about their experience of learning online. In *Teaching Innovations: Fostering a Creative and Collaborative Learning Environment* (pp. 93-105), Proceeding of summary papers presented at the First Teaching and Learning Symposium by the teaching community of HKUST. H.K.: HKUST.
- Handy, C. (1993). *Understanding Organizations*. London: Penguin.
- Hardy, D.W. & Boaz, M.H. (1997). Learner development: Beyond the technology. In T. E. Cyrs (Ed.), *Teaching and Learning at a Distance: What it Takes to Effectively Design, Deliver, and Evaluate Programs* (pp. 41-48). San Francisco: Jossey-Bass.
- Hayhoe, R. (2001). Educational Reform and Higher Education in Hong Kong. *International Higher Education*, Spring 2001. http://www.bc.edu/bc_org/avp/soe/cihe/newsletter/News23/text011.htm
- Higgins, R., Hartley, P. & Skelton, A. (2002). The conscientious consumer: reconsidering the role of assessment feedback in student learning. *Studies in Higher Education*, 27(1): 53-64.
- Higher Education Research Institute (HERI). (1999). *The American Freshman: National Norms for Fall 1998*. Los Angeles: University of California.
- Higher Education Research Institute (HERI). (2000). *The American Freshman: National Norms for Fall 1999*. Los Angeles: University of California.
- Higher Education Research Institute (HERI). (2004). *The American Freshman: National Norms for Fall 2004*. Los Angeles: University of California.

- Higher Education Research Institute. (2004). **Student Information Form**. Los Angeles, CA: University of California.
- Higher Education Research Institute. (2004). **Your First College Year**. Los Angeles, CA: University of California.
- Higher Education Research Institute. (2005). **College Student Survey**. Los Angeles, CA: University of California.
- Hill, F.M. (1995). Managing service quality in higher education: the role of the student as primary consumer. **Quality Assurance in Education**, 3(3): 10-21.
- Hong Kong Government. (1990). **Hong Kong 1990**. H.K.: Hong Kong Government Printing Press.
- Hong Kong Student Financial Assistance Agency. (1996). **Report: Consultancy Study on the Local Student Finance Scheme**. H.K.: Ernst and Young.
- Houser, M.L. (2004a). Understanding instructional communication needs of nontraditional students. **Communication Teacher**, 18(3): 78-81.
- Houser, M.L. (2004b). We don't need the same things!-- Recognizing differential expectations of instructor communication behavior for nontraditional and traditional students. **The Journal of Continuing Higher Education**, 52: 11-24.
- Houser, M.L. (2005). Are We Violating Their Expectations? Instructor Communication Expectations of Traditional and Nontraditional Students. **Communication Quarterly**, 53(2): 213-228.
- Hunt, N.P. & Bohlin, R.M. (1993). Teacher education students' attitudes toward using computers. **Journal of Research on Computing in Education**, 25(4): 487-497.

- Jacobson, R.L. (1994). Extending the reach of virtual classrooms. *Chronicle of Higher Education*, 40(44): A19-A23.
- James, R. & Beckett, D. (2000). Higher education and lifelong learning: an Australian perspective. In H. Schuetze & M. Slowey (Eds.), *Higher Education and Lifelong Learners: International Perspectives on Change* (pp. 173-194). London and N.Y.: Routledge Falmer.
- James, R. (2002). *Socioeconomic Background and Higher Education Participation: An Analysis of School Students' Aspirations and Expectations*. Australia: Department of Education, Science and Training. http://www.dest.gov.au/archive/highered/eippubs/eip02_5/eip02_5.pdf
- James, R. (2002). Students' changing expectations of higher education and the consequences of mismatches. In *Responding to Student Expectations* (pp. 71-83). Paris: OECD Publications.
- James, R., Wyn, J., Baldwin, G., Hepworth, G., McInnis, C., & Stephanou, A. (1999). *Rural and isolated school students and their higher education choices*. Canberra, Australia: AGPS.
- Jarratt Report. (1985). *Efficiency Studies in Universities*. London: Committee of Vice-Chancellors and Principals.
- Jiang, M., & Ting, E. (1998). *Course design, instruction, and students' online behaviors: A study of instructional variables and student perceptions of online learning*. Paper presented at the annual meeting of the American Educational Research Association, San Diego, CA. (ERIC No. ED 421 970)
- Johnson Foundation. (1993). *An American Imperative*. <http://www.johnsonfdn.org/AmericanImperative>.

- Kasworm, C. (2003). Adult meaning making in the undergraduate classroom. *Adult Education Quarterly*, 53: 81-98.
- Kehm, B.M. (2001). The Challenge of Lifelong Learning for Higher Education. *International Higher Education*, Winter 2001. http://www.bc.edu/bc_org/avp/soe/cihe/newsletter/News22/text003.htm.
- Kennedy, P. (2002). Towards the convergence of higher and continuing education (for lifelong learning) in Hong Kong. In J. Cribbin & P. Kennedy (Eds.), *Lifelong Learning in Action: Hong Kong Practitioners' Perspectives* (pp. 306-337). H.K.: Hong Kong University Press.
- Kennedy, P. (2004). The politics of 'lifelong learning' in post-1997 Hong Kong. *International Journal of Lifelong Education*, 23(6): 589-624.
- Kezar, A. (2001). Documenting the landscape: results of a national study on academic and student affairs collaborations. In A. Kezar, D.J. Hirsch & C. Burack (eds.), *Understanding the Role of Academic and Student Affairs Collaboration in Creating a Successful Learning Environment*. New Directions for Higher Education, 116: 39-51.
- Kiernan, V. (1998). Report documents role of race in who uses the World-Wide Web. *The Chronicle of Higher Education*, April 24. Online serial, available: <http://chronicle.com>
- King, C. (1995). Pay as you learn? Students in the changing university. In T. Schuller (Ed.), *The Changing University?* (pp. 116-127). Buckingham, England: SRHE & Open University Press.

- Klesius, J., Homan, S. & Thompson, T. (1997). Distance education compared to traditional instruction: The students' view. *International Journal of Instructional Media*, 24(3): 207-220.
- Koohang, A. (1989). A study of attitudes toward computers: anxiety, confidence, liking and perception of usefulness. *Journal of Research on Computing in Education*, 22(2): 137-150.
- Kraft, R.H. & Nakib, Y.. (1991). The "new" economics of education: Towards a "unified" macro/micro-educational planning policy. *International Review of Education*, 37(3): 299-317.
- Krallman, D. & Holcomb, T. (1997). *First-year student expectations: pre- and post-orientation*. ERIC ED No. 411731.
- Kuh, G.D. & Pace, C.R. (1998). *College Student Expectations Questionnaire* (2nd ed.). Center for Postsecondary Research and Planning, Bloomington: Indiana University.
- Lackland, A.C. & De Lisi, R. (2001). Students' choices of college majors that are gender traditional and non-traditional. *Journal of College Student Development*, 42: 39-48.
- Landrum, R.E., McAdams, H. & Hood, J. (2000). Motivational differences among traditional and nontraditional students enrolled in metropolitan universities. *Metropolitan Universities*, 11: 7-92.
- Lee, M.H. & Gopinathan, S. (2003). Hong Kong and Singapore's Reform Agendas. *International Higher Education*, Summer 2003. http://www.bc.edu/bc_org/avp/soe/cihe/newsletter/News32/text008.htm

- Lee, M.H. (2001). ***A Tale of Two Cities: Comparing Higher Education Policies and Reforms in Hong Kong and Singapore***. Paper presented at Australian Association for Research in Education (AARE) 2001 Conference, Fremantle, Australia. <http://www.aare.edu.au/01pap/lee01240.htm>.
- Lent, R.W. Brown, S.D. & Larkin, K.C. (1984). Relation of self-efficacy expectations to academic achievement and persistence. ***Journal of Counseling Psychology***, 31: 356-362.
- Lent, R.W., Brown, S.D. & Larkin, K.C. (1986). Self-efficacy in the predication of academic performance and perceived career options. ***Journal of Counseling Psychology***, 33(3): 265-169.
- Leung, S.A. (1999). ***Quality Education: A Career Development and Self-Concept Approach***. H.K.: The Chinese University of Hong Kong.
- Levin, H. & Rumberger, R. (1989). Education, work and employment in developed countries: Situation and future challenges. ***Prospects***, 19(2): 202-224.
- Long G.L. & Lake E.S. (1996). A Precondition For Ethical Teaching: Clarity About Role and Inequality. ***Teaching Sociology***, 24: 111-16.
- Low, L. (2000). ***Are College Students Satisfied?—A National Analysis of Changing Expectations***. New Agenda Series. ERIC ED No. 451816.
- Lucas, R. (1998). An ecology of distance learning. ***Syllabus***, 11(10): 14-16.
- Luk, H.K. (1991). Chinese culture in the Hong Kong curriculum: heritage and colonialism. ***Comparative Education Review***, 35(4): 650-668.

- Mangan, K. (1999). Top business schools seek to ride a bull market in on-line M.B.As. *The Chronicle of Higher Education*, January 15. Online serial, available: <http://chronicle.com>
- Martin, J.S. & Hanrahan, K. (2004). Criminology freshmen: preparation, expectations, and college performance. *Journal of Criminal Justice Education*, 15(2): 287-309.
- Mayhew, K., Deer, C. & Dua, M. (2004). The move to mass higher education in the UK: many questions and some answers. *Oxford Review of Education*, 30(1): 65-82.
- McInnis, C. (2003). *New Realities of the Student Experience: How Should Universities Respond?* Keynote address, 25th Annual Conference, European Association for Institutional Research. Limerick, Ireland, 24-27 August.
- McNay, I. (1995). From the collegial academy to corporate enterprise: The changing cultures of universities. In T. Schuller (Ed.), *The Changing University?* (pp. 105-115). Buckingham: SRHE/Open University Press.
- Mellon, C.A. (1999). Technology and the great pendulum of education. *Journal of Research on Computing in Education*, 32(1): 28-35.
- Misic, V.B. (2001). I still can't print the notes: Student attitudes towards online learning. In *Teaching Innovations: Fostering a Creative and Collaborative Learning Environment* (pp. 86-92), Proceeding of summary papers presented at the First Teaching and Learning Symposium by the teaching community of HKUST. H.K.: HKUST.

- Mok, K.H. (1999). The cost of managerialism: The implications for the 'McDonaldisation' of higher education in Hong Kong. *Journal of Higher Education Policy and Management*, 21(1): 117-127.
- Moore, M.G. & Kearsley, G. (1996). *Distance Education: A Systems View*. Belmont, CA: Wadsworth Publishing Co.
- Morgan, H. (1997). *Cognitive Styles and Classroom Learning*. Westport, CT: Praeger.
- Müller-Böling, D. et al. (Eds.). (1998). *University in Transition: Research Mission-Interdisciplinarity-Governance*. Gütersloh: Verlag Bertelsmann Stiftung.
- Nagle, B. (1998). A proposal for dealing with grade inflation: The Relative Performance Index. *Journal of Education for Business*, September/October: 40-43.
- National Center for Education Statistics (NECS). (2004). *The Condition of Education 2004 in Brief*. U.S. Department of Education and Institute of Education Sciences, NCES 2004-076.
- National Science Board. (2000). *Science and Engineering Indicators-2000* (Publication No. NSB-00-1). Washington, D.C.: Government Printing Office.
- Nauta, M.M. & Epperson, D.L. (2003). A longitudinal examination of the social-cognitive model applied to high school girls' choices of nontraditional college majors and aspirations. *Journal of Counseling Psychology*, 50(4): 448-457.
- Nauta, M.M., Kahn, J.H. Angell, J.W. & Cantarelli, D.A. (2002). Identifying the antecedent in the relation between career interests and self-efficacy: Is it one, the other, or both? *Journal of Counseling Psychology*, 49(3): 290-301.

- Newman, L., Cooper, J. & Ruble, D. (1995). Gender and computers II: the interactive effects of knowledge and constancy on gender-stereotyped attitudes. *Sex Roles*, 33(5/6): 3325-3351.
- Nyiri, J.C. (1997). Open and distance learning in an historical perspective. *European Journal of Education*, 32: 347-357.
- O'Heron, H. (1997). Different students, different needs. *Research File*, 1(5): 1-11.
- OECD. (1987). *Adults in Higher Education*. Paris: OECD.
- OECD. (1996). *Lifelong Learning for All*. Paris: OECD.
- OECD. (2003). *Education at a Glance—OECD Indicators, 2003*. Paris: OECD.
- Pajares, F. & Johnson, M.J. (1996). Self-efficacy beliefs in the writing of high school students: a path analysis. *Psychology in the Schools*, 33: 163-175.
- Pajares, F. & Miller, M.D. (1994). The role of self-efficacy and self-concept beliefs in mathematical problem-solving: a path analysis. *Journal of Educational Psychology*, 86: 193-203.
- Pajares, F. & Miller, M.D. (1995). Mathematics self-efficacy and mathematics outcomes: The need for specificity of assessment. *Journal of Counseling Psychology*, 42: 190-198.
- Pajares, F. (1996). Self-efficacy beliefs and mathematical problem solving of gifted students. *Contemporary Educational Psychology*, 21: 324-344.
- Pascarella, E.T. & Terenzini, P.T. (1991). *How College Affects Students*. San Francisco: Jossey-Bass Publishers.

- Pease, P. (1999). A new model for the new media—International University: The University of the Web. *Higher Education in Europe*, 24(2): 281-286.
- Perillo, L. (1997). When the classroom becomes a confessional. *Chronicle of Higher Education*, November 28: A50.
- Pitman, T. (2000). Perceptions of academics and students as customers: A survey of administrative staff in higher education. *Journal of Higher Education Policy and Management*, 22(2): 165-175.
- Post, D. (2003). Hong Kong Higher Education, 1981-2001: public policy and re-emergent social stratification. *Oxford Review of Education*, 29(4): 545-570.
- Postiglione, G.A. & Lee, W.O. (1998). Schooling and the changing socio-political setting: an introduction. In G.A. Postiglione & W.O. Lee (Eds.), *Schooling in Hong Kong: Organization, Teaching and Social Context* (pp. 1-21). H.K.: Hong Kong University Press.
- Postiglione, G.A. (1991). From capitalism to socialism? Hong Kong education within a transitional society. *Comparative Education Review*, 35(4): 627-649.
- Postiglione, G.A. (1998). Higher Education in Hong Kong: The Morning After. *International Higher Education*, Winter 1998. http://www.bc.edu/bc_org/avp/soe/cihe/newsletter/News10/text11.html
- Postiglione, G.A. (2000). Hong Kong higher education and the academic profession: entering the red chamber. *International Higher Education*, Winter 2000. http://www.bc.edu/bc_org/avp/soe/cihe/newsletter/News03/textcy3.html.

- Postlethwaite, N. (1988). ***Science Achievement in Seventeen Countries: A Preliminary Report***. Oxford: Pergamon Press.
- Price, C. (1989). Academics and society: freedom's seamless robe. In C. Ball & H. Eggins (Eds.), ***Higher Education into the 1990s: New Dimensions***. Milton Keynes: Open University Press.
- Price, R. & Winiecki, D. (1995). Attitudes and skill levels of college students entering a typical introductory college computing course. ***Journal of Computing in Teacher Education***, 120: 20-25.
- Psacharopoulos, G. (1994). Returns to investment in education: A global update. ***World Development***, 22(9): 1325-1343.
- Rahm, D. & Reed, B.J. (1997). Going remote: The use of distance learning, the World Wide Web, and the Internet in graduate programs of public affairs and administration. ***Public Productivity and Management Review***, 20(4): 459-474.
- Report of the National Committee (RNC). (1997). ***The National Committee of Inquiry into Higher Education of UK***. <http://www.leeds.ac.uk/educol/ncihe/>
- Reynolds, J. & Pemberton, J. (2001). Rising College Expectations Among Youth in the United States: A Comparison of 15 and 16 Year Olds in the 1979 and 1997 NLSY. ***Journal of Human Resources***, 36: 703-726.
- Riesman, D. (1980). ***On Higher Education: The Academic Enterprise in an Era of Rising Student Consumerism***. San Francisco: Jossey-Bass.

- Roblyer, M.D. (1999). Is choice important in distance learning? A study of student motives for taking internet-based courses at the high school and community college levels. *Journal of Research on Computing in Education*, 32(1): 157-171.
- Romainville, M. (1999). Quality evaluation of teaching in higher education. *Higher Education in Europe*, 24(3): 415-424.
- Rubenson, K. & Schuetze, H.G. (2000). Lifelong learning for the knowledge society: demand, supply and policy dilemmas. In K. Rubenson & H.G. Schuetze (Eds.), *Transition to the Knowledge Society: Policies and Strategies for Individual Participation and Learning*. Vancouver: UBC, Institute for European Studies.
- Sander, P., Stevenson, K., King, M. & Coats, D. (2000). University students' expectations of teaching. *Studies in Higher Education*, 25(3): 309-323.
- Sanders, D.W. & Morrison-Shetlar, A.I. (2001). Student attitudes toward Web-enhanced instruction in an introductory biology course. *Journal of Research on Computing in Education*, 33(3): 251-262.
- Schreiner, L. & Juillerat, S. (1993). *Student Satisfaction Inventory*. Iowa City, IA: USA Group Noel-Levitz.
- Schuetze, H. & Slowey, M. (2000). Traditions and new directions in higher education: a comparative perspective on non-traditional students and lifelong learners. In H. Schuetze & M. Slowey (Eds.), *Higher Education and Lifelong Learners: International Perspectives on Change* (pp. 3-24). London and N.Y.: Routledge Falmer.

- Schuetze, H. (1995). Funding, access and teaching: the Canadian experience of a mass system of higher education. In T. Schuller (Ed.), ***The Changing University?*** (pp. 161-175). Buckingham, England: SRHE & Open University Press.
- Scott, S.V. (1999). The academic as service provider: Is the customer 'always right'? ***Journal of Higher Education Policy and Management***, 21(2): 193-202.
- Selingo, J. (1998). Small, private colleges brace for competition from distance learning. ***The Chronicle of Higher Education***, July 17. Online serial, available: <http://chronicle.com>
- Sensicle, A. (1992). The Hong Kong initiative. In A. Craft (Ed.), ***Quality Assurance in Higher Education*** (pp. 65-82). Proceedings of an International Conference Hong Kong, 1991. London: The Falmer Press.
- Sharrock, G. (2000). Why students are not (just) customers (and other reflections on Life After George). ***Journal of Higher Education Policy and Management***, 22(2): 149-164.
- Shen, S.M., Lee, W.C. & Chan, F.T. (2002). A profile of Hong Kong adult learners: a survey of the demand for continuing education in Hong Kong. In J. Cribbin & P. Kennedy (Eds.), ***Lifelong Learning in Action: Hong Kong Practitioners' Perspectives*** (pp. 47-70). H.K.: Hong University Press.
- Shpperd, J.W. (1997). Relevance and responsibility: A postmodern response to "A Postmodern Explanation of Student Consumerism in Higher Education." ***Teaching Sociology***, 25(4): 333-335.

- Siann, G., Macleod, H., Glissov, P. & Durnell, A. (1990). The effect of computer use on gender differences in attitudes to computers. *Computers in Education*, 14(2): 183-191.
- Sims, R.R. & Sims, S.J. (Eds.). (1995). *The importance of learning styles: Understanding the implications for learning, course design, and education*. Westport, CT: Greenwood Press.
- Sino-British Joint Declaration on the Question of Hong Kong*. (1984). H.K.: Xinhua News Agency.
- Smith, B.N., & Necessary, J.R. (1996). The computer ability scale: Replication and extension involving college computer literacy students. In D. H. Redman (Ed.), *AERA Business Education and Information Systems Research Special Interest Group proceedings*. Washington, DC: American Educational Research Association.
- Snyder, T. D. & Hoffman, C. M. (2000). *Digest of Education Statistics, 1999*, NCES 2000-031. Washington, D.C.: U.S. Department of Education, National Center for Education Statistics.
- Soares, V.A.M. & Amaral, A.M.S.C. (1999). The entrepreneurial university: a fine answer to a difficult problem? *Higher Education in Europe*, 24(1): 11-21.
- Sporn, B. (1999). Towards more adaptive universities: trends of institutional reform in Europe. *Higher Education in Europe*, 24(1): 23-33.
- Swail, W.S. & Heller, (2004). *Changes in tuition policy: Natural Policy Experiments in Five Countries*. Millennium Research Series, Educational Policy Institute. Montreal: Canada Millennium Scholarship Foundation.

- Swann, J. & Arthurs, J. (1998). Empowering lecturers: a problem-based approach to improving assessment practice, *Higher Education Review*, 31(2): 50-74.
- Szeto, R. (2000). *Towards a model of internet learning for Hong Kong education stakeholders*. http://www.usdla.org/html/journal/JUN00_Issue/PDF/03towards.pdf#search='hong%20kong%20higher%20education%20student%20survey'
- Tasker, M. & Packham, D. (1993). Industry and higher education: A question of values. *Studies in Higher Education*, 18(2): 127-136.
- The Basic Law of the Hong Kong Special Administrative Region of the People's Republic of China*. (1991). H.K.: Joint Publishing Company.
- The Open University of Hong Kong. (2004). *Annual Report 2003-2004*. H.K.: OpenU.
- Thomas, H.G. (1999). Managerial implications of adopting formula-based systems of resource allocation: A case study from higher education. *Educational Management & Administration*, 27(2): 183-191.
- Times Higher Education Supplement. (1994). *Mature Approach Steadily Gains Ground*. 25 November.
- Tracey, T.J.G. (1998). The structure of interests and self-efficacy expectations: an expanded examination of the spherical model of interests. *Journal of Counseling Psychology*, 44: 32-43.
- Trout, P.A. (1997). What the numbers mean: providing a context for numerical student evaluations of courses. *Change*, September/October: 24-30.
- Trout, P.A. (2000). Flunking the test: the dismal record of student evaluations. *Academe*, July-August: 58-61.

- Trusty, J. & Ng, K. (2000). Longitudinal effects of achievement perceptions on choice of postsecondary major. *Journal of Vocational Behavior*, 57: 123-135.
- Tung, C.W. (2000). *Serving the Community, Sharing Common Goals*. Hong Kong: H.K. Government Printing Press.
- Turner, S. E. & Bowen, W. G. (1999). Choice of major: The changing (unchanging) gender gap. *Industrial and Labor Relations Review*, 52: 289-313.
- UNESCO. (1976). *Recommendation on the Development of Adult Education adopted by the General Conference at its Nineteenth Session*, Nairobi, 26 November 1976. Paris: UNESCO.
- UNESCO. (1993). *World Education Report*. Paris: UNESCO.
- UNESCO. (1995). *Policy Paper for Change and Development in Higher Education*. Paris: UNESCO.
- UNESCO. (1996). *Learning: The Treasure Within*. Paris: UNESCO.
- UNESCO. (2000), *World Education Report 2000—The Right to Education: Towards Education for All Throughout Life*. Paris: UNESCO.
- University Grants Committee. (2002). *Higher Education in Hong Kong - Report of the University Grants Committee* (by Stewart R Sutherland). H.K.: The University Grants Committee.
- University Grants Committee. (1996a). *University Grants Committee of Hong Kong : Facts and Figures 1995*. H.K.: The University Grants Committee.
- University Grants Committee. (1996b). *Higher Education in Hong Kong - A Report by the University Grants Committee*. H.K.: The University Grants Committee.

- Wallace, L. (1996). Changes in the demographics and motivations of distance education students. *Journal of Distance Education*, 1(1): 1-31.
- Wiesenfeld, K. (1996). Making the grade: many students wheedle for a degree as if it were a freebie T-shirt. *Newsweek*, June 17: 16.
- Wong, S.K. (1999). Development of student affairs in Hong Kong. *New Directions for Student Services*, 86: 45-51.
- Yeung, D. (2001). Toward an effective quality assurance model of web-based learning: The perspective of academic staff. *Online Journal of Distance Learning Administration*, 4(4). State University of West Georgia, Distance Education Center. <http://www.westga.edu/~distance/ojdla/winter44/yeung44.html>
- Young, B.J. (2000). Gender differences in student attitudes toward computers. *Journal of Research on Computing in Education*, 33(2): 204-213.
- Zhang, W.Y., Wang, L. & Ng, T.K. (2004). Research Collaboration between Open Education Providers and Consumers in developing an Academic Programme Preference Inventory in Hong Kong. *Asian Journal of Distance Education*, 2(2). <http://www.asianjde.org/2004v2.2.Zhang.pdf#search='hong%20kong%20higher%20education%20student%20survey'>

APPENDIX A: Websites of the Nine Participating Institutions

1. City University of Hong Kong: www.cityu.edu.hk
2. Hong Kong Academy for Performing Arts: www.hkapa.edu
3. Hong Kong Baptist University: www.hkbu.edu.hk
4. Lingnan University: www.ln.edu.hk
5. The Hong Kong Institute of Education: www.hkied.edu.hk
6. The Chinese University of Hong Kong: www.cuhk.edu.hk
7. The Hong Kong University of Science and Technology:
www.ust.hk
8. The Open University of Hong Kong: www.ouhk.edu.hk
9. The University of Hong Kong: www.hku.hk

APPENDIX B: Student Expectations Questionnaire

Hong Kong, 2005

- You are taking part in a first-year undergrads' survey that involves 9 institutions of higher education in Hong Kong.
- This study investigates students' expectations on certain aspects of higher education. Participation is voluntary and anonymous.
- Data are collected for academic research carried out in the University of Munich, Germany. All questionnaires will be destroyed once the study is over.
- Please answer all questions (all 4 pages). It will take you only about 15 minutes.

In deciding to go to university, how important to you was each of the following reasons? Please rate all the items and circle one number for each reason:

	not important	somewhat important	very important
6. To learn more about things that interest me	1	2	3
7. To gain a general education and appreciation of ideas	1	2	3
8. To be able to get a better job	1	2	3
9. To get training for a specific career	1	2	3
10. To prepare myself for graduate or professional school	1	2	3
11. To be able to make more money	1	2	3
12. To make me a more cultured person	1	2	3
13. To increase my social status	1	2	3
14. To find my purpose in life	1	2	3
15. My parents wanted me to go	1	2	3
16. Most of my friends are going	1	2	3

17. What do you value about a university? Choose from the following list the 3 most important things to you personally. Please do not check more than 3 boxes.

- Facilities are good
- Tuition fee is comparatively low
- Campus/social life is rich
- Learning atmosphere is competitive
- Provides learning opportunities for mature and/or non-traditional students/learners
- Professors are well-known scholars
- Professors are effective teachers
- Flexible curriculum designs and course delivery methods to accommodate students' needs
- Responsive to students' ideas and suggestions
- Graduates are generally successful in finding employment
- (Please specify) _____

18. Is this educational institution your...

- 1st choice? 2nd choice? 3rd choice? less than 3rd choice?

19. How satisfied are you being able to attend this particular institution?

- Not satisfied Somewhat satisfied Very satisfied

20. Please indicate your enrollment status:

- Full-time undergrad Part-time undergrad

21. What is your probable major field of study? (e.g., English, Music, Biology, Medicine, Civil Engineering, Economics, Computer Programming, Social Work, Elementary Education, etc.)

22. Please check one box that best describes the grade average of your most recently completed academic term (not public exam grades):

- A (3.75 - 4.0) A-, B+ (3.25 - 3.74) B (2.75 - 3.24) B-, C+ (2.25 - 2.74)
 C (1.75 - 2.24) C- or less (below 1.75)

Looking ahead to your university life, how true is each of the following statements?
 Circle one number for each statement:

	strongly disagree	disagree	neutral	agree	strongly agree
23. I have a clear picture of what university life is about.	1	2	3	4	5
24. I can adapt to campus life easily.	1	2	3	4	5
25. I can handle most academic work well.	1	2	3	4	5
26. I will enjoy university life as a whole.	1	2	3	4	5
27. I did some informal inquiries and I know quite well already what studying in this institution will be like.	1	2	3	4	5

For questions 23-48, rate how much you agree to each statement. Some items may seem repetitive, but they are designed that way. Circle one number for each statement:

	strongly disagree	disagree	neutral	agree	strongly agree
28. The relationship between a university and its students is similar to that of a service provider and its customers.	1	2	3	4	5
29. Curricula in the university should be job-oriented.	1	2	3	4	5
30. I prefer courses that are delivered on-line to traditional classes because I can use my time more flexibly.	1	2	3	4	5
31. I consider myself a 'customer' of the educational institution I am attending.	1	2	3	4	5
32. The need for lifelong learning should be an integral part in the development of higher education.	1	2	3	4	5
33. Curriculum designs in higher education as a whole need to fit better with the evolving needs of the labor market.	1	2	3	4	5

	strongly disagree	disagree	neutral	agree	strongly agree
34. Universities can serve the society better by being more sensitive to the needs of mature students.	1	2	3	4	5
35. The more tuition fee I have to pay for higher education, the more I should have a say in various aspects of the system.	1	2	3	4	5
36. I prefer flexible teaching methods (e.g., via electronic media) to conventional modes of instruction.	1	2	3	4	5
37. It is fair to pay more if one wants to study in a more prestigious university.	1	2	3	4	5
38. It is important to design curricula that position students to adapt to the labor market.	1	2	3	4	5
39. Delivery of lessons and classes should be more 'user-friendly' so that students are not compelled to spend a fixed amount of hours on campus.	1	2	3	4	5
40. It matters to me whether curricula offered in the university are responsive to the trends of the labor market.	1	2	3	4	5
41. Job-orientedness should play an increasing role in curriculum designs in higher education.	1	2	3	4	5
42. I would expect more from the university if I were required to pay a higher tuition fee.	1	2	3	4	5
43. Universities should pay more attention to the needs of students because they are the customers of higher education.	1	2	3	4	5
44. Flexibility of teaching method is as important as the quality of the course contents.	1	2	3	4	5
45. I value courses that are job-oriented.	1	2	3	4	5
46. The community as a whole is better off when the idea of lifelong learning is incorporated in higher education.	1	2	3	4	5
47. I am willing to pay more money to earn a degree from a famous educational institution.	1	2	3	4	5
48. Curriculum designs that are job-oriented appeal to me.	1	2	3	4	5
49. When higher education becomes more and more costly to students, they should be protected by consumer's law.	1	2	3	4	5
50. Most university students welcome on-line courses because they allow more flexible use of time.	1	2	3	4	5
51. It is appropriate to view university students as customers of their universities.	1	2	3	4	5
52. More lifelong learning opportunities in higher education contribute to the betterment of the society such as increased equity and/or improved labor force competency.	1	2	3	4	5
53. As students are asked to contribute more to the cost of higher education, universities should become more 'consumer-friendly'.	1	2	3	4	5

54. Your nationality:

Hong Kong Chinese Mainland Chinese Other (please specify): _____

55. How old will you be on December 31 of this year?

16 or below 17 18 19 20 21-24 25-29 30-39 40-54
 55 or above

56. Your gender:

Female Male

57. Your marital status:

Single Married with no children Married with children Divorced Single parent

58. Are you employed?

Yes, full-time (please go directly to Q. 55) Yes, part-time No (please go directly to Q. 55)

59. If you're working part-time, how many hours on average do you work per week?

1-5 6-10 11-15 16-20 21 or more

60. On average, what is your best estimate of your family's monthly income in 2005 (in HK\$)? Consider income from all sources before taxes.

Less than \$10,000 \$10,000-19,999 \$20,000-29,999 \$30,000-39,999
 \$40,000-49,999 \$50,000-59,999 \$60,000-69,999 \$70,000 or more

61. Who pays for your higher education?

Mostly own savings Mostly loans and grants Mostly scholarship(s)
 Mostly parent(s) Other (please specify): _____

62. What is the highest level of formal education obtained by your parents (consider only the highest of the two)?

Elementary school or less
 Some secondary school
 Secondary school graduate
 Postsecondary school other than university
 Some university
 Undergrad degree
 Some graduate school
 Graduate degree

63. What is the highest academic degree that you intend to obtain?

Bachelor Master Doctorate Currently undecided

END and thank you for your time!