

Understanding
the nature,
cause,
magnitude,
and direction
of English language attrition
in Hong Kong society

Measurement and assessment

HKLNA-Project Proposal¹
East Asian Research and Translation in Hong Kong
October 3, 2003

homepage.mac.com/moogoonghwa/earth/current/hklna/

¹ This is the first of several research projects proposed under the title Hong Kong Language Needs Assessment Project.

That no child be compelled to learn
more than he needs to know.

That every child have the opportunity to learn
as much as he desires.

That all children receive the best quality training possible.

橋 守

August 26, 2003
Hong Kong

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HKLNA-PROJECT FUND

<http://homepage.mac.com/moogoonghwa/earth/current/hklna/indices/fundex.html>

INTRODUCTION

All societies are founded in cultural traditions -- the backbone of social interchange. In addition all societies abound in myths that support these traditions and make them easily accessible to children. Myths are a popular rallying point for the collective body.

Some traditions and their myths survive far beyond their originally intended purpose. Such traditions are kept alive by artists and artisans who cherish their historical roots and seek to preserve them as part of their society's living past. Ancient folk dance, music, and crafts that resurface on important holidays and find their way onto stages or into souvenir shops are typical examples. Traditions and their respective myths are also recorded in books by cultural historians or placed on display in museums funded by local and national governments or wealthy philanthropic donors in search of popular and wholesome name recognition. Where the stakes are high and the stake holders powerful, myths are also revised and told again, so as to breathe new life and justification into waning traditions that are not yet regarded as a thing of the past. The universal English language (UEL) requirement appears to be a tradition of this latter sort, and those who are rewriting the many myths that sustain it in the popular mind are indeed well-educated, rich, and powerful.

Twelve years on the ground in East Asia has taught me that the world is not yet ready for a universally shared common language. In the simplest of terms there are too many people learning English to provide adequate training to non-native speakers and insufficient real demand to help them sustain what they have learned after having been trained. Moreover, there are too few people learning the languages of non-English speaking peoples to provide a sufficiently strong foundation for good cross-cultural communication and understanding. As a result the overall quality of the English language has suffered, East Asian languages have been neglected, and understanding between peoples of East Asia and the West has been impaired. The obvious solution to this problem is to remove the artificial demand for English language created by East Asian governments and the language's global proponents. Unfortunately, those who are in the best position to remove this excess demand and consequent poor-quality oversupply are the least inclined to do so.

In order to start the ball rolling I have created the Hong Kong Language Needs Assessment Project. Although dedicated almost entirely to Hong Kong, the project has important implications for the rest of East Asia, where I hope someday to move it forward under a different name. The purpose of the project is to assess the true use and real need of the English language in Hong Kong and eventually other East Asian societies and thereby provide policy makers and individual citizens with the information they require to make proper choices with regard to English language training and learning. The first important stage of this project is research, and it is to this end that the following proposal was developed.

Myths are believable because they coincide with reality on the one hand, and provide easy explanations for otherwise complex phenomena, on the other. Coincidence is not

science, however, and easy explanations are often a veil for greed, arrogance, or self-deception². This study will provide both government and Hong Kong parents with a solid basis for better understanding the true worth of the English language to all members of Hong Kong society.

Of course, even in a democratic society the majority is not always well informed and cannot always have its way. In a society such as Hong Kong's this is especially true, as recent events have surely borne witness^{3,4}. Thus, an important part of this research project is also the dissemination of this study's results.

² Stegemann, R. A. 2002 (14 April). English: bridge or barrier? The political economy of the English language in East Asia" [online document] East Asian Research and Translation in Hong Kong. <<http://homepage.mac.com/moogoonghwa/earth/samples/barrier.pdf>> (10 June 2003)

³ The HKCEE is an annual examination taken by nearly all Hong Kong form V secondary students, as well as other students and non students. In descending order of proportion of *all first time* 2002 HKCEE candidates 99.6% sat for either of the two English language syllabi, 99.1% sat for the Chinese language syllabus, and 98.7% sat for the mathematics syllabus. In descending order of proportion of *all* 2002 HKCEE candidates the numbers are even more revealing: English language 97.6%, Chinese language 77.5%, and mathematics 75.4%.

Source: Hong Kong Examinations and Assessment Authority. Hong Kong Certificate of Education Examination 2002. Table 5.1 - Patterns of subjects sat by day school first attempters. Table 5.3 - Patterns of subjects sat by all candidates [online document - 184 KB] <<http://www.hkeaa.edu.hk/doc/fd/2002cee/cestat5.pdf>> (June 2003).

⁴ According to Keith Bradsher, a correspondent for the New York Times, James Tien, the chairman of the pro-business and pro-government Liberal Party, recently said that Hong Kong was not ready for more democracy. Mr. Tien apparently claimed that "the minority of lawmakers who are already elected by the general public are not friendly enough to the business community and lack expertise in business issues". According to Keith Bradsher Mr Tien "also complained that democratically elected politicians here were too reluctant to accept financial contributions and other help from business leaders that might produce closer ties to the corporate sector". The New York Times. Today's Headlines. Hong Kong protesters demand free elections [online document] (10 July 2003).

PROBABLE USES

English in Hong Kong government

Many high ranking Hong Kong government officials serve on committees of various international organisations and governing bodies that depend on English as their principal medium of communication. There is also likely a much larger number of lower ranking government officials who are challenged daily by the needs of Hong Kong's tiny foreign community, various members of Hong Kong's large international business sector, and the ever present, but ephemeral tourist. Surely there are others in government who view English as a means to focus Hong Kongers' attention on the West so as to insure a safe distance between them and Beijing and thus preserve the one nation - two systems established under Hong Kong's Basic Law⁵. Then too, there must be those who similarly seek to preserve Hong Kong's British colonial legacy. Wherever these people are found and whatever their number, they are certainly not everyone in government and likely constitute only a fraction of all that is government.

Of course, there are those many others who from time to time make use of English, but whose limited knowledge could be easily replaced with fewer, more highly skilled speakers, recorded machine messages, and translated forms and documents.

English in Hong Kong business

Enthusiastic supporters of the UEL requirement are also likely found in business, where a large number of daily transactions are conducted in English -- if not orally, then in writing. So many, in fact, that few members of Hong Kong's tiny foreign business community even speak Chinese or require translation services. Certainly English has become the lingua franca of many domestic Hong Kong merchants, traders, and industrialists. The extent to which the English language is employed in Hong Kong's domestic and foreign business sectors simply because it is there, not because it is needed, has yet to be determined⁶.

In 2001 Hong Kong played host to some 516,837 firms of varying size⁷ employing

⁵ The Basic Law provides the legal basis for Hong Kong's legal and political system under the one nation - two system arrangement established when Hong Kong's sovereignty was transferred from the British Crown to Beijing in 1997. It is a kind of a constitution outlining Hong Kong's legal and political independence under Chinese national sovereignty.

⁶ If Hong Kong business people were made to pay the full cost of the English expertise that they employ, they would likely find other less costly means to achieve the same ends. Currently the Hong Kong government is subsidising Hong Kong employers to the tune of many billions of Hong Kong dollars -- tax dollars that could be easily diverted to more important educational needs. Source: Stegemann, R. A. 2002. English or languish - Probing the ramifications of Hong Kong's language policy

A problem of severe market distortion with simultaneous excess demand and oversupply. [online document] East Asian Research and Translation in Hong Kong.

<<http://homepage.mac.com/moogoonghwa/earth/current/hklna/indices/econdex.html>> (10 June 2003). Also Hong Kong Language Needs Assessment Project

<<http://homepage.mac.com/moogoonghwa/earth/current/hklna/>> (27 August 2003).

⁷ Hong Kong Government. Companies Registry. Key Statistics. Local Companies on Register and Overseas Companies. [online document] <<http://www.info.gov.hk/cr/key/index.htm>> (12 June 2003). In 2001 the number of registered local and foreign companies were 510,380 and 6,457, respectively. Adding these to amounts, dividing them into the number of foreign firms, and multiplying by 100 yields 1.2%.

3,256,400 people⁸. Of these half million firms only 1.2% were foreign! If one adds government workers to the private sector total, and considers only the proportion of workers employed in the provision of business and consumer services, the resulting proportion exceeds 85% of Hong Kong's entire work force⁹. Just who are these people serving, if not other Hong Kongers, though? Many argue foreign visitors.

In 2001 approximately 13.7 million people visited Hong Kong¹⁰ -- nearly twice as many people as there were Hong Kong residents in the same year¹¹. Notwithstanding, just over 67% of these annual visitors were from the Chinese mainland or Taiwan¹². In 1997 they accounted for only 38% of the total¹³. Moreover, if the average visitor spends only a week in Hong Kong, Hong Kong's foreign tourist population as a percentage of Hong Kong's total resident population Hong Kong's tourists rarely exceeds 3.9% -- slightly under Hong Kong's more permanent non-Chinese ethnic population^{14,15}. If the period of stay is shorter this percentage declines proportionately.

In 2001 Hong Kongers earned some HK\$64 billion in tourist revenue¹⁶. A closer look shows that this industry accounts for only about 5% of the the entire territorial

⁸ Hong Kong Census and Statistics Department. Hong Kong statistics. Hong Kong in figures. Labour. Employment distribution by industry sector. [online document] <http://www.info.gov.hk/censtatd/eng/hkstat/hkinf/labour/labor5_index.html> (12 June 2003).

⁹ Ibid. Number of civil servants. [online document] <http://www.info.gov.hk/censtatd/eng/hkstat/hkinf/labour/labor6_index.html> (13 June 2003).

¹⁰ WTO. Tourism Highlights 2002. [online document - pdf format 200K]. <<http://www.world-tourism.org/index.htm>> (05 March 2003).

¹¹ HK Census and Statistics Department. Demographic Statistics Section [electronic document] (6 June 2003). In 2001 the Hong Kong government counted 6,724,900 foreign and local Hong Kong residents.

¹² Including Chinese seaman there were 6,825,000 visitors from the mainland and 2,429,000 from Taiwan -- approximately 67.4% of all visitors to Hong Kong. Source: Hong Kong Government. Hong Kong Census and Statistics Department. Hong Kong in figures. Transport, communication, and tourism. Visitor arrivals by country/territory of residence. [online document]

<http://www.info.gov.hk/censtatd/eng/hkstat/hkinf/transport/transp11_index.html> (13 June 2003).

¹³ Ibid.

¹⁴ $(13,700,000 \text{ visitors} / 365 \text{ days}) \times 7 \text{ days} / 6,724,900 \text{ Hong Kong residents} = 3.9\%$

¹⁵ In 2001 the non-Chinese ethnic population totalled 343,950. Depending on the figures used for all Hong Kong residents, the proportion of non-Chinese Hong Kongers comes to about 5.1%. Source: Hong Kong Census and Statistics Department. Hong Kong statistics. Frequently asked statistics. Main tables of the 2001 population census. Demographic and social characteristics. Population by ethnicity, 2001. [online document] <http://www.info.gov.hk/censtatd/eng/hkstat/fas/01c/cd0052001_index.html> (13 June 2003).

¹⁶ The WTO reported US\$8.2 billion in tourism receipts for Hong Kong in 2001. Exchange rate adjustment: 7.989 HK\$/US\$. Source: World Tourism Organisation. Tourism Highlights 2002. [online document - pdf format 200K] Table: World's Top 15 Tourism Earners. <<http://www.world-tourism.org/index.htm>> (05 March 2003).

economy¹⁷, and as a portion of Hong Kong's wholesale, retail, import, and export trades, including restaurants and hotels, it barely comes to 20%¹⁸. Surely, the tourist industry is one of the world's most labour intensive, but the number of workers can never be greater than there is money to pay them. Of course tourism is only one of Hong Kong's many industries, but do you really think the demand for English in any of these could be very much greater or the exaggeration any less?

On any given day the Chinese ethnic population of Hong Kong is about 94%¹⁹. Ignoring one's place of residence, work, school, and play, the chance of a native Chinese Hong Konger meeting someone with non-Chinese ethnicity is about 5.8%²⁰. In a highly urban setting such as Hong Kong's the probability that one would both meet and talk is of course many times smaller. In brief, the use of English in Hong Kong society as a bridge between strangers, either domestic or foreign, can be neither common nor likely. Surely among non-permanent residents it is far more likely, but these latter, as we have already seen, represent only a small fraction of Hong Kong's total population.

English in Hong Kong academia

Can Hong Kong academia be any different from either government or business? In the academic year 2000-2001 there were 82,472 students enrolled in UGC funded tertiary institutions²¹. Of these, only 68,796 were enrolled in a formal degree program and more than 77% of these in either undergraduate or sub-degree programs. UGC funded academic and research staff during this same year totalled only 6,879²². The true, not artificially created, English language needs of professors and students must be compared.

University professors have an important need for the English language, because much

¹⁷ In 2001 Hong Kong's GDP was approximately HK\$1,216.4 billion. Source: Hong Kong Census and Statistics Department. Hong Kong statistics. National income and balance of payments. GDP by economic activity. [online document]

<http://www.info.gov.hk/censtatd/eng/hkstat/hkinf/nat_account/gdp4_index.html> (12 June 2003).

¹⁸ Ibid. In 2001 income generated from economic activities listed under the category *Wholesale, retail, import/export trades, restaurants, hotels* was approximately HK\$324.8 billion.

¹⁹ Calculation: (non-Chinese Hong Kongers + non-Chinese visitors per day) / (all Hong Kongers + all visitors per day) = (343,950 + 85,745) / (6,724,900 + 263,219) = 0.061. In order to obtain the proportion of ethnic Chinese in Hong Kong on any given day subtract 0.061 from 1.00. This obtains 0.939. Source: various previously footnoted resources.

²⁰ The chance of meeting is equal to the product of each population's proportionate representation in the total population on any given day. Thus, 0.939 X 0.061 = 0.058 or 5.8%.

²¹ University Grants Committee. Facts and figures 2001. General statistics on higher education in Hong Kong (UGC-funded institutions) - 1992/93 to 2001/02. [online document]

<<http://www.ugc.edu.hk/english/statistics/gentab.pdf>> (13 June 2003). The UGC is an advisory body to Hong Kong Education and Manpower Bureau (the EMB includes the government's former Department of Education) and plays a powerful influential role in the determination of academic funding to all Hong Kong's major institutions of higher education.

²² Ibid. FTE departmental academic and research staff numbers with salary wholly funded from general funds by staff grade and institution, 2001/02. [online document]

<<http://www.ugc.edu.hk/english/statistics/staff.pdf>> (14 June 2003). These staff figures are full time equivalents (FTEs) including instructors, tutors, language and research assistants, and others who may or may not be engaged in publication.

of the world's best research is published in English language journals; moreover, promotion in UGC schools is largely determined by one's ability to publish in these journals²³. Notwithstanding, as a proportion of both students and teaching and research staff Hong Kong professors made up less than 8% of Hong Kong's entire UGC funded academic community in 2001. Of the 12% of all students, who were enrolled as post graduates, few will continue in academia after receiving an advanced degree?²⁴

In order to obtain entry into a UGC funded tertiary school Hong Kong secondary school students must pass an English language syllabus for both the HKCEE and the HKALE²⁵. Should they obtain entry, their primary need for English is to read textbooks that Hong Kong teachers and professors are loathe to translate from English into Chinese, because the UGC fails to provide them with appropriate incentives. Moreover, most UGC professors do not want to be bothered with the additional time and effort necessary to teach students how to express what they learn in any format that cannot be compressed into a 90-minute true-false, multiple-choice, short-answer test²⁶.

Nevertheless, in order to pass the English language syllabi of the HKCEE students must sit through eleven years of English classes largely taught by non-native English speakers trained in the same largely hermetic system in which they teach. The effect of this perpetual recycling of passive, high grammar-laden, textbook English is especially visible in the written work of senior college undergraduates. Many college freshman have difficulty writing a full English sentence without error, and many more cannot follow English lectures whose content is not fully illustrated with an overhead or digital slide projector²⁷. No this does not apply to all, and certainly does not apply to many, but we are not adding totals, we are trying to understand proportions.

In 2001 there were nearly a million students enrolled and studying English in Hong Kong's formal primary and secondary school system²⁸. In the same year there were just under 60,000 enrolled in secondary forms six and seven. Under 15,000 students were studying at one of Hong Kong's eight major universities as first-year, first-degree students.

²³ Information obtained in departmental meetings and conversations with university staff. The Chinese University of Hong Kong, Department of Economics. Academic year 2000-2001.

²⁴ In the Hong Kong system of education a post-graduate student is someone who has graduated with an undergraduate degree. In the US such students are referred to as graduate students.

²⁵ The HKALE (Hong Kong Advanced Level Examination) is a comprehensive examination similar to that of the HKCEE (Hong Kong Certificate of Education Examination) but more involved. According to a senior officer of the HKEAA (Hong Kong Examinations and Assessment Authority) it costs more than twice as much to grade an advanced level (AL) examination paper than it does a certificate of education (CE) paper.

²⁶ See [figures 19](#), [20](#), and [21](#) in [appendix I](#) for a more complete understanding of this situation.

²⁷ This observation is based on personal teaching experience in the Economics Department at The Chinese University of Hong Kong.

²⁸ Only students from schools registered with the former Department of Education are included. The exact total was 949,530. Source: Hong Kong Department of Education, Planning and Research Division, Statistics Section (Now under the Hong Kong Education and Manpower Bureau). Enrolment Statistics 2001. April 2002. Table 3.1 Classes, accommodation, enrolment, and repeaters in primary day schools by grade, 1992-2001, 49. Table 4.1 Classes, accommodation, enrolment, and repeaters in secondary day schools by grade, 1992-2001, 81.

In effect, each Hong Kong primary and secondary student must spend nine to eleven years of his life studying a language that will enable him an equal chance to realize a professional opportunity for which the odds are less than one in five at the outset²⁹. Such a gamble may be taken in good conscience for the sake of entertainment at a Hong Kong horse race, but are such odds acceptable when a decade of your life is at stake? During his or her first nine years in school the average Hong Konger spends between 17 and 21 percent of his time dedicated to the study of the English language³⁰. Just how much time does the average Hong Konger spend using the English language after he has left secondary form V?

²⁹ Between 1995 and 2001 average secondary school enrolment per grade was 80,345. Average first-year, first-degree student enrolment in Hong Kong's eight major universities for this same period was 14,640. Dividing this latter figure into average secondary enrolment yields a little worse than 1 in 5. The university enrolment data were obtained from UGC's website under: Statistics menu. Student numbers. FTE Student Enrolment of UGC-funded Programmes - 1995/96 to 2001/02. [online document] <http://www.ugc.edu.hk/english/statistics/studentfte_series.pdf> (13 June 2003).

³⁰ Li Kwok Cheung, Secretary for Education and Manpower, Education and Manpower Bureau, Hong Kong SAR. 2003. Promoting the use of English in Hong Kong. [online document] <http://www.emb.gov.hk/emb/eng/info/lcpaper/paper3/txt_paper3_20030122.html> Information and News/Speeches and Papers at the Legislative Council/Speeches. Speech presented to the Legislative Council during a the 22 January 2003 motion debate.

HONG KONG'S ENGLISH SPEAKING COMMUNITY

Between the years 1997-2001 estimated average annual overseas Hong Kong enrolment in Australia, Canada, the United Kingdom, and the United States was 26,388³¹. Just over 50% of all students enrolled in the UK between the years 1997 and 2001 were enrolled in either an undergraduate or a graduate university degree program³². Under the assumption that enrolment patterns in other countries resemble the UK pattern, total Hong Kong overseas enrolment in undergraduate and graduate programs between 1997 and 2001 in the aforementioned countries was 13,514³³. Under the assumption that these students return to Hong Kong upon graduation, they account for approximately 7.7% of Hong Kong's total work force³⁴. These are the same Hong Kongers who appear in English on local television, deliver keynote speeches in English at local business conferences, serve as intermediaries between native Hong Kongers and distinguished English speaking foreign visitors, and travel overseas as Hong Kong's international ambassadors. They are the ones who give Hong Kongers and the world the impression that all Hong Kong is well versed in the English language. What about the 92.3% of Hong Kong's remaining work force -- the ones who spent 17-21% of their lives as Hong Kong primary and secondary students, so that they might someday fill out an English invoice statement read by another Chinese speaking native Hong Konger?

³¹ Although data for Australia, Canada, and the United States were available for the years 1990-2001, data provided by the British Council covered only the period between 1997 and 2001. Thus, UK figures prior to 1997 were obtained through extrapolation based on the proportion of those who studied in the UK between 1997 and 2001 and those who studied in other major industrially advanced English speaking countries -- namely, Australia, Canada, and the United States. See [figures 9](#) and [10](#) in [appendix I](#) for further details and exact data sources.

³² Data obtained from the British Council for the years 1997-2001 indicate that 51.2% of all Hong Kong residents studying in the UK were enrolled in either an undergraduate or postgraduate degree program. It is assumed here that a similar proportion of Hong Kong students studying in Australia, Canada, and the United States are also enrolled in tertiary programs.

³³ Average enrolment of Hong Kong residents in undergraduate and graduate degree programs at locally funded UGC tertiary institutions for the same period was 55,335. Combining these latter two enrolment figures and dividing their total into estimated overseas enrolment in undergraduate and graduate degree programs shows that just about 20% of all Hong Kongers enrolled in tertiary undergraduate and graduate degree programs were enrolled overseas. Source: HKSAR, University Grants Committee. FTE Student Enrolment of UGC-funded Programmes, 1995/96 - 2001/02. This document is no longer available at its previous online address. Similar data can be found in a document entitled FTE Student enrolment of UGC-funded programmes by broad academic programme category - 1996/97 to 2002/03 <http://www.ugc.edu.hk/english/statistics/ApcFte_series.pdf> (9 July 2003) Statistics/Student numbers.

³⁴ Using Hong Kong labour force statistics from 1995 to 2001 the expected work-life of the typical Hong Kong worker was estimated at 18.6 years. Multiplying this number times the number of average annual returnees for the years between 1997 and 2001 yields the total number of returnees in the Hong Kong work force at any given moment. The calculated estimate was 251,915. Dividing into this number by the average size of Hong Kong labor force for the years 1995, 1999, and 2000 and multiplying time 100 yields 7.7%. See under [figure 11](#), [appendix I](#) for calculation of average work-life. Data source: Hong Kong Census and Statistics Department. Hong Kong Statistics. Hong Kong in Figures. Key Indicators. Labor. Labor Force by Age Group [online document] <http://www.info.gov.hk/censtatd/eng/hkstat/hkinf/labour/labour_index.html> (15 December 2001)

According to UNDP's Human Development Report for 2002 the average life-span of a Hong Konger was just over 79 years³⁵. Even with the generous assumption that all of Hong Kong's 26,388 students, who study every year in a major, industrially advanced English speaking country, return to Hong Kong with near native English speaking ability, the whopping 1,665,080 Hong Kong residents that results still only comes to just over 25% of Hong Kong's total, non-transient, Chinese-ethnic population³⁶. Adding non-Chinese Hong Kongers to this group comes to just over 30% of Hong Kong's entire resident population. When adding these figures one must also keep in mind that Hong Kong's two largest non-Chinese ethnic groups -- Philippine and Indonesian -- constitute more than 50% of Hong Kong's non-Chinese ethnic population, and that the majority of Hong Kongers who study overseas probably do not remain long enough to obtain near-native fluency. Moreover, it is most unlikely that over 25,000 Hong Kongers have been studying overseas each year for the past 79 years! Thus, 30% is a very generous maximum, and somewhere under 15 percent is probably far more reasonable.

So, what about the 8 to 9 out of every 10 remaining Hong Kongers who only share in this international experience while looking through the closed window of an air-conditioned tour bus in Seoul, viewing the back-side of someone's t-shirt in a cramped underground train in Mong Kok, glancing at a caption beneath a bigger-than-life portrait of a Western model in a G2000 display window in Ma On Shan, or reading Chinese subtitles to the newest sequel of Lord of the Rings at a local cinema near you? Indeed, large Hong Kong businesses and government are getting a free ride at the expense of the Hong Kong general public and smaller Hong Kong businesses are scraping up the left overs³⁷.

In the end it is not a matter of some Hong Kongers being trilingual and biliterate; rather it is a matter of how many who aspire to become trilingual and biliterate ever reach their goal. If the need were that which so many would have us believe, then motivation would not be a problem. Similarly, were the need truly real, there would

³⁵ United Nations Development Program. Human Development Report. Human Development Indicators. II leading a long and healthy life. Table 8: Survival: progress and setbacks, 174. [online document - pdf 548KB]

<<http://hdr.undp.org/reports/global/2002/en/indicator/indicator.cfm?File=index.html>> (17 November 2002). The UNDP estimate was 79.1 years for the period 1995-2000.

³⁶ According to the Hong Kong Census and Statistics Department there were 6,364,439 ethnic Chinese living in Hong Kong in 2001. Under the assumption that the Hong Kong overseas student spends most of his childhood in Hong Kong, his post-overseas Hong Kong life-span is $79.1 - 16 = 63.1$ years. Thus, $(79.1 - 16)(26,388)/6,364,439 = 0.269 = 26.2\%$. Source: Main tables of the 2001 population census. Population by ethnicity [online database]

<http://www.info.gov.hk/censtatd/eng/hkstat/fas/01c/01c_index.html> (12 January, 2002)

Frequently asked statistics.

³⁷ Stegemann, R. A. 2002. English or languish - Probing the ramifications of Hong Kong's language policy A problem of severe market distortion with simultaneous excess demand and oversupply. [online document] East Asian Research and Translation in Hong Kong.

<<http://homepage.mac.com/moogoonghwa/earth/current/hklna/indices/econdex.html>> (10 June 2003).

also be a willingness to pay³⁸; students would study English because they saw a future in it, not because they were told. In short, not only is the universal English language requirement economically inefficient³⁹, but it cannot live up to the expectations of either the government or the people of Hong Kong⁴⁰.

³⁸ On 23 January 2003 I attended SCOLAR's Public Consultation at Hong Kong's City Hall. The overriding focus of that meeting was the absence of motivation and how to generate more.

³⁹ Stegemann, R. A. 2002. English or languish - Probing the ramifications of Hong Kong's language policy A problem of severe market distortion with simultaneous excess demand and over supply. [online document] East Asian Research and Translation in Hong Kong. <<http://homepage.mac.com/moogoonghwa/earth/current/hklna/indices/econdex.html>> (10 June 2003). Also, see the Hong Kong Language Needs Assessment Project <<http://homepage.mac.com/moogoonghwa/earth/current/hklna>>.

⁴⁰ Stegemann, R. A. 2001. English: bridge or barrier? The political economy of the English language in East Asia". Presented at the International Language in Education Conference 2001, Hong Kong. [online document]<<http://homepage.mac.com/moogoonghwa/earth/samples/barrier.pdf>> (10 June 2003)

THOSE WHO WOULD PROMOTE THE UEL REQUIREMENT

In January 2003 Hong Kong's Standing Committee on Language Education and Research (SCOLAR) reported⁴¹:

It is important to make a distinction between the learning of a second language through adopting it as the medium of instruction (MOI), and the learning of a second language as a subject.

Many people believe that using a second language as the MOI for academic subjects will enhance students' proficiency in the second language through increased exposure and use, without significant adverse effect on the learning of the subject matter. However, local empirical research since the 1970s has consistently shown that the majority of our secondary school students have not reached the level of English proficiency necessary to benefit from English-medium instruction. Some students were in fact performing worse in both English and other subjects taught in English as compared with students who received Chinese-medium instruction.

In 2001 primary day school enrolment was 493,075. Of these students only 6.1% attended Anglo-Chinese schools⁴². Of the remaining 93.9% a full 97% were enrolled in schools in which the Chinese language served as the primary language medium⁴³. Though 78 percent of all secondary schools are listed as schools with an English medium of instruction⁴⁴, less than 62 percent of the HKCEE bilingual syllabi were administered in English⁴⁵. A recent examination of Hong Kong's university students revealed that final year undergraduates demonstrate substantially worse ability in active English language skills than in passive, and that average listening competence ranks beneath reading ability across the board⁴⁶. Should anyone be surprised by the

⁴¹ Source: SCOLAR (Standing Committee on Language Education and Research). 2003 (January). Language education review: action plan to raise language standards in Hong Kong, 24. [online document] <http://www.language-education.com/consul_full_en.pdf> (14 June 2003).

⁴² How do Anglo-Chinese schools differ from other Hong Kong schools is not always an easy question to answer. The underlying assumption here is that Anglo-Chinese schools are more likely to use English as the medium of instruction for subjects other than English.

⁴³ Source: Hong Kong Department of Education, Planning and Research Division, Statistics Section (Now under the Hong Kong Education and Manpower Bureau). Enrolment Statistics 2001. April 2002.

⁴⁴ According to a senior researcher in the Language Education Division of Hong Kong's Education Manpower Bureau 400 of Hong Kong's 514 registered secondary schools are listed as EMI (English as a medium of instruction) schools. Though this means they have met certain minimum guidelines with regard to the use of English in the classroom, a better measure of what actually happens in the classroom is what the classroom produces in terms of results. This comparison assumes that average school size is the same for both CMI and EMI schools.

⁴⁵ Hong Kong Examinations and Assessment Authority. Hong Kong Certificate of Education Examination 2002. Table 7.0 - Attendance statistics for subjects offering both language versions. [online document - 184 KB] <<http://www.hkeaa.edu.hk/doc/fd/2002cee/cestat10.pdf>>. For further information and analysis in this regard see [figure 21](#) in [appendix I](#).

⁴⁶ University Grants Committee. 2003 (July 23). Common English Proficiency Assessment Scheme (CEPAS) [online document] <<http://www.ugc.edu.hk/english/documents/press/pr230703e.html>> (28 July 2003) Virtual library/Press Statements. See [figure 17](#), subsequent figures, and corresponding discussion in [appendix I](#) for more information.

findings of the Standing Committee on Language Education and Research?

Global economic competition and international reputation are the standing mantras of Hong Kong's perhaps most ardent supporters of the UEL requirement. Mr. Michael Tien, SCOLAR's government appointed chairperson, reported in his invitation to the Hong Kong community to comment on his committee's recommendations⁴⁷:

Being biliterate and trilingual has been our competitive advantage. Increasing globalisation and a more open China market have made it more important than ever to enhance the English and Chinese proficiency of the community as a whole to meet the challenges of the future.

Employers have repeatedly expressed concern about the declining language standards among employees. It is vital that we raise our language standards if we are to consolidate Hong Kong's position as Asia's world city.

One can only wonder just whom he and his committee asked about Hong Kong's commercial English language needs, if not others very much like him⁴⁸. Mr. Tien was trained in an English language medium of instruction (EMI) school and is a major international figure in Hong Kong's clothing and fashion industry. As a native Hong Konger he also speaks Cantonese.

At an international congress devoted to the effectiveness and improvement of schools, Ms. Fanny Law, a graduate from Harvard University and current Permanent Secretary of Hong Kong's Education and Manpower Bureau stated⁴⁹

[T]o uphold Hong Kong's position as a modern international city in the global economy of the 21 st Century, our young people must develop a global outlook, a good understanding of other cultures and the ability to live in harmony in a multicultural society.... [O]ur young people must also possess the language skills to communicate effectively in a global community. Today, English is still largely the business language in Hong Kong and over 90% of the population speak a local Chinese dialect.

Later in her speech she affirmed

⁴⁷ January 2, 2003 press release issued by SCOLAR to launch a two-month public consultation on a SCOLAR report entitled: Action Plan to Raise Language Standards in Hong Kong. [online document] <http://www.language-education.com/press_en.pdf> (14 June 2003). What is new?/News/Language Education Review/Press release.

⁴⁸ Michael Tien is the brother of James Tien, the chairperson of Hong Kong's pro-government liberal party. According to James democratically elected politicians cannot be expected to serve Hong Kong's best interest because they are "too reluctant to accept financial contributions and other help from business leaders that might produce closer ties to the corporate sector" See Keith Bradsher's article "Hong Kong protesters demand free elections" in The New York Times. Today's Headlines. [online document] (10 July 2003).

⁴⁹ Law Fan Chiu Fun, Director of Education, Education Department, Hong Kong SAR. In pursuit of excellence: challenges and changes for the Hong Kong Special Administrative Region. Archived address to the International Congress for School Effectiveness and Improvement Plenary Session, 5 January 1999. [online document] <http://www.ed.gov.hk/ednewhp/resource/international_congress/english/home.htm> (14 June 2003). The SAR Challenge on Education.

... [M]any parents still think that using English as the medium of instruction is the only way to master the English language. Speaking English well is seen as the stepping stone to a good job.

The Government remains committed to strengthening the learning of English as a second language.

These comments were made in reaction to the 1999 governmental decision requiring that the majority of Hong Kong secondary schools switch from the use of English to Chinese as the medium of instruction at junior secondary levels. As a native of Hong Kong Ms. Law also speaks Cantonese.

On 22 January 2003 the following motion was introduced by the Honorable CHOW LIANG Shuk-ye before the Legislative Council. The motion passed⁵⁰:

...that, as English is one of the two official languages in Hong Kong under the Basic Law, and in order to strengthen Hong Kong's position as Asia's world city, this Council urges the Government to adopt measures to promote the use of English with a view to maintaining its importance and improving its standard in Hong Kong.

Ms. Chow is a graduate of St. Paul's Coeducation College and The University of Hong Kong⁵¹. She performed graduate work at a speech and drama school in Great Britain after graduation⁵². Present at the above meeting was Professor Li Kwok Cheung, Secretary for Education and Manpower. In his speech he offered the following⁵³:

Notwithstanding the fact that our students spend thousands of hours learning the language, employers are expressing increasing concern over the decline in English proficiency, particularly in spoken English, among their employees. This is an issue that has given rise to much debate in the community. Educators, parents and employers are all asking, "[W]hat is wrong with the way we are teaching English in schools?"

One can only wonder where he obtained his information about Hong Kong employers, if not from Michael Tien whose standing committee is a key advisory group to the

⁵⁰ Chow-Liang Shuk Yee, Member of the Legislative Council. 2003 (January 22). Promoting the use of English in Hong Kong [online document] <<http://www.legco.gov.hk/english/index.htm>> (15 June 2003) Council Meetings/Motions without legislative effect/Year 2002-2003/22 January 2003. A *motion* is a means by which members of the Legislative Council express views and debate issues of public concern and/or call on the Chief Executive to take certain actions. A motion is not legally binding.

⁵¹ On the most recent CEPAS sponsored IELTS examination the University of Hong Kong lived up to its reputation as Hong Kong's best English speaking university. Source: University Grants Committee. 2003 (July 23). Common English Proficiency Assessment Scheme (CEPAS) [online document]<<http://www.ugc.edu.hk/english/documents/press/pr230703e.html>> (28 July 2003)

Virtual library/Press Statements.

⁵² A biographical sketch of Ms. Chow. [online document] <<http://www.legco.gov.hk/general/english/members/yr00-04/clsy.htm>> (15 June 2003) About the Council/Members.

⁵³ Li Kwok Cheung, Secretary for Education and Manpower, Education and Manpower Bureau, Hong Kong SAR. 2003. Promoting the use of English in Hong Kong. [online document] <http://www.emb.gov.hk/emb/eng/info/lcpaper/paper3/txt_paper3_20030122.html> Information and News/Speeches and Papers at the Legislative Council/Speeches. Speech presented to the Legislative Council during a the 22 January 2003 motion debate.

Education and Manpower Bureau⁵⁴. After graduation from Cambridge University in the United Kingdom Professor Li undertook surgical training at Harvard Medical School and the Massachusetts General Hospital in the United States. Before becoming the Secretary of the Education and Manpower Bureau Professor Li was Vice Chancellor of the Chinese University of Hong Kong. As a native Hong Konger he also speaks Cantonese⁵⁵.

⁵⁴ Standing Committee on Education and Language Research. Terms of Reference.[online document] <http://www.language-education.com/solar_en.htm> (4 August 2003).

⁵⁵ A somewhat dated biographical sketch. Department of Surgery, The Chinese University of Hong Kong. [online document] <<http://www.surgery.cuhk.edu.hk/staff/profile.asp?nID=17&iTeam=>> (15 June 2003).

PROJECT OVERVIEW

Primary Goals of This Study

1. Measure the degree to which English language skills acquired in primary and secondary school are retained, improved, or lost by the general population after graduation from secondary form five.
2. Determine the nature and degree to which these skills are utilised by the general population after graduation.
3. Assess the general public's attitude toward the usefulness of the UEL requirement as reflected in their post-secondary work, study, and leisure activities.
4. Gather information for further research that can better assess Hong Kong's true need for the English language.

Research Design

An examination

In order to obtain an accurate overall assessment of attrition (retention or improvement) the voluntary co-operation of randomly selected members of the population is required. After selection individuals will be asked to sit for a comprehensive examination.

A questionnaire

In order to better understand how the English language is used in Hong Kong society, Hong Kongers attitudes about its use, and the importance or non importance of the UEL requirement a questionnaire will be administered that will address each of these issues in depth.

Measuring attrition

General hypothesis

Knowledge is only truly useful, if it is utilised; under-utilised knowledge is subject to attrition. By measuring English language attrition across broad segments of Hong Kong's population one can better understand the extent to which English is truly utilised by Hong Kongers, and thus indirectly the true need for the UEL requirement.

If no attrition is taking place, then Hong Kongers are making good use of what they acquired in school, and there is strong reason to further promote the UEL requirement. If on the other hand attrition is taking place and that attrition is both widespread and/or profound, then the justification for the requirement should be re-examined, and other ways to satisfy Hong Kong's true English language needs should be explored⁵⁶. In summary,

Null hypothesis (H_0): No attrition is taking place.

Alternative hypothesis (H_1): Attrition is taking place.

Obviously the notion of attrition is far more complex than what this simple pair of hypotheses suggests, but a little formalisation at this stage is probably in order.

⁵⁶ Attrition is a shadow measure of false need; its more tangible complement is what is actually used. Once the contours of false need are understood, true need can be better targeted and understood.

Nature of attrition

The measurement of language attrition can be viewed from several vantage points including the breadth, depth and rate of attrition, as well as its social, economic, and linguistic contours.

Breadth of attrition

With regard to the breadth of attrition the UEL requirement can be justified, if either of the following two conditions are met:

1. Attrition is not taking place on a broad scale and everyone is making good use of what they learned.
2. Everyone is not making use of the English language but the expected payoff to everyone who learns the language is sufficiently high when it is learned so as to justify the cost of learning it.

At various points along our career paths each of us is required to weigh various alternatives with which to achieve the same, similar, or altogether different ends. With each alternative is associated a probability and a possible payoff. These probabilities are important in determining the likelihood of obtaining the payoff and the expected payoff of the entire gamble⁵⁷.

Education at the primary and secondary levels is acquired in baskets of subjects designed to provide students with basic skills and knowledge necessary for further education and adult survival. Obviously, not everyone is endowed with the same ability to succeed in each subject of the basket, some will even excel in all areas where others in none. Notwithstanding, placing subjects in the basket that knowingly lead to large discrepancies in performance across students without making them optional is unwise. Neither is it smart to place subjects in the basket for which the across-the-board expected payoff is not sufficiently high to compensate for the known requisite sacrifices.

Depth of attrition

Certification is an important feature of Hong Kong society and is likely to play an even

$$^{57} E(x) = \sum_{i=1}^n p_i x_i$$

where p_i is the probability associated with the i^{th} payoff x_i and $\sum_{i=1}^n p_i = 1$

$E(x)$ is the individual's expected value from the entire set of alternative payoffs and their associated probabilities.

The younger we are, the more similar are our sets of alternative payoffs. What is likely to differ among young people are the probabilities associated with each payoff. These probabilities are determined by individual endowment, social environment, family background, school, and parental income. How these factors influence one's ability to learn and retain English is part of what this study intends to measure. Also important is the determination of the set of alternative payoffs common to everyone. This study will examine both.

more important role for the English language in the near future⁵⁸. For the moment, however, the HKCEE English language syllabi remain the principal yardsticks for measuring Hong Kongers' acquisition of English. Each is also at least one objective measure of how much English knowledge Hong Kongers acquire by the time they complete their first nine years of basic education plus an additional two years between secondary forms IV and V⁵⁹. As the HKEAA keeps HKCEE examination grades from 1978 to present, these syllabi are a particularly useful benchmark for measuring post-secondary English language attrition.

Obviously it will be difficult to measure how much additional language related knowledge was acquired after completion of secondary school. Nevertheless, partial measures can be obtained through factual questions similar to those asked with regard to the breadth of attrition -- namely, how much additional schooling, language related training, overseas experience, conversational, and written language practice the individual experienced after sitting for the HKCEE.

If it is the goal of the Hong Kong government that everyone acquire a certain minimum level of competence with regard to the English language, then it must also be the goal of government to maintain that level throughout an individuals' lifetime. Measuring the depth of attrition will demonstrate just how effective the government has succeeded or failed in this regard.

Teaching knowledge of a language that one forgets for lack of use can only be justified in so far as the expected payoff for having learned it in the first place was reasonable at the time of acquisition. Knowing how the individual follows up with regard to his basic training will also provide important information with respect to his expected payoff at the time of acquisition.

Rate of attrition

In 2002 the number of candidates sitting for the HKCEE was 122,098. Of these only 44,880 day schoolers met the minimum requirements for entry into form six programs⁶⁰. Though not everyone who sits for the HKCEE seeks enrolment in form VI courses, for every five students in forms IV and V in 2002-03 there were only two form

⁵⁸ In his speech during a motion debate at a Legislative Council meeting on 22 January 2003 Hong Kong's Secretary of Education and Manpower put forward SCOLAR's recommendations for more rigorous assessment and certification of Hong Kongers' language competence. See the EMB's website under Information and news/Speeches and papers at the Legislative Council/Speeches. Promoting the use of English. Setting and assessing standards. [online document] <http://www.emb.gov.hk/emb/eng/info/lcpaper/paper3/txt_paper3_20030122.html> (9 July 2003).

⁵⁹ Between 1992-2000 there were on average 83,541 students enrolled in each of the secondary forms I, II, and III in each year. During this same period there were approximately 76,201 students enrolled in each of the secondary forms IV and V in each year. Dividing 76,201 by 83,541 and multiplying by 100 yields 91.2%. Thus, more than 90% of all students who complete secondary form III can also be expected to complete form V. For more exact figures and source information see the HKLNA-Project website-<<http://homepage.mac.com/moogoonghwa/earth/current/hklna/ff/data/tables/table1b.html>> Data Collection/Tables/Table 1b - Day School Enrolment by Grade Level (1992 - 2001)

⁶⁰ Hong Kong Examination and Assessment Authority. Annual Report 2002. Appendix VI Examination Statistics, 64. [online document] <http://www.hkeaa.edu.hk/doc/isd/annualReport_app_6.pdf> (16 July 2003) About us/2002 Annual report/Appendices/Examination statistics.

VI and VII students in the same year⁶¹. In 2002 there were 36,213 candidates who sat for the HKALE. Of these only 16,311 day schoolers met the requirements for entry into a Hong Kong tertiary school. Assuming that most of those who sat were form VII students we are looking at a failure rate of about 50%. What stimulus for further English language education, training, and practice exists after form V is anything but uniform⁶².

How fast language attrition occurs is both a function of the way we learn language and how we use it after it is learned. Thus, a careful understanding of attrition will examine not only what is lost, but also the factors that determined it. Was the student's instructional medium Chinese or English? Did the student attend an all English medium school? Did the student's school encourage the use of English in extracurricular activities? Did the student cultivate English speaking friends with whom to practice what he learned in school? After leaving school did the student travel overseas? In what manner did he use the English language at his place of work? Did he participate in English language conversation groups? Did he watch CNN on a regular basis? Did he correspondent or chat in English over the internet? If so, how much? These are the kinds of factors that are likely to retard language attrition, and must be examined along with post-secondary citizens knowledge of the language.

If the overall rate of attrition in the population is slow, no matter how severe the loss becomes after many years of language neglect by some, one can make a better argument in favour of the many, because the probability that individuals will use what they have learned after leaving school increases and so too their expected payoff.

As most individuals only sit for the HKCEE once, or alternatively several times in rapid succession, one cannot trace individual rates of attrition over time. However, one can measure rates of attrition across generations, in so far as the time passed since having sat for the HKCEE the first time will be different for each age group examined⁶³.

Contours of attrition

Whereas measures of the breadth and depth of attrition provide information about the entire underlying population, this same information when combined with factual, behavioural, and perceptual information provided by each respondent can tell us who among the population is and is not benefiting from the UEL requirement.

Though each respondent's social, educational, and employment foot print is likely to be different, each respondent will share at least some of the same various social,

⁶¹ Hong Kong SAR, Education and Manpower Bureau [online document]

<http://www.emb.gov.hk/EDNEWHP/resource/key_statistics/English/secondary_education.htm>
Highlights/Key statistics on school education/Secondary education/Enrolment (15 July 2003).

⁶² See Post Secondary Programmes at <<http://www.postsec.edu.hk/>> for a list of programs, institutions, and other information related to the kinds of post-secondary educational opportunities available to Hong Kong citizens.

⁶³ To the extent that changes in the system of English language education in Hong Kong have taken place over time, a truly accurate measurement of attrition rates will likely require the introduction of institutional control variables. Similar kinds of technical adjustments will also have to be made for the benchmark HKCEE examinations. As neither the system of education nor the standards of measurement with which English is measured are constant over time, just how much constancy is assumed and not assumed will require a careful examination of the changes that have taken place.

educational, and work attributes with others of his own age cohort. As these attributes are likely to be shared in greater or lesser amounts among many individuals, statistically identifiable patterns or clusters with important information related to the identity of each individual and his or her respective group will result. Moreover, as these patterns repeat themselves across different age cohorts, one might trace how these groups change over time. One can easily imagine as a result the creation of three-dimensional social, educational, and employment contour maps whose levels reflect varying degrees of language attrition.

As the frequency with which identifying cluster attributes occur in the underlying population can be estimated, the probability with which an individual exhibiting these attributes belongs to a particular pattern or cluster can also be determined. This data can later be used in calculating the expected payoffs of the UEL requirement for various subgroups of the underlying population.

TOOLS OF MEASUREMENT

Two alternative approaches

The proposed research is divided into two integrated but separate components: one, an English language examination used to measure levels of attrition; and two, a survey questionnaire designed to elicit factual, behavioural, and perceptual information used to identify the factors that contribute to attrition on the one hand, and determine the population's underlying subgroups that experience it on the other.

The purpose of the examination is to measure rates of attrition (both positive and negative) among Hong Kong's post-secondary school population at different stages of individual social and professional development⁶⁴. It focuses on what may be called Hong Kong's post-secondary form-five population -- those Hong Kongers who are currently resident in Hong Kong, old enough to have passed through six years of primary and five years of secondary Hong Kong educational development, and have sat for the HKCEE at least once.

The study proposes either of two sampling frames each of which depends on the examination to be administered and the availability of information related to each examination and its corresponding sampling frame. There are two approaches currently under consideration: the repeated-test approach and the second-test approach. Inquiry is now being conducted to determine the feasibility of each approach. Each of these two approaches is subject to considerable modification with regard to the actual number of Hong Kong residents tested and the degree to which they are tested. As this project is large, the goals and budgets of potential funders must obviously be taken into consideration.

Certainly other test approaches can be considered, as well.

Repeated-test approach

The Examination

This approach is preferable to the second-test approach, because the basis for comparison is the same as that used to measure the respondent's primary and secondary school performance.

Each year the HKEAA (Hong Kong Examinations and Assessment Authority) conducts an examination called the HKCEE (Hong Kong Certificate of Education Examination)⁶⁵. This examination consists of a large number of subject tests known as syllabi. Among these syllabi are the English Language Syllabus A and the English Language Syllabus B; HKCEE candidates may sit for either of these two syllabi but not both⁶⁶. Each syllabus is

⁶⁴ Negative attrition occurs when the individual not only retains what he has learned, but also acquires additional knowledge. Positive attrition is actually a negative concept indicating language loss.

⁶⁵ See the HKEAA website under HKCEE at for further details with regard to the nature of the examination and individual syllabi.

<http://eant01.hkeaa.edu.hk/hkea/topper.asp?p_coverdown=hkcee_home.html>

⁶⁶ Students are allowed to sit for the same or different English language syllabi in different examination years.

composed of several papers; not all are administered on the same day⁶⁷. These papers are grouped into scoring components for the purpose of assigning a grade to each candidate's syllabus. Scores are awarded for each component, and from these component scores a composite score is derived for each candidate. It is these composite scores that form the basis for the ranking and assignment of candidates' performance and syllabus grades.

In general candidates never see their component scores, and the scores are destroyed, along with much other personal information, within a certain period after a candidate's grade has been assigned and released. Sample scripts are maintained by the HKEAA for each grade category of each syllabus. These scripts are selected test papers obtained from candidates' completed syllabi. They are said to represent overall examination performance for each grade level for each syllabus for each year. As neither the component scores nor the composite score for individual syllabi are likely available, these sample scripts can be used to reconstruct the old grading standard for the purpose of grading newly administered old papers or portions of papers⁶⁸

As HKCEE grade certificates are typically requested when Hong Kongers apply for new employment, most respondents who sat for the HKCEE are likely to have copies of their grade certificates. In any case individual respondents can request a copy of their HKCEE syllabi grades, if they no longer have them. Moreover, the grades for each of the two English language syllabi are in many cases, if not all, comparable for each examination⁶⁹.

With proper sampling of respondents, rigorous readministration of the old English language syllabi, and appropriate grading based upon old standards for each syllabus and its corresponding grade structure, an accurate measurement of language attrition should be obtainable. Obviously what will be measured is only that which the original HKCEE benchmarks were able to measure -- namely, the ability of individual respondents to remember eleven years of primary and secondary Hong Kong English language education. To the extent that this education was valuable to individual respondents after they left secondary form V it will be retained.

Sampling frame and procedure

The HKEAA maintains records of past English language syllabi dating back to 1978. Thus, there is a 25 year period from 1978 to 2002 over which the repeated-examination approach can be applied⁷⁰. In 2002 over 99% of all HKCEE candidates were between the ages of 15 and 30⁷¹. Under the assumption that this same age segment accounts for a similarly high proportion of HKCEE candidates in each of the other years between 1978

⁶⁷ In the case of the English language syllabi each paper focuses on a different aspect of language use and ability. For example, an interview with an English language examiner is considered a paper.

⁶⁸ Thus, it is possible in principle to administer only a portion of an entire syllabus. Whether this should be done will depend on the nature of the syllabus, what is included in the questionnaire, and the cost of administering the repeated exam.

⁶⁹ Hong Kong Examinations and Assessment Authority. Hong Kong Certificate of Education Examination 2004 Regulations. Results 7.3, p. 17.

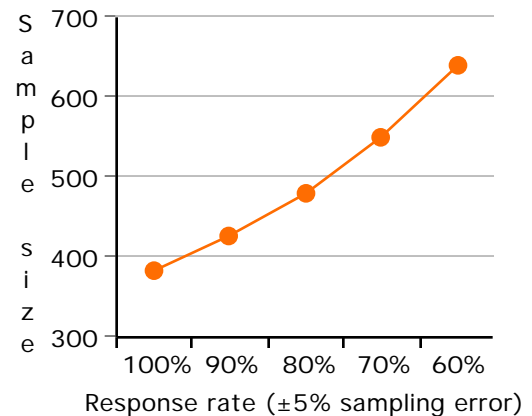
⁷⁰ Depending on when this study begins this time frame could be extended to more than 25 years.

⁷¹ Source: HKEAA. 2002. HKCEE Exam Report. Age distribution by gender of day school first attempters sitting the examination. See [figure 2](#) in [appendix 1](#).

to 2002, a stratified random sampling of between roughly 400 to 600 Hong Kongers for each age group between the ages of 16 and 55 is required for proper re-examination and accurate assessment of English language attrition. Estimated sizes for each age cohort range between 80,500 and 128,400 persons⁷². With 5% sampling error and a 95% level of confidence the size of the required sample size varies considerably with the response rate⁷³.

The most important hurdle to overcome with regard to proper sampling is finding a data base from which to conduct a random sample that will yield the information required to identify and locate a randomly selected list of respondents for each age cohort. Due to Hong Kong's privacy laws and the various restrictions placed on those who collect data, it may not be possible to obtain the required sample sizes directly⁷⁴.

Required sample size (alpha=0.05)



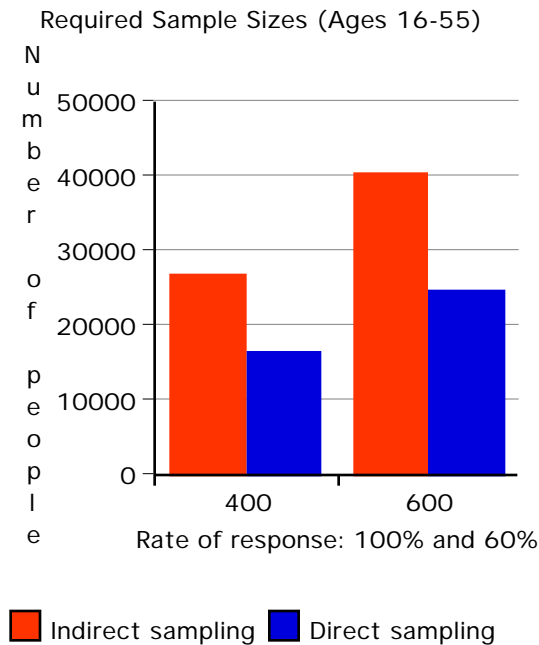
Although it is possible to obtain fairly complete randomly selected contact lists for the entire population using telephone number data banks, one would be required to sample nearly twice the number of people needed in order to obtain the number required. In 2002 there were an estimated 5,692,600 Hong Kong residents age 15 and

⁷² Source: Hong Kong Census and Statistics Department, Demographic Statistics Section. 2003. Population estimates obtained in electronic format upon request.

⁷³ A binomial variable with uniform probability for each outcome was assumed for the calculation of approximate sample size. This is because little information is required about the underlying population in order to perform the calculation. See [Calculation of sample size](#) under [In depth/Sample size](#) for a more thorough discussion with regard to proper estimation procedure. For more information about this calculation in particular see [figures 5 and 6](#) in [appendix I](#). See also Richard J. Larsen and Morris L. Marx. 1986. *An introduction to mathematical statistics and its applications*, 2nd ed. New Jersey: Prentice Hall, 280-282 and 299-305 and Louis M. Rea and Richard M. Parker. 1997. *Designing and conducting survey research: A comprehensive guide*, 2nd ed. San Francisco: Jossey-Bass Publishers, 119.

⁷⁴ The Hong Kong Census and Statistics Department, the Hong Kong Examinations Assessment Authority, the Births, Deaths, and Marriage Records Section of the Hong Kong Immigration Department, and the Registration of Persons Administration Section of the Hong Kong Immigration Department have all been contacted. None of these are able and/or willing to generate random samples by age cohort that could produce appropriate lists of names and corresponding current addresses appropriate for this research project.

older⁷⁵. Of these approximately 60% ranged between the ages of 16 and 55⁷⁶. In order to obtain random samples of 400 and 600 for any of these age cohorts separately



26,846, and 45,638 Hong Kong residents would have to be sampled⁷⁷. If direct sampling of each age cohort were possible these numbers could be reduced to 16,400 and 24,600, respectively⁷⁸. Moreover, having to contact respondents by telephone requires additional work, because each candidate/respondent's address must be elicited directly and separately. Thus, considerable cost saving could be achieved through direct mailing, and the likelihood of obtaining funding for the project greatly increased.

Of course, sampling only one age cohort is not the same as sampling 40 age cohorts, as one would have to reject only 4 out of every 10 contacts when selecting for 40 as opposed to one out of every sixty six when selecting only one⁷⁹. Thus, substantial economies of scale can be achieved by sampling many age cohorts simultaneously.

Once the sampling technique is chosen and the samples drawn those respondents who have not previously sat for the HKCEE must be weeded out. As the repeated test

⁷⁵ Hong Kong Census and Statistics Department, Demographic Statistics Section. 2003. Population estimates obtained in electronic format upon request.

⁷⁶ Ibid. Average size of Hong Kong age cohort 85,018 = 6,724,900 / 79.1 = Hong Kong population in 2002 / estimated life-span of Hong Konger in 2002. Number of Hong Kongers between and including the ages 16 to 55 years = 3,400,720 = 85,018 X 40 = Average size of HK age cohort X number of years. Percent of age 15 plus population = 3,400,720 / 5,692,600 = 0.597 = 59.7%. Data source for Hong Kong life span: United Nations Development Program. Human Development Report. Human Development Indicators. II leading a long and healthy life. Table 8: Survival: progress and setbacks, 174. [online document - pdf 548 KB]

<<http://hdr.undp.org/reports/global/2002/en/indicator/indicator.cfm?File=index.html>> (17 November 2002). The UNDP estimate was 79.1 years for the period 1995-2000.

⁷⁷ The probability of selecting some of a certain age among the age 15 and over population is 0.0149. 85,018/5,692,600 = 0.0149 = 1.49%. The number of individuals that one must sample in order to insure that 400 came from the same age group is 400/0.0149 = 26,846. In order to insure that 600 are from that age group 600/0.0149 = 40,268 individuals must be sampled. Obviously, this many people will not be required for each year, if all 40 years of the proposed sampling frame are included.

⁷⁸ As the age groups 16 to 55 span 40 years, the total number of respondents required for a 100% response rate would be 16,000 = 400 X 40. With a response rate of 60% the number becomes to 24,000 = 600 X 40. Once again, these figures assume a separate sampling for each age cohort.

⁷⁹ 0.015 = 0.025 X 0.597 = P(A|B) X P(B) = where A is the probability of selecting someone of a certain age from among the 16 and 55 age group, and B is the probability of selecting someone between the ages of 16 and 55 from the over age 15 population. Thus, 66 = 1/0.015.

approach employs the HKCEE as the standard measure for attrition, little could be gained by examining those who have not sat for the HKCEE.

Second test approach

The examination

This approach differs from the repeated test approach in so far as the same test is administered to everyone. As a measure of language competence across age cohorts this approach will naturally produce better comparative results than the repeated test approach, because the same benchmark is used for everyone. As a measure of language attrition and the effectiveness of the UEL requirement, however; this approach cannot be as accurate. Rather, than measuring each individual at some distance from an initial starting point that varies from cohort to cohort, this approach measures all individuals at the same point irrespective of where they started. By maintaining the same sampling rigour across age cohorts and eliciting similar factual, behavioural, and perceptual information from each respondent, one can still obtain measures, however, of breadth, depth, and rate of change, and from these create social contours based on levels of competency rather than individual rates of attrition⁸⁰. Individuals and age groups are no longer identified by what they have forgotten or retained, but by what they know and are able to utilise.

Despite its obvious shortcomings with regard to the measurement of attrition and the effectiveness of the UEL requirement, this approach has several distinct advantages over the repeated test approach.

1. Because one is no longer constrained by the twenty-five year time frame imposed by the HKCEE, one can examine the entire post-secondary population. Thus, where before obtaining appropriate sample size meant sifting through too many observations, so as to eliminate those age groups that did not apply, now all age groups can be included and all respondents tested⁸¹.
2. Because the HKCEE is no longer the standard for measuring language competence, other more universally applicable tests can be utilised -- tests that can provide better cross-border comparisons⁸².
3. As only one benchmark is used to measure everyone's competence, the cost of grading can also be reduced. With the repeated test approach antiquated grading systems need to be reconstructed and reapplied, so as to produce comparable results across time. With the second test approach the same grading system can be used for everyone. As all graders can be instructed to grade in the same way an important cost-saving can be achieved.
4. Statements made with regard to the population as a whole will be far more representative as a much larger cross-section of the population will be included in the sampling frame.

⁸⁰ In effect competency for those who stopped learning English in secondary form V is the glove of attrition turned inside out.

⁸¹ The underlying assumption is that the preferred direct sampling method is not possible.

⁸² The IELTS examination is worthy of note in this regard, as it is the same test employed by the UGC under the CEPAS program to measure final year undergraduate student English language competence. See International English Language Testing Service at <<http://www.ielts.org/>> (30 July 2003) and CEPAS at <<http://www.ugcepa.com/>> (30 July 2003) for further information.

Sampling frame and procedure

As one is no longer bound by the HKCEE time constraints the sampling frame becomes that of all post-secondary school Hong Kong residents, there is no need to sift through observations to find who among the sampled population is between the ages of 16 and 55⁸³. Indeed, everyone sampled will be eligible, though not selected, for the examination -- even those who did not sit for the HKCEE and those who did not pass through Hong Kong's primary and secondary education system. In order to main the same level of statistical rigour for each and every age group, somewhere between 25,200 and 37,800 respondents would be required⁸⁴.

⁸³ The assumption here is that no one under 16 years of age or above age 79 has a telephone number. As this is clearly not the case some sifting will be required.

⁸⁴ $25,200 = 63 \times 400$ and $37,800 = 63 \times 600$. $63 = 79 - 16 =$ average life span of a Hong Konger less the age of the youngest HKCEE candidate (There are a few 15 year olds who sit for the HKCEE, but as a proportion of the total there number is negligible.) A good random sample should yield a sample for each cohort that resembles its proportion in the underlying population. As a result a minimum of sifting should be necessary.

SURVEY INSTRUMENT

The survey instrument provides additional information about each respondent that can serve a variety of purposes depending on which examination approach is employed. Primary among these are an understanding of the socio-linguistic contours of English language attrition (or competence), Hong Kongers post-secondary school perceptions of the UEL requirement, a better notion about how the English language is employed in Hong Kong society, and a solid basis for estimating the probabilities associated with alternative payoffs available to Hong Kong children when selecting a career path for which the English language is an important determinant.

Socio-linguistic contours

Definition

For the purpose of this study a socio-linguistic contour is defined as any combination of factual, behavioural, or perceptual data supplied by respondents and plotted against their attrition or competence levels. Data obtained from other sources can also be employed in the formation of these contours.

Formation

Socio-linguistic contours can be formed in either of two ways: one, statistical inference based on data obtained from either of the two examinations (repeated test or second test) and the questionnaire; or two, theoretical constructs based on prior information about the nature of Hong Kong society and data obtained from this study and other data bases.

The personal data employed in the formation of these contours is that obtained from individual respondents' answers to questions about their post-secondary acquisition, use, and avoidance of the English language. This includes both factual and behavioural information related to the individual's post-secondary education, training, employment, overseas travel, language-related leisure, and market activities. Questions related to the frequency and nature of the use of English language in each of the these settings must also be examined.

In addition respondents would be asked questions related to their pre-primary, primary, and secondary formation under the UEL requirement and other English language related experiences associated with their acquisition of the language during this period⁸⁵.

In summary any information, either factual or behavioural, that could contribute or detract from the individual's ability to acquire knowledge of the English language, or alternatively enhance the rate at which he or she forgets it.

⁸⁵ It is well known that one's ability to retain what one has learned is determined by the nature and conditions under which the knowledge was initially acquired. Cramming just before an examination, for example, rarely produces enough lasting knowledge to justify the activity from any point of view other than that of acquiring grades, certificates, and proving one's ability to perform under pressure. In addition, information about one's social, school, and family background can also help in determining probable post-secondary social outcomes as they relate to the English language.

Interpretation

The socio-linguistic contours thus derived can be used to better understand the nature and causes of post-secondary attrition (repeated test approach) and acquisition (second test approach), the expected payoffs to those subject to the UEL requirement, and the frequency, nature, and use of the English language in Hong Kong society at large. Each category of interpretation can form the basis for further research and enquiry.

For many Hong Kongers the English language can be little more than another school subject, like Chinese language or mathematics, that must be learned in order to obtain passing grades on the HKCEE, HKALE, and eventual admittance into a college or university; for others the English language must represent a lifetime of learning, overseas opportunity, and frequent international encounters. Still others must view it as a means to pass more tests, obtain more certification, and advance their professional careers. For still other it must represent little more than more school drudgery in a system of education badly in need of reform. What social, economic, and educational factors form the basis for these likely groups, and others yet imagined, are the primary reason for constructing socio-linguistic contours.

Though the direct and obvious goal of this study is to measure and understand the nature of English language attrition (repeated test approach) or competence (second test approach), an important motivation for this research is to provide Hong Kong policy makers, educators, parents, and children with better insight into the role of English in their own society, so that they might better plan their shared and separate futures.

As the UEL requirement can only be truly justified in so far as the expected payoff to each Hong Konger is both positive and significant, the alternative payoffs and the probability associated with each must be clearly understood. To the extent that socio-economic background can affect these probabilities and alternative payoffs this study and the socio-linguistic contours that it generates will contribute significantly to all of Hong Kong.

English is not mathematics; it is not something that everyone must know in order to succeed in today's world. Nor is it Chinese, the language spoken by well over 90% of all Hong Kongers. The assumptions of yesterday no longer apply today. The future of Hong Kong does not lie with Great Britain, nor the anglophonic world per se. Hong Kong is but one territory of China, whose political future is still up in question. As an independent East Asian economy its present, immediate and distant future are intimately bound with China and its principal trading partners. Truly English is a language of East Asian and world business, but it is only one language among many, and not necessarily the language most useful to all Hong Kongers.

An important goal of this research is to determine just who and who does not benefit from the English language. The socio-linguistic contours generated by this study will provide important insight into the distribution of these benefits. Moreover, what this study does not reveal can be revealed through further study that uses this study as a stepping stone. Obviously, what benefits a few should not be made the burden of the many without important and clear justification.

Hong Kongers' Perception

Introduction

In addition to factual and behaviour information that can help us understand the underlying socio-economic, educational, and political landscape that contribute to English language attrition or competence, this study will also gather information with regard to Hong Kongers' perception about the importance of English to themselves and Hong Kong society as a whole. It will ask respondents to assess their own post-secondary progress with regard to the English language, their view of the language as an important contributor to Hong Kong's present and future, and the degree to which they believe they have personally benefited from their acquisition of the English language and the UEL requirement. This information will then be compared with the reality of their situation as reflected in their examination scores and their answers to factual and behavioural questions. The resulting contrast will help government policy makers and Hong Kong citizens to separate fact from fiction about the importance of the English language in their own society.

Perception and measurement error

How well respondents score on the examination will likely be related with how respondents employ what they have learned after leaving school. Aspects of the language that are not well-represented on the test, but are utilised by respondents are not likely to contribute to their test scores. As a result respondents' perception of their own ability and the scores that each receives on the examination are likely to diverge. Thus, it is important to understand how respondents actually employ the language after they have left school. It may be that Hong Kong students are not learning what they need to know⁸⁶.

Perceived versus actual use

There is good reason to believe that East Asia's perception about the importance of the English language does not correspond well with East Asia's actual use of it⁸⁷.

Comparing Hong Kongers' beliefs about the general importance of the language with their use of it, should thus prove instructive. If the number of respondents who believe English is important does not correspond well with the number who actually use it and have benefited from its use, then it is likely that the language has been oversold and the more obvious benefits from its use exaggerated.

In a similar light the language may be used in ways that it is not truly needed. Looking for an excuse to justify what one has learned, is not the same as fulfilling a true need. Thus, respondents will be asked to assess alternative ways to achieve similar tasks without the language.

⁸⁶ In a completely different light individual respondents may be surprised and learn that they have retained far more of the language than they actually use, and that their negative perception of their own ability is only warranted in so far as they are not using what they have learned -- not that they have forgotten and cannot use this knowledge in the future.

⁸⁷ Stegemann, R. A. 2002. English: bridge or barrier? The political economy of the English language in East Asia. [online document - pdf 136 KB]
<<http://homepage.mac.com/moogoonghwa/earth/samples/barrier.pdf>> EARTH/Projects/HKLNA-Project/Hypothesis testing/Discussion

The UEL requirement

Eleven years is a long time to study a language that one rarely uses outside of the classroom. As a result one must find reasons to justify having to have learned it. Once having escaped the classroom and entered into a world where these justifications can be tested, what is the result? Are new justifications found, are the old justifications reinforced, or is the entire matter simply set aside as a youthful experience with little application in the post-secondary world. In short, just how well do the justifications of young students stand up against those same students turned adults. Are post-secondary Hong Kongers satisfied with that which they were told about the virtues of learning English? What do Hong Kongers' have to say about the government's policy of a biliterate-trilingual society?

PROJECT SIGNIFICANCE

According to the Hong Kong Department of Education there were approximately 15,000 full-time equivalent teachers employed in the instruction of English language in Hong Kong primary and secondary schools in 2001. Using primary and secondary school teachers average salaries and the actual number of teachers employed in English language instruction at each level as a basis for calculation, total salary expenditure dedicated to government mandated English language instruction amounts to roughly HK\$5.7 billion. This figure includes neither the many tens of millions of Hong Kong dollars spent on the importation of native-speaking English teachers (NETs) from overseas, nor the post-secondary cost of training Hong Kong teachers to become certified professionals in English language instruction. Nor, does it include the equally substantial expenditure made in the purchase of English language instructional materials promoted by major publishing houses throughout East Asia. There is also the additional private sector expenditure on English language training⁸⁸.

At the Hong Kong primary level alone students spend between 17 to 21 percent of their total classroom hours in English language acquisition. This represents an enormous sacrifice in time and opportunity loss that must be weighed against the real, not imaginary, benefits of universal English language education.

Despite these obvious and substantial sacrifices in time, money, and lost opportunity no one has examined in a thorough way the extent to which the English language is retained and utilised by Hong Kong students, once they have completed their primary and secondary school studies. Until now the assumption has been that the English language is vital to Hong Kong's economic future, and every student must therefore acquire a minimum level of proficiency. Though few people dispute the importance of the English language as a second language for some and even many, the need for every Hong Kong student to acquire minimal proficiency in the language is an entirely different question. In light of recent theoretical evidence that suggests the presence of enormous economic waste and cross-cultural damage resulting from current educational policies the absence of empirical research can no longer be tolerated. Moreover, well-conducted scientific research in this area will benefit not only Hong Kong, but other East Asian peoples, who share similar regional, national, and local governmental agendas.

⁸⁸ For more information with regard to the interplay of private and public sector English language training see Stegemann, R. A. 2002. English or languish - Probing the ramifications of Hong Kong's language policy A problem of severe market distortion with simultaneous excess demand and oversupply. [online document] East Asian Research and Translation in Hong Kong. <<http://homepage.mac.com/moogoonghwa/earth/current/hklna/indices/econdex.html>> (10 June 2003).

IN DEPTH

Sample size

Nonuniform variance across age cohorts

Whether it is everyone who took the HKCEE or everyone sitting for the second test examination, the temporal standard for measuring attrition is the same -- the age of the candidate. As age cohorts vary dramatically in size over the span of this study⁸⁹, and each cohort represents a distinct sampling frame, the sample size required for uniform statistical reliability across all cohorts will be different. This is because larger sampling frames are likely to result in larger sample variances for each observed variable.

The size of the sampling frame is by no means the only determinant of variance, however. Take for example, variables that seek to measure a respondent's income or language competence. Income variance among younger respondents is likely to be far smaller than that among older respondents, who have had more opportunity to increase their income over time. As a result income dispersion among older cohorts is likely to be greater. Similarly, those who demonstrated good language competence at a young age, are likely to show even better competence as they grow older. In contrast those who showed no or little aptitude for the language at a young age are likely to demonstrate higher levels and faster rates of attrition as they grow older. Over time these two groups will diverge ever farther apart.

Thus, not only will different variables exhibit different variance within the same age cohort, but the same variables can be expected to exhibit different variances across different cohorts. As a large number of variables will be examined, it is important that one not have to second guess the variance of each.

Under sampling leads to sampling error that is difficult to correct; oversampling, on the other hand is easy to correct, but more costly⁹⁰. So as to avoid unnecessary guess work with regard to variance a [pilot study](#) is both useful and crucial.

Calculation of sample size⁹¹

The confidence interval for a simple random variable with mean μ drawn from a sample of size n is given by⁹²

$$\bar{x} - z_{\alpha/2} S_{\bar{x}} \quad \mu \quad \bar{x} + z_{\alpha/2} S_{\bar{x}}$$

⁸⁹ See [figures 1](#) and [4](#) in [Appendix I](#) for adequate illustration.

⁹⁰ *Oversampling* is the term applied when more respondents are obtained than are required to ensure statistical accuracy. Oversampling can be corrected through repeated sampling which is the random sampling of a randomly drawn sample.

⁹¹ Austin W. Homer. Sample size: How much is enough? *Quality and Quantity* 17, no.3, 1983, 239-245. Social Surveys. Sage Benchmarks in Social Research Methods, Vol. 4, ed. David de Vaus, 2002. London: Sage Publications. Also, Louis M. Rea and Richard M. Parker. Designing and conducting survey research: A comprehensive guide, 2nd Edition, Part II, Chapter 7. San Francisco: Jossey-Boss Publishers, 1997.

⁹² This formulation is used for the calculation of sample size for quantitative variables whose values can be measured along the real number line. Restrictions imposed by the Central Limit Theorem also require that the sample size is large ($n > 30$) or the variable's distribution in the underlying population is normal. As the samples used in this study are all large, these restrictions will not present a problem.

where \bar{x} = sample mean
 z = number of standard normal deviations
 = type I error⁹³
 $s_{\bar{x}}$ = standard error of the sample
 μ = population mean

and

$$s_{\bar{x}} = \frac{s}{\sqrt{n}}$$

where n = sample size
 s = sample standard deviation⁹⁴

Substituting for $s_{\bar{x}}$ in the first expression and solving for n yields

$$n = \frac{s^2 z_{\alpha/2}^2}{e^2}$$

where e = sampling error⁹⁵

From this formula it should be obvious that one cannot know the appropriate sample size without having first estimated the variance of the underlying population for each variable. This is because there will be many variables for which no prior knowledge is available. Thus, a pilot study must be performed, and it must include samples selected from those sampling frames likely to demonstrate the largest amount of dispersion for any given variable. In large studies that attempt to measure many variables, it is the variance (standard deviation) of the variable with the largest relative variance that determines sample size⁹⁶.

Oversampling

To the extent that some individuals will be careless or no shows a slightly larger number of respondents should be permitted to take the examination and questionnaire than those required for statistical accuracy.

Solicitation of Respondents

Respondent Incentives

A pair of free round-trip tickets and a weekend's accommodation to a popular vacation resort could be raffled and awarded as an incentive for respondent participation. As an advertisement from a sponsoring travel agent or commercial airline can be included

⁹³ The level of statistical confidence -- namely, the likelihood that the estimated confidence interval contains the population mean -- is given by $1 - \alpha$. Its complement α expresses the likelihood that the true mean of the population lies beyond the boundaries estimated by the confidence interval.

⁹⁴ In effect the standard deviation of the sample replaces the standard deviation of the population s when the s is not known. Provided that n is large ($n > 30$) or the distribution of the variable in the underlying population is normally distributed, no appreciable distortion should result.

⁹⁵ The distance from the mean that the researcher deems permissible given some level of statistical significance α . Sampling or margin of error is equal to one half the size of the confidence interval.

⁹⁶ In this context relative variance refers to the correlation of variance for each variable -- namely, the sample standard deviation of each variable divided by the sample mean for that same variable.

with the project's own advertisements and invitations, such a trip could be secured at a reduced price by the HKLNA-Project. As the number of respondents required for successful completion of the project is large, the complementary advertising potential for potential project patrons would be substantial. Smaller raffled gifts such as large stuffed animals could also be offered, so as to increase the number of winners and thus provide greater incentive.

In addition respondents could be invited to an end-of-study celebration at which the free round-trip tickets would be drawn from amongst the respondents' own project tickets. The ticket would form a separable portion of the questionnaire and include the respondent's number. Those who could not attend the party would be permitted to submit their tickets through the mail or with their answer sheets on the day of the examination.

As the number of respondents is large admission to the celebration would also be randomly determined after the examination and questionnaire have been administered.

A certificate of participation including the individual's examination results could also be extended to all participants for their participation. What better form of post-secondary adult English language certification could a Hong Konger produce to a current or prospective employer than the results of a region-wide examination endorsed by the EMB and administered by the HKLNA-Project in co-operation with the HKEAA or IELTS?

Respondents' employers

As soon as potential respondents have been identified and made familiar with the project, they should be encouraged to contact their employers, so as to obtain permission to participate. As Saturday is the most likely candidate for administration of the examination and questionnaire, work overlap is bound to occur. Whenever necessary respondents should also be encouraged to provide the HKLNA-Project with appropriate employer contact information, so that reluctant employers can be better persuaded. To this end employers can be reminded of their civic duty and how they might ultimately benefit from an improved English-language work force as a result of their employee's participation. Depending on their level of co-operation employers could also receive a free executive summary after the study has been completed.

Acknowledgement of sponsors

Contributing sponsors to this study should be properly acknowledged on all written material sent to potential respondents and their employers. In addition sponsors' names should appear in the questionnaire booklet, and their representatives invited to, and appropriately acknowledged at, the end-of-study celebration.

Due to the size of the project it is unlikely that a single donor will supply all of the financial resources necessary to bring the project to successful completion. Thus, a special insert listing only project sponsors could be included with formal invitations to respondents to participate.

Response rate and the age factor

It may be that younger Hong Kongers will be more willing to sit for the examination and questionnaire than older ones. Older Hong Kongers might resist because they are out of the test taking habit, less able to leave their place of employment due to greater work responsibilities, or have built in beliefs that "do not require testing". Thus, more sampling may be required in order to obtain a sufficient number of older respondents. Depending on how difficult it becomes snowballing among those who volunteer should be considered.

Snowballing

Snowballing is a sampling procedure, whereby the researcher identifies and locates additional respondents through those that he has already identified⁹⁷. The success of this approach would depend on ability of HKLNA-Project researchers to demonstrate that friends, relatives, and co-workers are statistically independent with regard to language competence, social rank, and attitude toward the UEL requirement. As having to demonstrate this after selection is made and the experiment concluded may prove too late, this approach should only be applied as a last resort, and then only with appropriate preliminary tests and screening of potential respondents.

Public awareness

In order to promote interest, maximise volunteer effort, and minimise sampling costs an advertising campaign should be initiated that would elicit the support of the local media. Not only would potential respondents be knowledgeable of the examination and survey before they are contacted by an HKLNA-Project representative, but they would be more eager to participate knowing that they have been among the "chosen" or "lucky few" selected to participate. Moreover, employers and potential funders are more likely to support the project with both co-operation and pecuniary aid, if they know that others in the community are also participating. As close to 1/2% of the entire Hong Kong population is will become involved, a concerted advertising campaign would be well worth the effort. Certainly the media that provides advertising assistance can be added to the project's list of sponsors under a separate category.

High versus low achievers

As the examination and questionnaire are about the English language, the interest of potential respondents in this study is likely to be guided by their interest in the English language⁹⁸. Catering to this bias would be an unfortunate circumstance, as those who are likely to perform poorly on the examination will not volunteer, and their absence would bias the results upward. As such, it is probably wise, if everyone were deceived into believing that they could be tested in any of the three languages for which Hong Kong purports to be trilingual -- namely, English, Cantonese, and Putonghua. In this way no language would be singled out, and respondents' decision to participate would not be biased in favour of a particular language. In like but opposite manner, the

⁹⁷ Louis M. Rea and Richard M. Parker. 1997. Chapter 8 - Non probability sampling. Designing and conducting survey research: A comprehensive guide, 2nd Edition. San Francisco: Jossey-Bass Publishers.

⁹⁸ This was pointed out to me by Professor G.L.J. de Bot of Groningen University, The Netherlands, in an e-mail. Professor de Bot has himself measured French second language attrition in a small West European country. May 2003

English language-non specific ramifications of the project should be emphasised.

Mini-survey

A mini-survey would be conducted during the initial sampling period over the telephone⁹⁹. During the mini-survey individual respondents would be asked about their knowledge of the HKLNA-Project and their interest in Hong Kong education and language reform. They would also be provided with a brief summary of the project's goals, a list of the project's sponsors, as well as a link to the internet where they could find out more. In addition they would be asked questions with regard to the role of language in Hong Kong society, their own ability as a speaker of English, Putonghua, and other languages.

Gathering this information would serve a dual purpose. On the one hand, it would spark interest in the issues that the HKLNA-Project seeks to address; and on the other, it would provide valuable insight into the pre-test, pre-survey attitudes and perceptions of potential respondents and non-respondents¹⁰⁰. As the examination is likely to have a marked impact on respondents' attitudes and perceptions, the mini-survey offers a means to control for this impact on the final survey. In addition the mini-survey would also lighten the examination and survey load, by allowing the researcher to obtain information about individual respondents that would otherwise be asked on the day of the examination.

As age is crucial to both the measurement of attrition and the determination of the sampling frame, another vital function of the mini-survey is to determine the age of the respondent.

Mini-survey respondents would also be asked to provide contact information by which they might later receive an invitation and other enticements through the mail. Where possible e-mail addresses should also be obtained, as a substantial reduction in mailing costs can probably be achieved through direct access to potential respondent's over the internet.

Other information crucial to the survey that might inconvenience the respondent over the telephone could be obtained when formal invitations are sent out. Employer contact information is likely to be among these.

After the min-survey has been completed, individual respondents would be assigned a respondent [identification](#) number (RIN) to be used throughout the study as a means of anonymous identification and confidential access to information. Each respondent would be told his RIN when invited to participate in the examination and final survey, and each respondent would be provided with an examination and questionnaire booklet corresponding to his RIN on the day of the examination and survey. In this manner all information provided by respondents could be easily traced and no information lost.

⁹⁹ In expectation that a data base providing direct access to former HKCEE candidates or specified age cohorts will not be found, telephone data based sampling is the more likely alternative.

¹⁰⁰ Not everyone who participates in the mini-survey will participate in the examination or final survey for any variety of reasons.

As the mini-survey will serve as an enticement to potential respondent's, it must be constructed carefully both in terms of content and length, so as not to turn away those who might be hesitant to participate in the more comprehensive examination and final questionnaire.

Respondent recruitment

Just as one must be careful about the wording of questions and answers on the questionnaire, so must one be careful about the way in which individual respondents are solicited.

Social exchange theory suggests that the research remain flexible with regard to the recruitment of respondents. Following a strict pattern that treats everyone the same is likely to drive many respondents away. In general one should reward response with increasing perceived rewards and decreasing costs and seek to establish trust and emphasise the social good that each respondent's participation is likely to produce¹⁰¹.

Measuring attrition

Reporting HKCEE scores

As many respondents are likely to have sat for the HKCEE more than once, one must decide which HKCEE attempt to use as the benchmark for measuring attrition for each individual. As second and third attempts will reflect factors such as cramming, better familiarity with the test format, and greater diligence on the part of candidates; results from the first attempt are likely to provide a more accurate appraisal of what was truly learned and retained up until departure from secondary school.

As individuals are likely to present only their best HKCEE grades when requested, some control must also be made for HKCEE repeaters, so that only first attempt results are obtained.

Controlling for institutional change

Institutional reform is an important probable source of measurement error that must be investigated. As the Hong Kong system of education, the HKEAA, and Hong Kong society itself have undergone substantial change since 1978, when one sat for the HKCEE would affect not only one's examination results, but also one's acquired level of knowledge. As a result, the amount of attrition for a standard interval of time will vary according to the institutional conditions that prevailed both prior and at the time of one's departure from secondary school. To the extent that such differences exist improper comparisons across age cohorts are likely to result, and control variables that adjust for these changes should be introduced. For example, economic productivity could serve as a proxy for technological advancement, tourist arrivals and departures for increased overseas exposure, and dummy variables for structural changes such as the introduction of NETs into the primary and secondary school system, or changes in UGC-funded university entry requirements.

Component scores versus syllabus grades

Although the final grades for previous HKCE examinations are likely available for all

¹⁰¹ Don A. Dillman. Mail and internet surveys: The tailored design method, 2nd Edition. Singapore: John Wiley & Sons, 2000.

candidates, the various component scores, from which the final grade for each syllabus of each candidate were calculated, have probably been destroyed¹⁰². Thus, refined comparisons between scores received on the first and second sittings of the HKCE examination will not be possible and levels of attrition must be measured for the entire syllabus -- not by component. This also implies that portions of the examination may not be easily extracted to streamline the testing procedure and thereby avoid wear and tear on older respondents who are no longer accustomed to sitting for scholastic endurance tests of days long past. In short, the examination may have to be administered in its entirety or not at all, if a proper measure of individual attrition is to be obtained.

To the extent that component examination scores on a language test can objectively reflect how English is used in Hong Kong society, the second test approach may yield better results¹⁰³. This is because the component structure of the HKCEE has changed over time, and an objective one-to-one comparison for each component across time is unlikely¹⁰⁴. No matter the approach -- repeated test or second test approach -- respondents will be asked to evaluate their own ability with regard to each component and these results compared with those obtained on the examinations.

Standardised time intervals

In order to measure attrition it is important that a consistent set of standards is employed. One of these standards is the time interval over which attrition is measured. For this study one-year intervals based upon age have been selected. There are several reasons for this. Firstly, measuring attrition by year mirrors the way in which the language was acquired by most Hong Kongers under the UEL requirement. Secondly, there are important economies of scale with respect to the [indirect random sampling](#) of specific age cohorts. Thirdly, age is an important factor in the determination of when one sits for the HKCEE¹⁰⁵; and fourthly, it is a consistent and accepted discriminator with regard to social role and therefore useful in the construction of [social contours](#).

Test taking measurement error

A likely and important source of measurement error will be that brought about by another form of attrition -- namely, one's ability to sit for examinations. See under [test-taking measurement error](#) in the section entitled [questionnaire format](#).

Questionnaire

Factual questions

Factual questions should elicit information with regard to the respondent's current occupation, previous employment, overseas experience, language-related interests, level of schooling, family background, and other personal information, that can assist

¹⁰² This was learned through e-mail exchange and telephone conversation with Ian Chu, Division Head, Information System Services Division, Hong Kong Examinations Assessment Authority.

¹⁰³ Recent CEPAS results provide a clear indication in this regard for at least final year UGC-funded tertiary students. See [figure 17](#), and [figure 22](#) in [appendix I](#) for further discussion in this regard.

¹⁰⁴ A somewhat thorough examination of the annual reports for the HKCEE dating back to 1978 revealed both important consistency and change over time.

¹⁰⁵ Sixteen, seventeen, and eighteen year olds accounted for approximately 80% of all candidates who sat for the HKCEE in 2001. See [figure 2](#) in [appendix 1](#) for further discussion and illustration.

researchers in better constructing the socio-linguistic contours that map likely causes of language attrition and use. Which questions are asked will also depend on the needs of participating researchers and information gathered during convenience sampling.

Cross-cultural comparison

As the UEL requirement is by no means unique to Hong Kong, one should keep in mind the possibility of cross-cultural comparisons when formulating and encoding survey questions.

Obviously not all questions will have universal application, but those that do should be specially encoded, so that data collected from them can be easily separated out. Keeping the cross-cultural perspective in mind when creating questions would also serve to keep the researcher objectively focused. This is especially true with regard to the questionnaire designed for use in the second test approach.

Self-assessment

After taking the examination respondents will be asked whether they felt the examination was an accurate assessment of what they know. How examinees respond to this question can then be compared with their actual performance, additional post-secondary English language training and use, as well as their post-secondary test taking experience.

This information can be used to assess differences between individual perception and more objectively measured socio-linguistic conditions that apply both to the individual respondent and Hong Kong society as a whole. It can also be used to help control for [measurement error](#) due to test-taking attrition.

As the HKCEE and other examinations are designed to test what students have been taught; rather, than what they learn, post-secondary Hong Kongers are likely to be more critical of the examination once they have experienced the language in a non-curricular setting¹⁰⁶. How respondents react to this question will be helpful in understanding how well the UEL requirement prepares them for their post-secondary careers.

Educational background

If the UEL requirement and the HKCEE are worthy of the pain they obviously produce for many Hong Kong children, parents, and teachers, then success on the HKCEE's

¹⁰⁶ One of the questions asked during the public consultation administered by SCOLAR in early 2003 was: "Why are the GCE O-Level and IELTS Band 6 not used for all students -- both domestic and foreign?" One response was: "Is the more appropriate question not what is the purpose of the examination? Is it to measure the ability of Hong Kong English language instructors to impart knowledge of recycled Hong Kong English to Hong Kong students, or is it to measure the ability of Hong Kong students to communicate with the non-Chinese world both in and outside of Hong Kong? If it is the latter, then the most universal testing procedure possible is preferred." Source: EARTH's preliminary critique of the Language Education Review - "Action Plan to Raise Language Standards in Hong Kong". Standing Committee on Language Education and Research, January 2003. [online document] <<http://homepage.mac.com/moogoonghwa/earth/current/hklina/ff/quality/critique.html>> (29 August 2003) /Answers to Questions.

English language syllabi ought to correlate well with high levels of English language later on in life. In order to test for this correlation respondents should be asked to provide not only their grades for the English language syllabi, but also those for other HKCEE syllabi as well. In this way the separate effects (overall HKCEE performance and performance on the English language syllabus) can be properly measured and identified.

By way of example, someone who scores poorly overall on his HKCEE, but does well on his or her English language syllabus, may be permitted greater opportunity to utilise the language after he leaves school, than someone who scores poorly on everything. Whereas the former may seek opportunities to use the language, the latter may actively seek to avoid them.

Career advancement

Success in life depends on many factors -- not merely a university degree. To the best of my knowledge no one has ever rigourously examined just how important the English language is to professional success in Hong Kong. Certainly many equate good English, with obtaining entry into a good school, and thus a better chance in life. Has anyone ever separated the degree and language effects after the entry into the good school has been obtained?

Certainly it would not be sufficient to ask, if English has been important to one's career. More importantly, one must know in what way. If it has only meant obtaining entry into a Hong Kong university, rarely to use the language thereafter, then learning the language is likely to have had little intrinsic worth. Learning how respondents use the English language in their daily lives and comparing this with the ways in which the English language has helped them to advance their careers could be useful in two-ways: one, it would help researchers better understand the alternative payoffs available to primary and secondary students, who might someday view the English language as an option, rather than a requirement, along their chosen career path.; and two, it would help sort out the differences between real and artificially created demand.

True need versus artificially created want

As supply begets demand it is difficult to distinguish just how much English is truly needed and how much is used simply because it is made available by the UEL requirement. In order to obtain at least some notion of what is truly needed and thus an indicator of the language's true social utility, respondents must be queried about alternative language modes and their suitability for achieving the same tasks.

A document written in English that is typically filled out in Cantonese is a good example of artificially created need. This is because the document could be translated into Chinese and not require a clerk to understand English in order to complete it. Several clerks at a service counter, who require English occasionally, could easily be replaced with one clerk at a special service window designated for both non-Cantonese and Cantonese speakers. This is not social discrimination; rather, it is an efficient use of scarce resources to satisfy real market demand from a transient international presence. Bilingual automated teller machines have likely replaced many bilingual clerks with poor English language ability already. An economics textbook used by thousands of economic teachers, who have received graduate degrees in economics from institutions that require knowledge of the English language for graduation (not entry), may not be

worth translating, but that same textbook purchased and used by hundreds of thousands of economic students with no desire to become economics professors, is obviously worth translating. The list of alternative uses is likely long and slightly different in each situation, but well constructed [audio-visual clippings](#) can capture the difference of essential and nonessential use with excellent clarity, and thus provide respondents with the stimulus they require for consideration of their own work environment.

Do you think in English?

An important test of language ability is the degree to which one actually thinks in the language. Is code switching frequent, or does one seek other ways to express the same thought or idea in the absence of the correct word in the actual medium? Is one forever running to a dictionary for help? When a dictionary is used is it monolingual or bilingual? When one is thinking about what to write or say, does one think about it first in one's native tongue, or does one think about it in the language in which the idea is to be expressed?

People who use a second language become more comfortable with it over time. People who do not use it become less confident and eventually avoid use altogether, unless of course they are compelled. Thus, language attrition and language comfort are closely related phenomena and when examined together should provide good insight into the state of Hong Kong English.

Thinking in Cantonese or English could be easily captured in an audio-visual pair that contrasts two Hong Kongers writing a report in English: one, who thinks out loud in Cantonese as he writes, and one, who thinks out loud in English.

Code switching and language maintenance

Code switching is an important form of language formation and maintenance that reflects one's ability and confidence in the use of language. Carefully selected audio-visual clippings that depict code switching could be compared and ranked by respondents in an effort to measure their degree and use of this behaviour. From these ranked comparisons metrically scaled portraits of code switching can be obtained for each individual and Hong Kong society as a whole. These portraits could then be compared with other measures of language competence and attrition to obtain more accurate measures of both.

Avoidance

Another phenomenon closely related to the question of language maintenance and attrition is avoidance behaviour. Does the individual struggle with what he knows when confronted with the language, does he run for help of another who might know the language better, or does he simply avoid use altogether? These phenomena could easily be captured through the use of audio-visual clippings and thus serve as still another good measure of language use among Hong Kongers.

Are struggling and avoidance a function of examination grades, do they depend on language related extracurricular activities, or are they a question of individual psychological make-up? These are additional questions that could be partially answered by this study.

Extracurricular language learning

Obviously there is more to language competence than one's ability to pass a written examination; this is especially true when the examination employed is more focused on that which is taught, than on what is actually learned¹⁰⁷. As an important source of motivation for second language learning is found in extracurricular, language-related activities, examinees must be queried about their non-academic, language-related goings-on -- both while they were still in school and after they entered the work force.

Historical perspective

In 1997 Hong Kong's political landscape changed from that of a British colony to a Chinese special administrative region. Obviously this has effected the way in which many Hong Kongers perceive Hong Kong society and the role of the English language in it. Understanding how the changeover has affected this perception is important to understanding the motivation of those who would perpetuate the UEL requirement¹⁰⁸.

Showing a brief film clipping of the changeover ceremony would elicit gut feelings of the past tempered by some six years of post-changeover social, political, and economic change, and thus serve well as an important stimulus for a short battery of questions about changed attitudes. Individual perception with regard to the changeover could then be compared with individual English language attrition and competence. To the extent that politics and language attrition are correlated, one could better control for political influence in the interpretation and analysis of this study's results, as well as the eventual educational reforms that might result from this study.

Self-assessment and perception of the UEL requirement

As no one appears to have rigorously tested the assumptions used to justify the UEL requirement, and those who advocate it often appear out of touch with those who must submit to its drudgery, there is good reason to know the extent to which the requirement is understood and supported by the general public. One way to test what the general public understands about the UEL requirement is to query respondents twice about its importance and relevance to their own lives: once before they sit for the examination and questionnaire, and once after. A broad-based change in attitude on the part of respondents toward the UEL requirement evoked by the examination and questionnaire would suggest that Hong Kongers have not given the UEL requirement sufficient thought.

Accordingly respondents would be administered a [mini-survey](#) either over the telephone, or independently through correspondence, as they are recruited. Knowing how much thought Hong Kongers have put into the UEL requirement will shed light on the need for further public consultation before more language reforms are undertaken.

Lifelong learning

The Continuing Education Fund is a government sponsored program that seeks to attract adult workers back into education and thus advance the educational level of

¹⁰⁷ The HKCEE appears to be this kind of examination.

¹⁰⁸ See figures 4, 6, 8, 9, and 10 of Appendix II for a discussion and graphical illustration of the impact on overseas and domestic international educational enrolment.

Hong Kong's work force¹⁰⁹. This program reimburses adult workers 80% of their course fees up to HK\$10,000 upon successful completion of their coursework. Only those enrolled in courses that have been approved by the Hong Kong government and do not hold university degrees are eligible for reimbursement. Although a great idea one must wonder, who among Hong Kong's adult workers can actually take advantage of this opportunity for self-advancement, when so many young workers must spend ten hours a day, six days a week, with unscheduled time off at their place of work.

As the UEL requirement is partially justified by the lifelong educational opportunities that it provides Hong Kong citizens, it is important to know just who, among those who are eligible for the program, can actually take advantage of it. Certainly English language training forms a part of the approved curriculum. To this end a portion of the factual questions must address respondents work schedules.

Special needs of contributors and sponsors

As the study is large in scope and will likely require the assistance of a large number of inputs, those who contribute to the success of the project should be invited to participate in the formulation of the questionnaire. This is to say, the special needs of participating institutions, provided that they do not detract extraordinarily from the intended purpose of the study, can be entertained as a means to elicit their support.

Questionnaire Format

Vocabulary and content

When probing the general public one must be prepared to elicit responses from a broad spectrum of people with varying levels of talent and erudition. Thus, survey questions and their answers must be easily understood by everyone, but also made to appeal to a broad spectrum of interests. Finding the appropriate wording for each question and set of answers is a daunting task.

Audio-visual clippings permit the individual to distance himself from survey content while still actively participating in it, and thus relieve some of the pressure on the researcher to create questions that appeal to everyone, but still not miss the point. Notwithstanding, the entire survey cannot take place on a viewing screen, and the researcher must be careful that questions and alternative answer sets, are worded in such a way that they appeal and are understood by everyone.

Classification of factual data

When formulating questions about schooling, employment, income, geographical location, and other potentially useful socio-linguistic data it would be helpful to employ categories utilised in pre-existing data bases that focus on these issues. With regard to schooling, for example, the EMB's Statistics Section should be consulted; with regard to employment and income the Vocational Training Council, Census and Statistics Department, and the Inland Revenue Department should be queried. In this way accurate statistical comparisons can be made between respondent's perceptions and less psychologically influenced indicators of Hong Kong society and social structure. Here too, internationally applied standards should be used wherever possible.

¹⁰⁹ Hong Kong Special Administrative Region, Education and Manpower Bureau. The Continuing Education Fund. <<http://www.info.gov.hk/sfaa/cef/>> (24 August 2003) /English

Identification

So as to insure a high and accurate rate of response each respondent should be assigned a number and that number placed on all pages of the examination, questionnaire, and response sheet submitted for grading and scoring. In the end each response for each question should be associated with a number that identifies the author of the response.

Hong Kong ID numbers may or may not be appropriate for this purpose. Over personalisation of individual responses may discourage respondents from providing full information. Obviously this should be avoided. Assigning numbers might, on the other hand increase respondents' feeling of anonymity and thus remove unconscious inhibitions with regard to answering certain questions.

Grading and scoring

As both the number of respondents and questions are large, machine scored answered sheets will be the most cost-effective method of tallying data. Thus, questions must be carefully worded so as to ensure that each alternative answer is exclusive with regard to every other and all alternatives taken together are comprehensive.

Open-ended questions that are unavoidable and included in the final instrument, should be placed on pages that are easily separable from the body of the questionnaire and labelled with the respondent's number (see [Identification](#) above).

In an effort to minimise, or if at all possible eliminate, the need for open-ended questions on the final questionnaire, these should be posed during convenience sampling before the pilot study and in focus groups after the pilot study, but before the final questionnaires is put into print. (See [description of events](#) and [weekly schedule of events](#) in [appendix III](#))

So as to reduce error, good testing procedures as suggested by the HKEAA (repeated test approach) or IELTS (second test approach) should be rigorously followed.

Question format

When designing survey questions the researcher must keep in mind not only the information that he hopes to elicit, but also the form in which it is obtained. As most statistical procedures are limited by the nature of the data they employ, the format in which questions are posed is crucial. Different question formats produce different kinds of data -- some of which is easier to manipulate statistically; some of which is more revealing. Moreover, one must take into consideration who will read the final report, and to what further use the collected data will likely be made. As the analysis often depends upon the data one collects, it is not always easy to foresee exactly which statistical procedures will provide the best results. It is for this reason that knowledge about a large number of different statistical procedures at the outset can greatly facilitate the analysis and the writing of the final report¹¹⁰.

Test taking measurement error

An important source of potential measurement error is another kind of attrition

¹¹⁰ See under [statistical methods](#) in the section entitled [analysis and assessment](#) and the HKLNA-Project's [Statistical toolbox](#) on the HKLNA-Project website for more information in this regard.

unrelated to the English language -- namely, the habit of test taking. Whereas younger members of the population are likely to remain in the test taking habit for many years after they have left secondary school, older members of the population, who have already passed through several layers of post-secondary certification required for professional advancement, will be out of the habit. As a result, English language examination scores may be biased downward and not adequately reflect true knowledge.

One way to control for this bias is to include a set of questions that measures respondents' test taking experience. One might ask when the last time the individual sat for a major examination, or how often during the past five, ten, fifteen, or twenty years did he or she sit for a major examination. Alternatively, one might ask questions related to the examination itself: were the instructions easy to follow, were the questions clearly understood, were the alternatives provided adequate for finding a suitable answer, was the examination well organised, etc.? How individuals respond to these sorts of answers could be statistically summarised into a single or smaller number of independent measurement variables that could later be used to control for test-taking attrition¹¹¹.

Language medium

So as to maximise the response rate of potential candidates the survey-instrument should be made available in Hong Kong's three principal languages: Cantonese, Putonghua, and English. So, as to know how many of each exemplar to reproduce respondents could be asked to select their preferred language during the [mini-survey](#). In addition to obtaining a significant reduction in printing costs, this question would also reduce [measurement bias](#) with regard to those who do not speak English well and might otherwise be discouraged from participation.

Subsequent testing

Depending on the study's findings, similar studies could be repeated in the future. Thus, respondents should be queried about their willingness to participate in future projects and how the examination and survey procedure might be improved to make them more willing to do so. Obviously an important savings in sampling costs and reduced measurement error could be achieved, if the same people were willing to sit again. It is also for this reason that the examination and survey procedure should be made as pleasant an experience as possible for everyone.

End-of-study celebration

A thank you note and an invitation to join the project's end-of-study party could be included at the end of the questionnaire booklet including an easily detachable ticket with the location, date, time, and cost of the party. A survey question to query each respondent's likelihood of attendance could also be asked in order to permit better planning.

Examination and survey procedure

Locations, days, and times

As the suggested sampling frames cut across a large swath of the underlying population, test sites must be selected in such a way that they are easily accessible to

¹¹¹ Principal component analysis, a kind of [factor analysis](#), is especially useful in this regard.

everyone; respondents that are required to travel a long distance may be reluctant to participate. So that all respondents are able to attend, each must be provided with sufficient flexibility in order to participate. Thus, a large number of test sites covering a broad area with different examination times should be made available -- at least one appropriate time and location must be made available for each willing volunteer.

Local schools that host the annual administration of the HKCE and HKAL examinations are the most likely candidates for providing suitable locations and ensuring proper administration of both the examination and questionnaire. The HKEAA should be approached for help in identifying appropriate contacts. If the repeated test approach is selected the HKEAA should also be approached to assist in the administration of the examination and questionnaire. Their expertise in this area would likely prove invaluable.

In all cases, respondents should be discouraged from sitting for the examination and questionnaire at different times and/or locations, so as to minimise measurement error.

Selecting an appropriate time frame

Including travel and break time the examination and questionnaire are likely to take several hours. As a result daytime employees will be reluctant to attend after work, and fatigue would likely bias test results downward. Getting respondents to spend their only free day a week (Sunday) to participate in this project is also unlikely. Saturday thus appears the most likely candidate for administration of the examination and questionnaire.

Respondents should be examined within the shortest time frame possible, so as to minimise the affect of changing current events on questions related to perception.

Where there is a conflict with an employee's work schedule, the employer should be contacted and asked to make an exception.

Use of audio-visual equipment

In so far as the examination and questionnaire are administered in a group setting at prescribed locations, audio-visual equipment can be employed to streamline and standardise the examination and survey procedures. Though the creation and use of audio-visual aids would be a costly undertaking, because the study examines a large number of respondents important economies of scale and reduced administration costs can be realised. Similarly advantageous would be the reduction in measurement error brought about by the elimination of inconsistent administrative procedures.

Using audio-visual equipment can prove helpful in other ways. With regard to the second-test approach, and where applicable the repeated test approach, listening ability can be tested using a uniform standard. Questions related to [language use](#) that are difficult to capture on paper can be enhanced through an appropriate selection of audio-visual background materials. In so far as the examination and questionnaires are relatively long, these same aids can serve to release stress and thus enhance each respondent's ability to provide the best information possible.

Finally, the use of audio-visual aids can provide a more objective, though perhaps less comparative, means to test respondents' use of language¹¹².

Order of events

The order in which the examination and the questionnaire are administered will affect the outcome of each. If for no other reason, fatigue will take its toll on whichever measurement tool is administered last.

For many respondents sitting for an English language examination that uses either of the two proposed test approaches is likely to be a stark reminder of their school days. For these and others it may also become an important eye-opener about what they have retained or forgotten even before the examination results are made known¹¹³. Thus, the experience of the examination will probably affect how respondents perform on the questionnaire. Should this be encouraged?

Of the three measurement tools (repeated test, second test, and questionnaire) the examination used in the second test approach is best suited for cross-cultural comparison. This is because it is the least language and culture-specific in design¹¹⁴. Administering this examination after the questionnaire would likely bias the examination's results downward, and thus make it a poor tool for subsequent cross-border comparisons that do not employ a questionnaire¹¹⁵. On the other hand, if the questionnaire is properly designed and administered, it will prove far less a burden on individual respondents' ability to answer than the more onerous language examination (see [use of audio-visual equipment](#) above), and should therefore be administered second.

The UEL requirement advocates that everyone learn certain aspects of the English language, so that each can achieve a minimum score on an examination that may or may not reflect how most utilise the language after they have sat for the examination. Administering the examination before the survey will better focus respondents' attention on the differences and similarities between the exam language and that which they actually use at their place of work or during their leisure hours.

Proctors

An important advantage of this study is the way in which individual candidates, examinees, and respondents are queried. In a group setting well-informed proctors can answer respondents' questions on the spot, and thus reduce the number of questions for which no response would otherwise be forthcoming. As many statistical procedures are not designed to handle omitted responses, an important source of potential measurement error and additional analytical work can thus be avoided.

In order to make proper use of proctors an orientation and training session will have to

¹¹² Audio-visual clippings will have a marked tendency to be both culture and language-specific, and their results less useful for cross-cultural comparison.

¹¹³ This is especially true for the repeated test approach as the examination tool will be identical to the one for which the candidate/respondent has already sat once before.

¹¹⁴ The HKCEE is a system-specific examination that targets Hong Kong students who have passed through Hong Kong's primary and secondary educational system.

¹¹⁵ Once again, fatigue is an important factor that must be kept in mind.

be organised to insure uniformity of procedure.

Convenience sampling (Getting acquainted)¹¹⁶

In order to obtain meaningful socio-linguistic contours appropriate questions must be asked. As the answers to these questions determine the nature of the contours that result during analysis; it is important to have some idea about what contours probably exist before the survey questions are formulated. Knowing approximately how post-secondary Hong Kongers utilise the English language, perceive the UEL requirement, and interact with the international community before the questionnaire is designed would prove useful in formulating specific questions. Thus, sidewalk booths located near train stations and at local shopping malls and open markets at various locations around Hong Kong could be set up and an initial non rigorous reading of public sentiment performed.

This same information could also be used to write a news article and provide the Hong Kong press with information it might require to introduce the HKLNA-Project to the general public and thus better insure the participation of potential respondents and their employers.

These sidewalk interviews would combine both factual and open-ended questions that permit researchers to understand the source of opinion on the one hand and maximise the flow of volunteered information on the other. Those who collect the information would take notes, write brief summaries of what they gathered, and after the data has been tallied, meet for a general meeting to discuss their findings. These findings and the discussion surrounding them would then be used to design the initial survey instrument.

When the interview is completed contact information for each respondent would be gathered, so as to provide a potential list of respondents for a subsequent [pilot study](#).

The interviews could be collected by many people at different locations simultaneously, or by a smaller number of people at various times and locations within a prescribed period. As the interviewers would require initial training, so as to insure they obtain unprejudiced information and not alienate the public, an obvious trade-off between the cost of training and timeliness of collection must be considered.

So, as not to overemphasise that English is the focus of the HKLNA-Project study, the booths and questions should be as multi-lingual as possible. Obviously more information will be gathered than what is needed, but the information gathered would be in a broad context and thus more valuable for more purposeful focus later on.

Captured audience

As respondents take the survey in a group at a specified location to which they must travel, the amount of time spent answering questions can be prolonged. In effect, once

¹¹⁶ Convenience sampling is a formal term used to describe a non rigorous random sampling procedure of a population. In effect, the researcher presents himself at a public location and obtains opinions from passers-by through direct solicitation. See Louis M. Rea and Richard M. Parker. 1997. Chapter 8 - Non probability sampling. Designing and conducting survey research: A comprehensive guide, 2nd Edition. San Francisco: Jossey-Bass Publishers.

the respondent arrives, he becomes part of a captured audience that can be subjected to greater query than he would likely tolerate alone on his own or over the telephone with an interviewer. As such, a larger number of questions posed in a more comprehensive format can be administered and more information collected. Here again, important economies of scale can be realised that would better justify the overall cost of the study.

Notwithstanding, as with any survey endeavour, one must take into account the attention span of respondents, and pose questions in a creative manner that can demand their full attention for a prolonged period. (See [Use of audio-visual equipment](#) above.)

In a similar light the survey instrument should be made aesthetically pleasing. In this way respondents could view the questionnaire as something more than an aimless battery of questions they would rather not answer. Pictures, graphs, colourful topic markers could be included. If made into a booklet respondents could take the questionnaire with them upon completion of the survey to show to others. Pages that contain answer to short-answers could be perforated and thus easily extracted before respondents leave the testing room.

The survey-questionnaire should leave the respondent with the thought that his voluntary effort was well spent and that someday in the distant future he might be willing to sit again for a similar examination and questionnaire.

Language use

In the same way that consumers are presented with alternative products by marketers and then asked to rank them according to preference, HKLNA respondents can be presented with carefully edited [audi-visual scenes](#) that typify use of English in Hong Kong society. Each respondent would be asked to rank each pair of scenes according to what is typical for, preferred by, and expected of each respondent¹¹⁷. From these separate rankings, metrically scaled portraits of typical, preferred, and expected behaviour can be drawn for each respondent, each subgroup (socio-linguistic contour), and Hong Kong society as a whole.

As metrically scaled portraits allow respondents to employ their own standards for comparison and ranking, rather than those imposed by researchers through carefully designed question formats, the data obtained from these rankings is likely to provide a more natural picture of the Hong Kong mind set. Moreover, as each scene would bring into a play a number of different aspects of language use and ability simultaneously, it will be easier for respondents to identify and rank each scene-pair. Having ranked several scene-pairs based on one's own standards first will also condition respondents with a better notion about how to respond to standards imposed upon them by

¹¹⁷ Expected behaviour differs from preferred behaviour in so far the former reflects demands placed on the individual by society that he may or may not wish to follow. What the person actually does (typical behaviour), may differ from that which he would prefer to do (preferred behaviour), because society demands that he do otherwise (expected behaviour). Depending on the individual preferred behaviour may or may not coincide with expected behaviour. This refinement, although obvious to the researcher, may not always be obvious to the respondent. As it would increase the response load by a full third, it may be better to simply contrast typical with expected behaviour or typical with preferred behaviour.

researchers later on in the questionnaire.

Which audio-visual scenes to create can be determined from answers to questions about English language use provided by respondents during convenience sampling prior to the creation of the survey instrument. Which scenes are to be used in the final survey would be determined in post pilot study [focus groups](#). Obviously, those who create the scenes must be careful about how much information is included in each.

As all scenes that are created will probably not be used, scenes that are not incorporated into the questionnaire could be used for the purpose of television or other audio-visual advertisements such as Hong Kong's KCR Road Show.

In the end the UEL requirement is only as useful as the language skills that it produces are used. It might just be that much of what is learned is not going to use, or could be easily replaced with a machine, a translation, or a new approach to advertising. It might be that the language is used in other ways that are not commonly understood. Let's find out!

Envelops and postcards

Once potential respondents have been identified and their contact addresses and numbers obtained, it is important that they are coaxed into attendance. In order to encourage respondents to attend and employers to encourage their attendance it will be necessary to send out information that explains the project and demonstrates proof of community endorsement. This procedure will likely have to be repeated several times. One source recommends as many as 300 to 400 stamped envelops with contents for each 100 respondents¹¹⁸. Written confirmation solicited from individual respondents and where appropriate employers would help to ensure that those who say they will participate actually participate. Postcard reminders two days before each respondent is scheduled to sit for the exam and questionnaire would also help to insure attendance and remind respondents to bring their Hong Kong Certificate of Education for proper verification.

Pilot Study

As popular opinion is often elusive and the gathering of data expensive, it is important that researchers have a good idea about that for which they are looking before they begin. In the absence of previous studies such information may not always be available, and the researcher must [sound the population](#) before he begins¹¹⁹. Knowing what one is looking for, does not mean that one can obtain it, however. Pilot studies allow researchers to test the power of their survey instruments before they spend a lot of time, effort, and money in the collection of data that is of little use. Pilot studies uncover poorly worded questions, inappropriate response alternatives, redundancy, and missing information. They can also reveal procedural weaknesses, identify potential sources of measurement error, and confirm or disconfirm popularly held beliefs that are crucial to the gathering of information. In addition to understanding how questions and alternative responses to answer sets are interpreted, the pilot study can

¹¹⁸ Tim May. Social surveys: Designed analysis with Malcom Williams. Social Research: Issues, Methods and Process, 3rd Edition, Chapter 5. Buckingham: Open University Press, 2001.

¹¹⁹ This is the primary purpose of the convenience sampling proposed above.

determine which questions respondents are unwilling or reluctant to answer.

Post pilot study focus groups

Once the pilot study has been completed small groups of respondents (12-15 persons) could be assembled and asked to comment on why they answered questions as they did. Based on their responses and further analysis survey questions could be reformulated so as to avoid ambiguity, eliminate redundancy, and enhance clarity and accuracy of response. Where necessary new questions could be formulated and others removed.

Reducing the number of open-ended questions

The pilot study can also be used to reduce further the number of open-ended questions on the final questionnaire by providing an opportunity to identify alternative answers to closed-ended questions -- in effect a further refinement over convenience sampling

Measuring the effectiveness of audio-visual clippings

When respondents are asked to rank pairs of audio-visual clippings, they do so based on their own set of standards. An important part of the pairing exercise is to identify what standards they employ. Knowing these standards can reveal the effectiveness of the clippings in eliciting certain information. Thus, depending on the standards identified, one can produce a more effective set of clippings for the final survey. In addition, these standards can form the basis for closed-ended questions that attempt to identify those standards most typically used by the larger population.

Estimating variance

Pilot studies are also very useful in the obtainment of preliminary variance estimates for the purpose of calculating [proper sample size](#).

Analysis and Assessment

Large data sets

SAS software is ideal for the statistical analysis of large data sets, but may have to be acquired through special leasing arrangements, or donated by contributing research partners.

Non-response bias

Though there are a variety of ways to correct for non response bias, the best method of correction is to insure that it does not occur. To this end close attention should be paid to the design of the questionnaire. Also, the questionnaire should be pre tested, and those that administer it should be carefully instructed.

Statistical methods

Hopefully it is understood by those who review this proposal that the statistical procedures employed in the analysis are determined both by the formulation of the questions and by the data obtained from them. As the proper formulation of questions is a time consuming task, their formulation cannot be expected to occur until after funding has been approved and the project undertaken. Moreover, one cannot know the exact nature of the data until the questions have been asked and answered. Thus, at this early stage one can merely talk about the statistical procedures that might be

employed and their probable uses. Crucial is that one understands the possible applications and associated limitations of each statistical technique, that no technique be misapplied, and that there are a sufficient number of different techniques, so as to insure good flexibility and robust results. It is to this end that the HKLNA-Project's [statistical tool box](#) was created. There you will find a more thorough overview with regard to each of the following techniques and its expected applications described below.

Cluster analysis

As a data summary and classification technique cluster analysis is useful in the identification of patterns of an underlying population about which the researcher may or may not be aware. In this study its primary use will be exploratory -- namely, the identification of social contours related to different levels of attrition (linguistic competence) and age. Ostensibly it can also be useful in helping to identify patterns of language use.

There are a wide variety of clustering routines and statistical techniques; which ones are employed depends on the availability of software and the nature of the data obtained. Clustering procedures can employ either metric or non-metric proximity data, but work best when the variables employed are measured with similar units over like ranges. When the data are normally distributed, even highly dissimilar metric data can be standardised and effectively analysed, however. Questions with a large number of alternative responses measured over the same ordinal scale are particularly good candidates for cluster analytical techniques. So, too are a large number of questions, each of which tests for only the presence or absence of a particular attribute. Finally, cluster analysis tests for statistical interdependence among variables and is not useful for statistical prognosis unless utilised in combination with other statistical techniques¹²⁰.

Factor analysis

As a data reduction and summarisation technique factor analysis can be employed to identify hidden factors from a large number of related variables (common factor analysis), determine key or proxy variables amongst a group of closely related variables (principal components analysis), generate an entirely new set of variables for further analysis using other statistical techniques that require variable independence (principal components analysis). As a clustering technique it can be used to generate fuzzy clusters provided that the data are similar (factor Q-analysis). Factor analysis is largely limited for use with metric data, but can also employ dummy variables.

Both common factor and principal components R-analysis are likely to prove useful during the period immediately following the pilot study, in so far as hidden factors and key variables can be identified. One might discover, for example, that either the wrong questions are being asked or that one can obtain nearly the same information with fewer questions. One can also identify variables that are likely to be good candidates for

¹²⁰ In particular [multidimensional scaling](#) in the presence of multiple population subgroups.

further analysis using other statistical techniques later on¹²¹. In a limited number of cases factor Q-analysis could be used in place of other clustering techniques or as a check for their robustness.

Multidimensional scaling

Multidimensional scaling is a diagnostic technique with prognostic power. In addition to helping researchers understand a respondent's or group of respondents' preferences and perceptions, it also provides information about how they conceive them. From simple subjective rankings (non metric pair and non-pair rank orderings) based on complex psychological thought patterns (respondents' standards for judgement) more easily understood and manipulatable metric data is obtained. From this metric data respondents' preferences and perceptions can be compared with more objectively produced scientific fact. With regard to the UEL requirement and English language use that scientific fact would be individual respondent's attrition rates.

Complex phenomenon with which we are very familiar, but have not thought very much about is easily compared, but more difficult to understand. Although the researcher can provide standards for judgement, the respondent may find it difficult to apply them. Creating simple audio-visual scenes that focus on specific aspects of language and then allowing respondents to compare and rank them free of externally imposed standards may provide better insight into language use than more direct questions based on standards imposed by researchers.

Multiple discriminant analysis

Unlike cluster analysis, which exploits the interdependence of attribute variables to classify observations into previously unknown groups, multiple discriminant analysis employs dependent and independent relationships to understand how observations are classified into known groups. With multiple discriminant analysis the groups to which individual observations belong are defined by a single, non metric, dependent, categorical variable with two or more categories. The attribute variables that determine which observations belong to which category or group are metric and assumed to be independent.

In order to understand popular sentiment with regard to certain issues questions can be formulated that force respondents to take a particular stand. Respondents' answers to these questions become the elements of exclusive groups that form the basis of a non metric, categorical, dependent variable whose behaviour the researcher then seeks to explain through a set of metric independent variables. From the resulting analysis factor scores are generated for each individual. These scores reflect the relative strength of each individual's decision with regard to the discriminating set of independent variables. These scores can then be used in combination with other metric variables to perform other kinds of statistical analyses¹²².

¹²¹ Both regression and multiple discriminant analysis require variables that are independent. As a data reduction technique principle component analysis is useful for isolating variables that behave independently of one another.

¹²² In particular regression analysis and classification analysis (not described here) that can be used to estimate the probabilities of alternative payoffs.

This is not the only use of discriminant analysis as individual respondents often fall into categorical groups based upon their ability, achievement, and social rank. What determines group membership is of course of interest to researchers, policy makers, and those affected by the policies that are made.

Multivariate analysis of variance and covariance

MANOVA and MANOCOVA are simply multivariate extensions of their bivariate counterparts ANOVA and ANACOVA¹²³. These procedures are used in testing for statistically meaningful differences between the means of groups of metric variables that are categorically determined. Whereas multiple discriminant analysis seeks to understand why individual observations fall into certain categories, MANOVA and MANOCOVA tells us whether difference between categories are statistically meaningful. As group attributes often occur in clusters these multivariate procedures are clearly superior to their bivariate counterparts. MANOVA and MANOCOVA differ only in so far as the latter allows the researcher to remove the influence of extraneous metric variables that are influence the means of each multivariate group in an adverse manner.

The obvious use of both the multivariate and bivariate procedures is in the determination of statistically meaningful differences among different groups of respondents. with regard to a select number of closely related variables.

Regression analysis

Regression analysis is the economist's empirical tool of choice. It can be utilised as both a diagnostic and prognostic tool, but is largely limited to metric data and dummy variables. Already we have observed that these limitations can be overcome through the use of other statistical routines that convert non metric input data into more useful metric output data.

Regression analysis is a diagnostic tool in so far as it provides researchers with the means to test hypothetical cause and effect relationships. Once these relationships have been confirmed, they can be used to predict future events. By providing a sound basis for understanding the extent to which the English language is vital to Hong Kong users -- not necessarily Hong Kong employers; this study will go a long way toward helping to identify those variables that determine supply on the one hand, and true and artificially created demand for language on the other. Though predicting future supply and demand is not the purpose of this study, understanding the relationships among the variables that determine both are certainly well within it reach.

As a fundamental tool for understanding and testing cause and effect relationships, regression analysis can be used in many ways both by itself and in combination with other statistical procedures.

Standard survey statistics

As the collection of data through survey instruments (questionnaires) from randomly drawn samples of larger populations is a well-established data gathering technique,

¹²³ ANOVA and ANACOVA stand for analysis of variance and analysis of covariance, respectively.

much literature has been written on the subject, and standard formats for presenting survey data have resulted¹²⁴. Among these include frequency distributions, polygon histograms, contingency tables and other visual aids. Associated with each are one or more standard statistics employed to test for statistical significance, strength and direction of relationship, and goodness of fit. Each statistic has properties that are well-suited for specific kinds of data and variable relationships.

Measures of central tendency

The most common measures of central tendency are the mean, the mode, and the median. The mean is commonly used with metric data whose observations have been grouped into intervals of fixed length and then displayed as a histogram. Categorical variables are typically represented as tabulated frequency distributions and do not lend themselves to averaging. The mode is the appropriate measure of central tendency for these latter. Central tendency for ordinal data is typically measured by the median, as it represents the midpoint of the entire ranking. Depending on the way in which the ordinal data was gathered and other measures of central tendency might also be considered, however. The central tendency of scaled ordinal data is often represented by either the mean or mode¹²⁵.

Contingency tables

Contingency tables are commonly used to represent the relationships between two or more variables. Where the relationship is believed to be one of cause and effect, the causal (independent) variable is typically represented as a column variable, and the effect (dependent) variable as a row variable. Depending on the nature and relationship of the variables compared and the reason for which the comparison is made several different statistics can be employed including the χ^2 -square, Z-, t-, Cramer's V-, ϕ -, ϕ^2 -, and λ -statistics.

χ^2 -square statistic

The χ^2 -square statistic is probably the most common statistic associated with the reporting of survey data, as it is the only statistic available for testing statistical significance between two categorical variables. The χ^2 -square statistic compares obtained and expected frequencies and determines whether these are statistically different. In so far as the χ^2 -square statistic can only say whether the obtained and expected frequencies for all categories of both variables are statistically different, the researcher must not jump to conclusions about the relationships among any two

¹²⁴ See Louis M. Rea and Richard M. Parker. 1997. Chapter 8 - Non probability sampling. Designing and conducting survey research: A comprehensive guide, 2nd Edition. San Francisco: Jossey-Bass Publishers.

¹²⁵ Researchers who represent central tendency for scaled ordinal data ascribe special importance to the intervals that may or may not exist in the mind of the respondent. On a scale from -3 to +3 the value zero is likely to represent indifference. One might even surmise that -3 indicates something that is considered just as bad by the respondent as something represented by +3 is considered good. How about a respondent who represent one thing with +1 and something else with +3? Is the latter three times better in the mind of the respondent than the former? It is difficult to say, but this is what central tendency indicated by the mean would suggest.

specific categories¹²⁶ .

Z- and Student t-statistics

Although these two statistics obviously have a wide variety of applications in statistical modelling, their most popular use when representing survey data is a test for statistical significance between the means or proportions of two categories of a single, categorical variable and a common metric variable. The relationship need not be cause and effect; nor must the sample size corresponding to each of the two categories be identical. The t-statistic is used to replace the Z-statistic when normality of the sample populations cannot be demonstrated or the sample size of either population is 30 observations or less. One can test for either equality or inequality of the means or proportions. When more than two categories are present analysis of variance must be applied, but like the χ^2 -square statistic mentioned above the ANOVA procedure can only test statistical significance across all categories -- not between any two.

Cramer's V- and χ^2 -statistics

These two statistics, though less popular than the χ^2 -square statistic, test the strength of relationship between two categorical variables. The χ^2 -statistic is a special case of Cramer's V-statistic and applies only when one or both of the two categorical variables consists of only two categories. Both statistics rely on the χ^2 -square statistic for their calculation. Obviously what causes a close relationship between two variables is not always clear; it could be a third variable that acts on both variables similarly, or a close relationship between the two variables tested. The relationship may be either one of cause or effect or simply structural.

χ^2 -statistic

Like the χ^2 -square, Cramer's V-, and χ^2 -statistics the χ^2 -statistic is used to compare two categorical variables. Unlike the Cramer's V- and χ^2 -statistics the χ^2 -statistic test does not depend on the χ^2 -square statistic for its calculation. Moreover, the χ^2 -statistic can be used to measure both the magnitude and the direction of the dependency of the relationship. Though calculation of the statistic is straight forward, full information is required.

χ^2 -statistic

The χ^2 -statistic, like the χ^2 -statistic, is used to measure the magnitude and direction of the dependency between two variables. Unlike the χ^2 -statistic, however, it requires that the values of both variables can be ranked. In fact, in order to calculate the χ^2 -statistic the values of both variables must be ordered in the same direction -- either both increasing or both decreasing in their respective rank orders. Calculation of the χ^2 -statistic, although straight forward, is somewhat cumbersome. Unlike the χ^2 -statistic it

¹²⁶ In a recent report commissioned by the Education and Manpower Bureau the research provider completely ignored any meaningful discussion of statistical significance. In the final report produced by the EMB the results were simply parroted, as if carefully selected samples and the underlying population were identical and sampling error did not matter!

can however be tested for statistical significance using the Z-statistic.

Post survey focus groups

In so far as questions arise with regard to respondents answers or to statistical outcomes derived from those answers, post final survey focus groups could be employed to elicit further information that might clarify those responses and outcomes. These groups could be assembled either randomly or through targeted selection depending on the nature of the response and/or outcomes requiring further consideration. As these groups would only be required to clarify results, the samples could be selected based on the logistical and temporal needs of both researchers and participants. In order to insure participation a dinner might be offered. Post-survey focus groups should be viewed as a measure of last resort and probably not necessary, if the convenience, sampling, pilot study, and post-pilot study focus groups are properly conducted.

Final Report

Written presentation

As the purpose of the HKLNA-Project is to provide information to both policy makers and those affected by policy, more than one report is required including: one, an easily understood executive summary that highlights those aspects of the study's findings most likely to be of interest to policy makers; two, a full-report that focuses on the study's most significant results and all aspects of the study that led to those results; and three, a specially designed report that is easily understood by the general public and useful for generating public discussion. All three reports should be made available in electronic format to the general public. The latter of these reports should be interactive, well illustrated, and user friendly. In addition, those aspects of the study that are likely to be of use to the broader scientific community, should be summarised and submitted for publication to the appropriate scientific journals.

Oral presentation

In order to effectuate the goals of the HKLNA-Project an oral presentation should be created that can be shown to schools, local civic organisations, and business associations, as well as special interest groups and the Hong Kong press. These presentations would promote the goals of the HKLNA-Project and insure that the study's results become something more than just another revelation of passing interest and a dust collector on someone's library shelf.

Posting examination results

Individual respondents should be allowed to see their examination results as a reward for sitting for the examination. As an incentive to respondent's employers, these latter could also be provided with access to their employee's results with the permission of their employees.

Individual examination results would be posted in context with other selected results from the examination and survey, so that respondents could see how they ranked among their peers. This same data would be made available to employers at the respondent's request.

As a cost saving device these results would be posted on the internet in an interactive data base that would allow private access with entry of the respondent's identification number. Those without access to the internet would receive copies of their results through the mail, although likely in a more abbreviated format.

Reporting examination results

So as to provide longitudinal follow-up and further study on the part of other researchers, all data should be well organised and properly archived.

Translation

The HKLNA-Project services two principal language groups: native Cantonese speakers who have no or little need for the English language, and everyone else who requires it. This study hypothesizes that the former group is by far the larger. As such, it would be an important mistake not to make the results of this study available in Cantonese. As a courtesy to the Chinese government the executive report should also be provided in Mandarin.

HKLNA-PROJECT WEBSITE

An updated website will achieve several important objectives including the least cost provision of information to those who have access to the internet, an open door for those who have questions about the project or wish to offer their input, and a public forum for discussion. The website must eventually be designed for a variety of audiences with varying levels of interest, knowledge, and aptitudes.

Obviously, one must not rely entirely on the HKLNA-Project website for project promotion, information dissemination, and discussion, as it is both a limited and exclusionary medium.

SECOND OPINION

Though it is likely that many people will voluntarily offer their time and effort for the resolution of small problems that are easily identified, and for which solutions can be readily found, more difficult problems will require either further research on the part of the HKLNA-Project team, or the hiring of outside consultants who are not directly involved in the HKLNA-Project. One must consider the trade-off between time (additional internal research) and money (outside consultant fees).

FUND RAISING

Although it would be convenient to find a single donor, the sheer size of this study may prove prohibitive. In another light a broad spectrum of donors might better insure the success of the project, because it would demonstrate broad based community support and would thus be of greater interest to all potential respondents, employers, sponsors, and other project participants. In this light government funding would also be helpful, but unlikely. Please see HKLNA-Project Newsletter No. 11 under Project Fund on the HKLNA-Project website

OUTSTANDING ISSUES

Project Cost

As EARTH is a relatively new entity and the HKLNA-Project is an undertaking whose research challenges Hong Kong's status quo, many potential project participants, although interested, are reluctant to join the project, until they see concrete support from others who are more established. This is a catch-22 situation that can surely be overcome through persistent effort to muster project support. See Reaching Out Across the Worldwide Web under Project Fund on EARTH's HKLNA-Project website.

As the principal costs of this project will be sampling, testing, grading, and analysis, it is difficult to offer a project cost estimate, until key participants are willing to spend the time and effort to provide proper estimates.

Key potential project participants

Below are a list of people and/or organization that EARTH has approached and who have expressed a serious interest in the project.

ADMINISTRATION OF HKCEE OR IELTS EXAMINATIONS

- Hong Kong Examinations and Assessment Authority
Ian Chu, Division Head, Information System Services
- International English Language Testing Service
Contact currently sought.

ADMINISTRATION OF MINI-SURVEY AND RANDOM SAMPLING

- See Reaching Out Across the Worldwide Web (HKLNA-Project website)

PRINCIPAL POTENTIAL DONOR

- See Reaching Out Across the Worldwide Web (HKLNA-Project website)

PROFESSIONAL EXPERTISE

- See Reaching Out Across the Worldwide Web (HKLNA-Project website)

Legal foundation

Although East Asian Research and Translation in Hong Kong is a registered Hong Kong company, the legal foundation for the HKLNA-Project Fund has not been undertaken, due to the high cost of legal fees. As soon as a willing potential funder and/or funders have been identified, EARTH will gladly initiate the legal work necessary to set up the proposed fund.¹²⁷ See under Project Fund on the HKLNA-Project website for details.

¹²⁷ East Asian Research and Translation in Hong Kong.

<<http://homepage.mac.com/moogoonghwa/earth/contacts.html>> EARTH Contact/Business Registration (30 August 2003).

GRAPHS, CHARTS, AND TABLES Appendix I

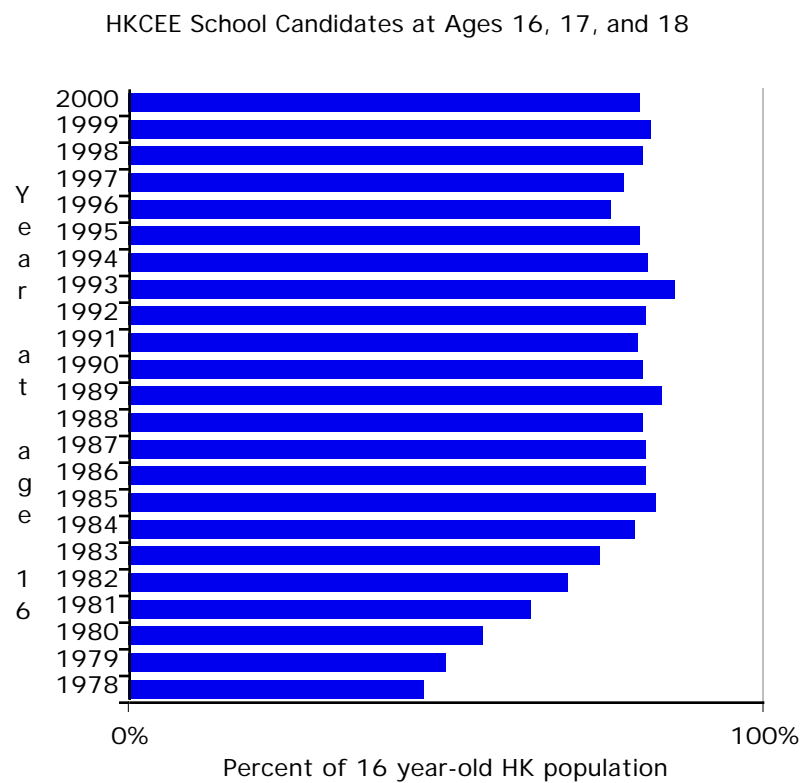


Figure 1¹²⁸ - HKCEE School Candidates at Ages 16, 17, and 18

This figure shows the percentage of 16, 17, and 18 year olds who were 16 in the year shown, and who sat for the HKCEE while still enrolled in secondary school¹²⁹. Over the period for which the HKEAA has maintained past English language syllabi, the amount of variation in the number of those sitting for the examination has varied considerably.

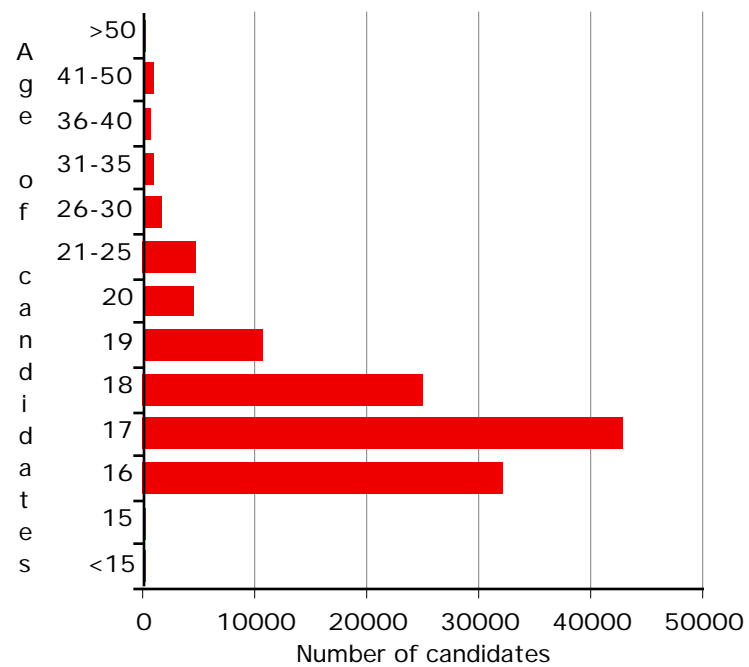
¹²⁸ Source: HKEAA. 1978 to 2002. HKCEE Exam Reports. Age distribution of school candidates sitting the examination.

¹²⁹ As students are allowed to sit for the examination more than once, the proportion sitting for the examination only once is lower than that indicated in this graph.

Figure 2¹³⁰ - 2002 HKCEE Candidates by Age - All Subjects

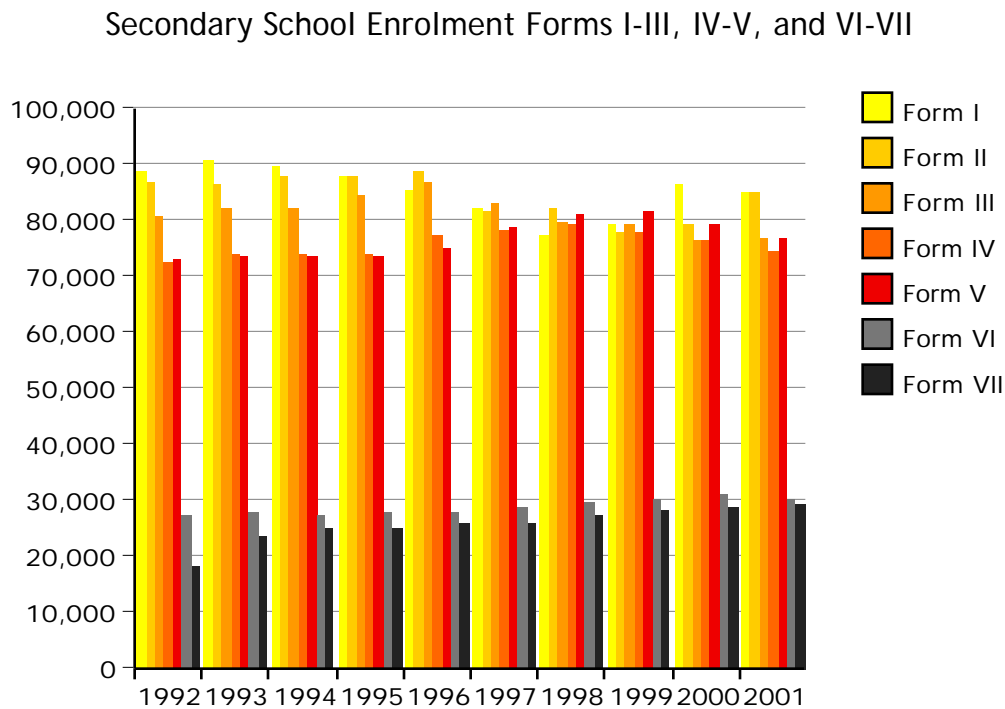
Although 16, 17, and 18 year-olds accounted for over 80% of the day school candidates sitting for the HKCEE in 2002 for the first time, a substantial number who sat for the examination were much older. A very small number of 15 year-olds also sat, but they are not visible in the figure. A more thorough examination of the data reveals that slightly more than 99% of all 2002 candidates were between the ages of 15 and 30. If 2002 is representative of the examination's age composition for all years, then the appropriate sampling frame for the repeated-test approach is those Hong Kongers who were between the ages of 15 and 30 for each of the years between 1978 and 2002.

2002 HKCEE Candidates by Age - All Subjects



¹³⁰ Source: HKEAA. 2002. HKCEE Exam Report. Age distribution by gender of day school first attempters sitting the examination.

Figure 3¹³¹ - Secondary school enrolment (Forms I-III, IV-V, and VI-VII)



Only in the years 1997 to 1999 were the number of secondary students in forms one through five approximately equal.

Until 1997 the number of secondary form one, two, and three students differed substantially from that of secondary form four and five students. The general trend toward greater convergence of these two groups until 1997 suggests, that even greater numerical disparity existed prior to 1992. Once again, there is substantial reason to believe that a large number of Hong Kongers have never sat for the HKCEE.

¹³¹ Source: Hong Kong Education and Manpower Bureau (previously Hong Kong Department of Education), Planning and Research Division, Statistics Section. 2002 (April). Enrolment Statistics 2001. Table 3.1 Classes, accommodation, enrolment, and repeaters in primary day schools by grade, 1992-2001, 49. Table 4.1 Classes, accommodation, enrolment, and repeaters in secondary day schools by grade, 1992-2001, 81. The data used in constructing this chart includes only schools registered with the Hong Kong Department of Education.

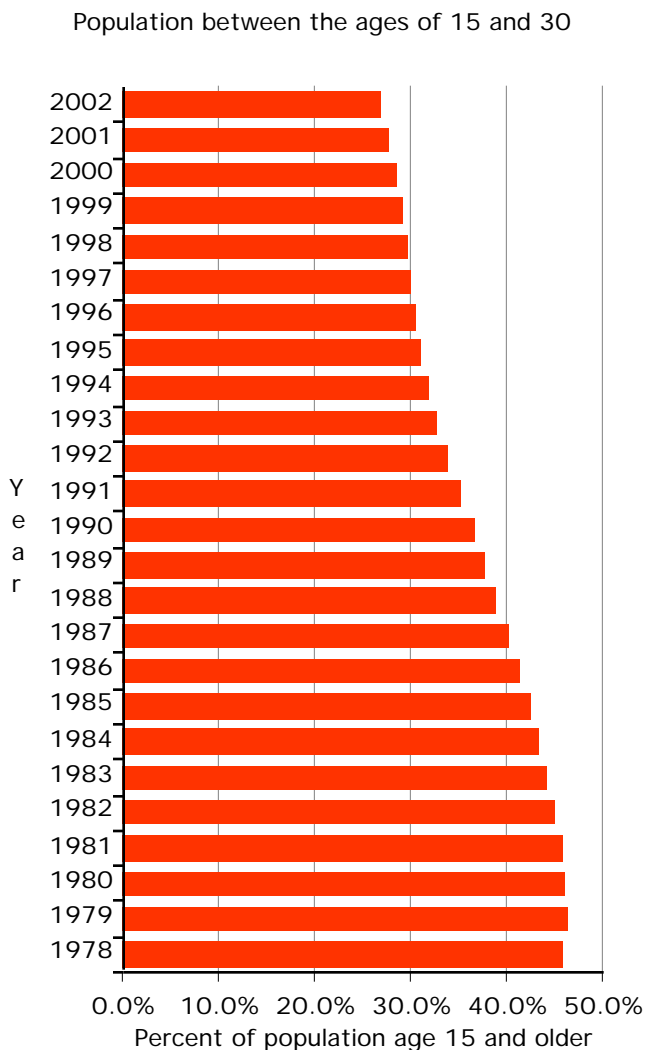


Figure 4¹³² - Population between the ages of 15 and 30.

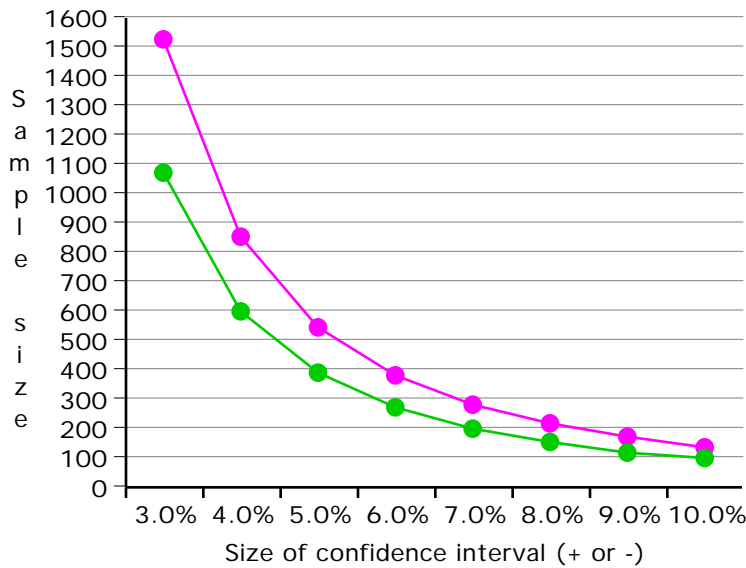
Since 1978 the number of those between the ages of 15 and 30 has become an increasingly smaller proportion of Hong Kong's post-secondary school population. Though a consistent measurement of attrition can be obtained for each age segment between 1978 and 2002, measurements of perception of this age segment alone will become increasingly less representative of the entire population as we move forward in time.

¹³² Source: Hong Kong Census and Statistics Department, Demographic Statistics Section. 2003. This graph was constructed from annual population estimates obtained in electronic format upon request.

Figure 5 - Required sample size with 70% response rate

As participation in this study will be entirely voluntary, it is likely that many who are invited to participate will not. This graph depicts the largest sample sizes required for a

Required sample size with 70% response rate (N = 128,400)



■ = 1.96, = 0.05 ■ = 1.645, = 0.10

70% response rate at two levels of statistical significance for various levels of precision. The underlying population size represents the largest age group between the years 15 and 30 for any year between 1978 and 2002¹³³. At the same level of statistical significance larger samples are required for increasing levels of precision (size of confidence interval). With no prior knowledge of the probability of success, p is assumed equal to 0.50. Type II error and related power calculations are not taken into account¹³⁴.

Similar comparisons between the largest (128,400) and smallest (80,500) sampling frames

with appropriate adjustments for finite populations showed zero or negligible difference in the required sample size at each level of precision for each level of significance. Thus, the crucial determinants of proper sample size for this study are

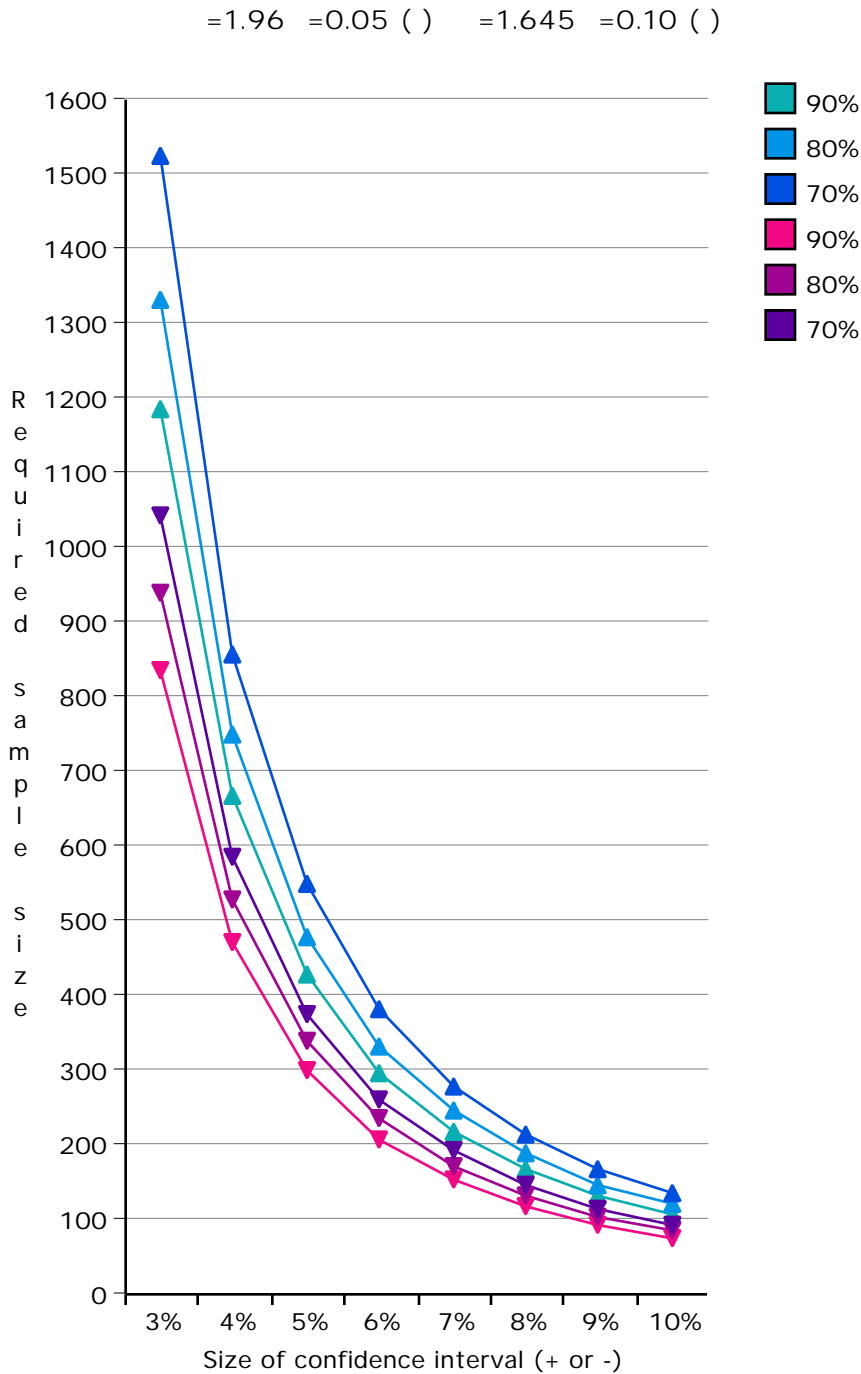
¹³³ Source: Hong Kong Census and Statistics Department, Demographic Statistics Section. 2003. This graph was constructed from annual population estimates obtained in electronic format upon request.

¹³⁴ Richard J. Larsen and Morris L. Marx. 1986. An introduction to mathematical statistics and its applications, 2nd Ed. New Jersey: Prentice Hall, 280-282 and 299-305. The curves generated in the this graph were obtained using the following formula:

$$n = \frac{z_{\alpha/2}^2}{d^2} p(1 - p)$$

- where n = sample size
- z = table Z value at $\alpha/2$
- p = the probability of success in a random Bernoulli trial in the absence of prior information
- d = a specified distance from p between 0 and 0.5.

The size of the confidence interval (+ or -) corresponds to 2d.



levels of statistical significance and the probable response rate.

Figure 6¹³⁵ - Comparison of required sample sizes by level of statistical significance and response rate

This figure shows the variation in sample size for different response rates at different levels of statistical significance and measurement error. Depending on the size of the confidence interval the required sample size for different levels of significance and response rates can vary dramatically.

With 10 percent measurement error (a confidence interval of plus or minus 5 percent) and a response rate of 70 percent a 5 percent change in the level of statistical significance requires nearly a 50 percent change in sample size.

With increasing measurement error these disparities diminish dramatically. Notwithstanding, when

¹³⁵ Louis M. Rea and Richard M. Parker. 1997. Designing and conducting survey research: A comprehensive guide, 2nd ed. San Francisco: Jossey-Bass Publishers, 119.

small differences in test scores can mean important difference in final test grades, large level of measurement error are unacceptable.

2001 Primary Day School Enrolment by Stream (All Grades)

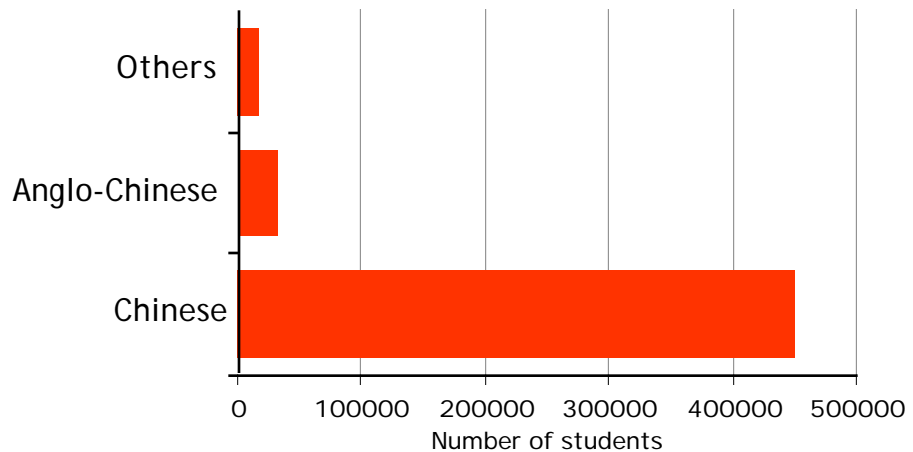


Figure 7¹³⁶ - Primary day school enrolment by stream (All grades)

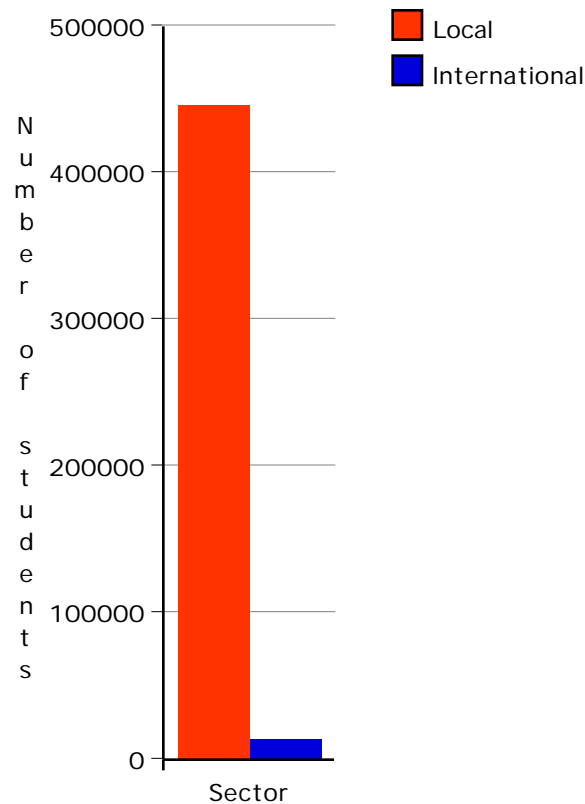
In 2001 there were 493,075 students enrolled in primary day schools registered with the Hong Kong government. Among these only 6.1% were enrolled in Anglo-Chinese mixed language medium schools. The 447,850 students enrolled in Chinese schools accounted for more than 90% of the total. With regard to the medium of instruction the distinction between Anglo-Chinese and Chinese schools is often blurred. Not all non-Chinese language subjects are taught in English in Anglo-Chinese schools, and not all English language subjects are taught solely in Chinese in Chinese schools. In Anglo-Chinese schools it is likely that the English language will always be taught in English. More recently the lines between the Anglo-Chinese and Chinese schools have become stricter.

¹³⁶ Hong Kong Government. Education Department (since reorganised under the Education and Manpower Bureau). 2002 (April). Planning and Research Division. Statistic Section. Enrolment statistics 2001. Table 3.12 - Enrolment in Primary Day Schools by Sector by Stream by Grade, 2001, 65.

Figure 8¹³⁷ - 2001 secondary day school enrolment by sector

In 2001 there were 456,455 students enrolled in registered Hong Kong local and international schools. Of these 97.4% were enrolled in local schools, while the remaining 2.6% were enrolled in international schools. Local and international schools differ in their curriculum. Where the former prepare students to sit for the HKCEE, the latter do not. Among international schools are included English Schools Foundation (ESF) schools. The ESF was established by ordinance in 1967 to operate schools in Hong Kong offering a modern liberal education in an English language medium¹³⁸.

2001 Secondary Day School Enrolment by Sector



¹³⁷ Ibid. Enrolment statistics 2001. Table 4.3 - Classes, Accommodation, Enrolment and Repeaters in Secondary Day Schools by Sector by Grade, 2001

¹³⁸ ESF schools receive HK\$300 million in annual government subsidies. Source: Katherine Foster. 2003. South China Morning Post. Falling demand spurs ESF pay-cut proposal (June 14). [online document] <http://newsletter.classifiedpost.com/nl_jscommunity.php?communitycode=EDU&lcid=HK.EN> (14 June 2003). Classified Post/Job Categories/Education.

Figure 9 - Overseas study by major English speaking country



With the exception of Australia, which gained steadily after 1997, the distribution of Hong Kong residents studying in the world's four major industrially advanced English speaking countries was relatively stable. About 60 percent of all Hong Kong citizens studying overseas in one of these four English speaking countries studied in the United Kingdom¹³⁹.

¹³⁹ These are fairly rough estimates calculated by combining academic year data obtained from The Hong Kong British Council for Hong Kong students studying in the UK with fiscal year data supplied by Hong Kong's Education and Manpower Bureau for students studying in Australia, Canada, and the United States. Source: HKSAR, Education and Manpower Bureau. Number of Hong Kong students leaving Hong Kong for overseas studies. [online document]

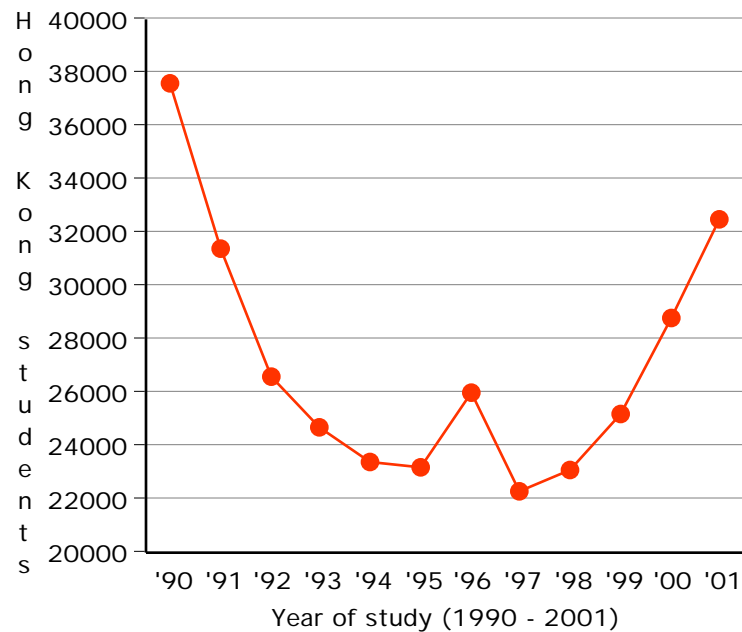
<http://www.emb.gov.hk/cgs/english/further_studies/overseas/stat.htm> (16 June 2003).

According to the EMB these data were obtained from each country's respective Hong Kong consulate. The data for Hong Kong students studying in the UK was obtained in electronic format from The Hong Kong British Council upon special request. The Council's source document are known, but no formula was provided.

Figure 10 - Hong Kong overseas enrolment in major English speaking countries

By assuming a distribution pattern similar to the one given in the [previous figure](#) for the years previous to 1997 time series totals for all four countries can be calculated¹⁴⁰. From 1990 until 1997 the number of Hong Kong students studying overseas in a major industrialised English speaking country was in near monotonic decline. In the year of the reversion (1997) this trend suddenly reversed. An average annual -8.3% rate of nearly steady decline suddenly became an average annual 9.0% positive rate of growth. These crude estimates suggest strongly that any diachronic study of the English language in Hong Kong must take recent historical and political factors into account.

Hong Kong overseas enrolment in major English speaking countries



One often hears from the SCOLAR group headed by Michael Tien that English is what the people want, and that SCOLAR is simply catering to the needs and desires of the Hong Kong people. Need one be reminded that that the 32,511 HK overseas students indicated for the year 2001 represent less than 0.5% of the entire Hong Kong population?

¹⁴⁰ Ibid. As the data from the British Council only included the academic years 1997-98 to 2000-2001 the percent average for Hong Kong students studying in non-UK major industrialised English speaking countries during these four academic years was determined and divided into the totals provided by the EMB for the remaining three countries for each year from 1990 to 1996. The resulting numbers and those from 1997 to 2001 form the basis for this graph.

Figure 11 - Number of Hong Kong workers by age group (1995-2000)



One can estimate the work-life of an average Hong Kong citizen from the age distribution of workers across the local population. The data in this graph were obtained by averaging Hong Kong census data for the years 1995, 1999, and 2000¹⁴¹. The work-life of the average Hong Kong worker is equal to the expected number of years worked in all of the above indicated age groups.

$$\sum_{i=1}^n \frac{x_i}{Z} y_i = 18.6 \text{ years}$$

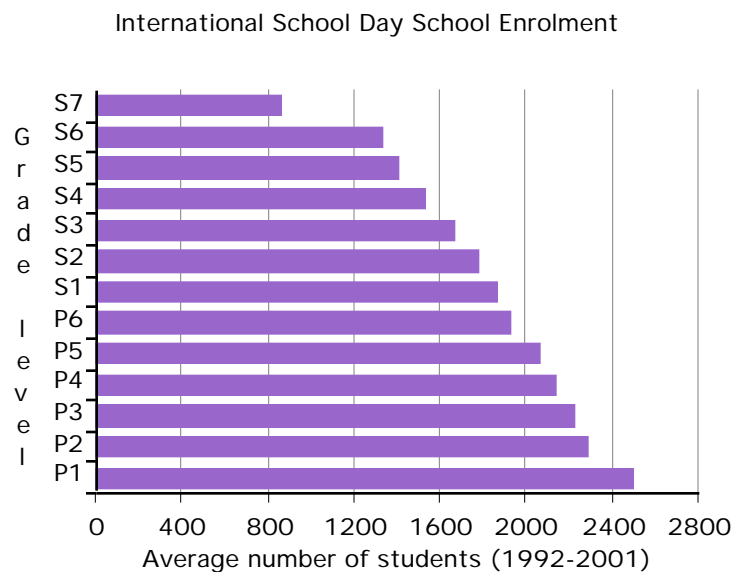
where X_i = the number of workers in the i th age group,
 Z = the total number of workers,
 Y_i = the number of years worked by those in the i th age group,
 n = 4 (total number of age groups).

The above calculation assumes that workers under the age of 25 begin work at the age of 16, and workers 65 and over complete work at age 79.

¹⁴¹ Data source: Hong Kong Census and Statistics Department. Hong Kong Statistics. Hong Kong in Figures. Key Indicators. Labour. Labour Force by Age Group [online document] <http://www.info.gov.hk/censtatd/eng/hkstat/hkinf/labour/labour_index.html> (15 December 2001)

Figure 12¹⁴² - International school day school enrolment

International schools differ from government and other privately funded schools in two fundamental ways: one, the medium of instruction is normally in English; and two, students do not focus their attention on preparation for the HKCE and HKAL examinations. Most students who attend international schools do so with the intention of studying overseas after graduation or finding employment in a locally based foreign or international firm. The sudden drop in secondary form VII students suggests an early departure for study abroad¹⁴³.

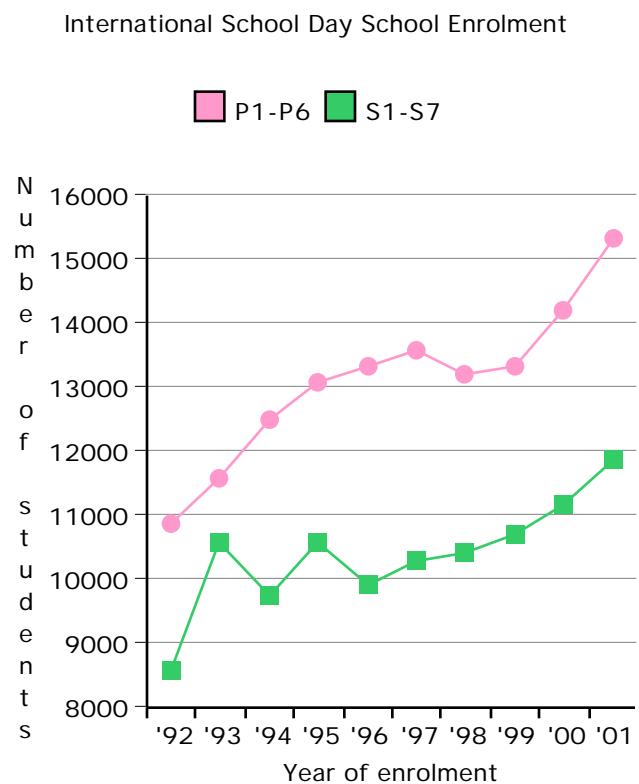


¹⁴² Data source: Hong Kong Government. Education Department (since reorganised under the Education and Manpower Bureau). 2002 (April). Planning and Research Division. Statistic Section. Enrolment statistics 2001. Table 3.1c - Classes, accommodation, enrolment and repeaters in primary day schools by grade, 1992-2001, 51. Table 4.1c Classes, accommodation, enrolment and repeaters in secondary day schools by grade, 1992-2001, 85.

¹⁴³ University bound Hong Kong secondary students are normally required to complete 13 years of primary and secondary schooling before entry into a university -- their North American counterparts only twelve.

Figure 13¹⁴⁴ - International school primary and secondary day school enrolment

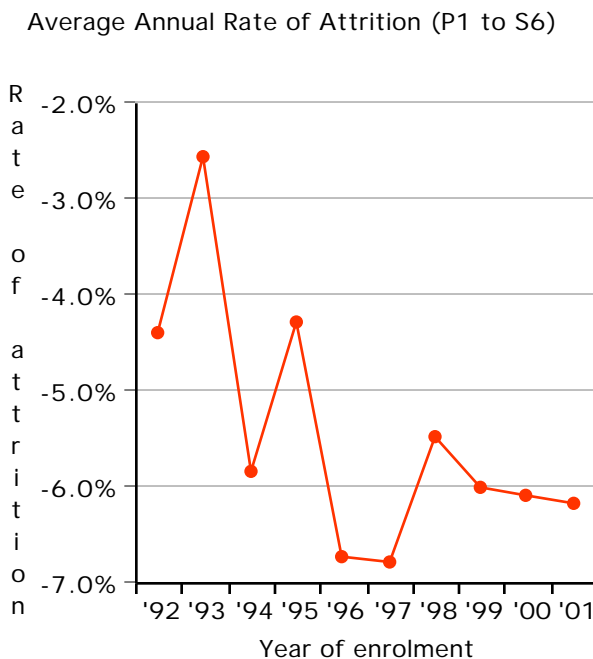
From 1995 to 1999 -- the years just prior and just after the 1997 reversion -- primary international school enrolment was nearly flat, thus interrupting a general upward trend in international school enrolment. A possible explanation for this behaviour is hesitation on the part of Hong Kong parents to commit their children to non-traditional education until the political situation was clearly understood. Further examination of the data also shows that the vacillation in international secondary school enrolment between 1992 and 1996 was not across the board, and that after the sudden surge in enrolment between 1992 and 1993 only forms IV, V, and VI demonstrated extreme fluctuation. This vacillation was likely due to factors unrelated to the 1997 reversion.



¹⁴⁴ Data source: Hong Kong Government. Education Department (since reorganised under the Education and Manpower Bureau). 2002 (April). Planning and Research Division. Statistic Section. Enrolment statistics 2001. Table 3.1c - Classes, accommodation, enrolment and repeaters in primary day schools by grade, 1992-2001, 51. Table 4.1c Classes, accommodation, enrolment and repeaters in secondary day schools by grade, 1992-2001, 85.

Figure 14¹⁴⁵ - Average annual enrolment attrition rates - P1 to S6.

The decline in enrolment across grade levels depicted in [figure 12](#) was based on average enrolment in each grade for the years 1992 to 2001. In this figure the same across-grade attrition is captured over time by averaging the rates of decline across grade levels for each year. What we observe is an erratic, but overall increase in the rate of attrition as we move forward in time. Moreover, looking at the ten year averages shown in [figure 12](#) reveals that nearly half (46.5%) of all international school primary



form I students are missing by the time the remaining 53.5% reach secondary form VI. A quick comparison of figures 13 and 14 shows further that these increasing rates of attrition across grade levels ([figure 14](#)) and increasing enrolment for all levels ([figure 13](#)) are taking place simultaneously. In other words, even as international school enrolment increases at all levels, the number of students enrolled in each higher level is decreasing faster as a proportion of that overall increase. As the medium of instruction at international schools is often in English, this paradox is worthy of remark.

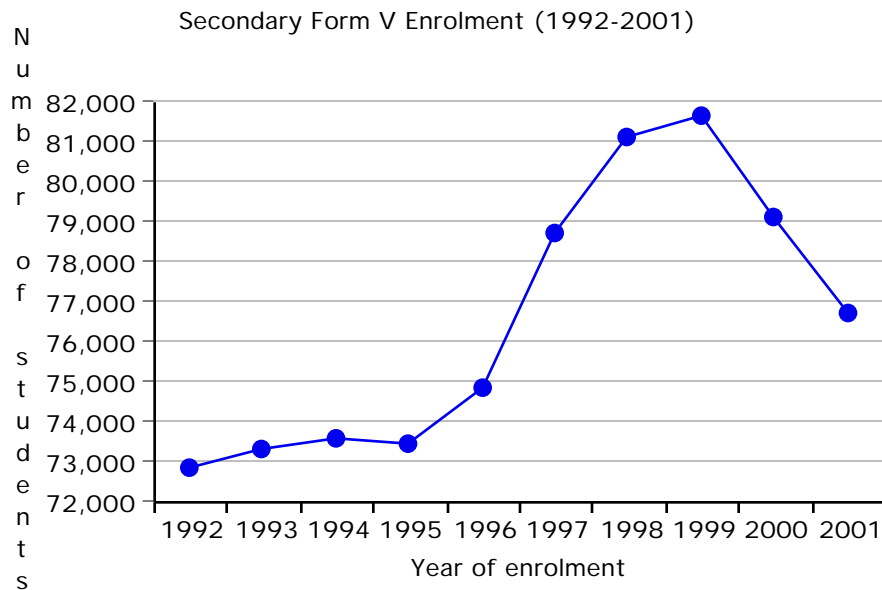
There are two possible explanations for this behaviour; one, Hong Kong parents are sending their children to international school primary schools in order to obtain a good foundation

in the English language, and then putting them into Hong Kong secondary schools where they can prepare for the HKCE and HKAL examinations; or two, there exist false expectations on the part of parents and children with regard to international schools. Is it not likely that both explanations are at work?

¹⁴⁵ Hong Kong Government. Education Department (since reorganised under the Education and Manpower Bureau). 2002 (April). Planning and Research Division. Statistic Section. Enrolment statistics 2001. Table 3.1c - Classes, accommodation, enrolment and repeaters in primary day schools by grade, 1992-2001, 51. Table 4.1c Classes, accommodation, enrolment and repeaters in secondary day schools by grade, 1992-2001, 85.

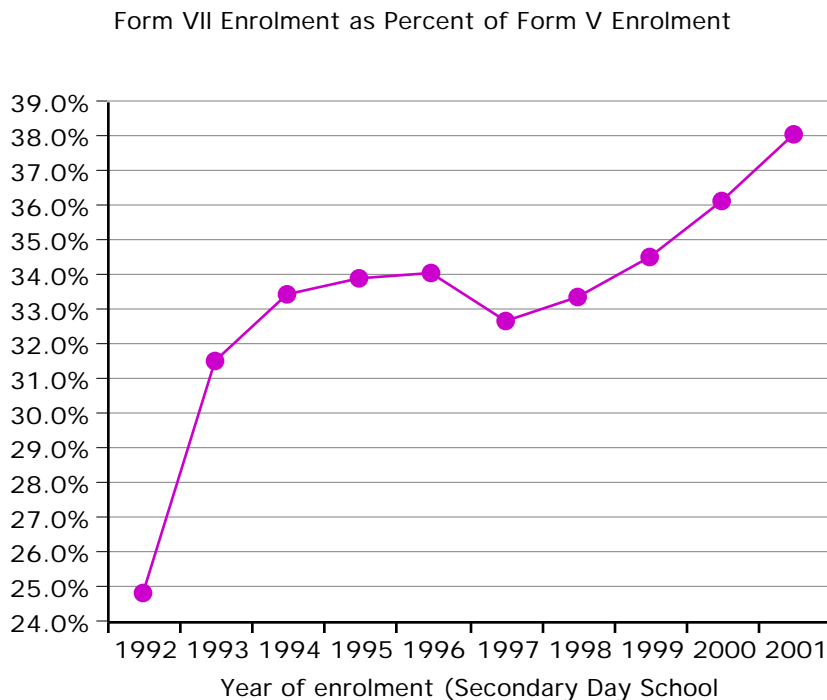
Figure 15¹⁴⁶ - Secondary form V enrolment (1992 to 2001)

As secondary form VII day school enrolment increased by more than 50% as a proportion of secondary form V enrolment, secondary form V enrolment increased absolutely by over 11%. In 1995, two years before the reversion, secondary form V enrolment stood at 73,466; by 1999, two years after the reversion, secondary form V



enrolment had increased to 81,639. Despite the sudden drop after 1999 total secondary form V enrolment had increased by 5.3% for the ten year period from 1992 to 2001. Even as form V enrolment tapered off after 1999, as a proportion of form V enrolment, form VII enrolment continued to increase. See [next figure](#).

¹⁴⁶ Ibid. Table 4.1a Classes, accommodation, enrolment and repeaters in secondary day schools by grade, 1992-2001 (Local and international school enrolment), 81-82.

Figure 16¹⁴⁷ - Secondary form VII enrolment as percent of form V enrolment

From 1992 until 2001 secondary form VII enrolment as a percent fraction of secondary form V enrolment increased by more than 50%. In 1992 secondary form VII students represented just under a quarter of their secondary form V counterparts. By 2001 they represented nearly 40%. Since 1997 the increase in secondary form VII students has risen steadily. This suggests a larger number of post-secondary form V educational opportunities, and a lowering of form VI and VII standards to fill them.

Figure 17 (next page) - CEPAS performance by subject (2002-03)

According to the UGC's CEPAS (Common English Proficiency Assessment Scheme) web page the "IELTS is the premier English Language test for migrants, students and personnel world-wide. With IELTS you can assess your ability to read, write, speak and understand in English, and so add value to your job application".¹⁴⁸ The IELTS examination is offered at no charge to final year students of Hong Kong's UGC funded universities, who allow the statement "in possession of IELTS result taken on (date) under the University Grants Committee's Common English Proficiency Assessment Scheme" to be placed on their graduation certificate. Exactly 7357 final year students sat for the examination, slightly over half (51%) of all final year students in attendance at UGC-funded schools. The examination was completely voluntary. Excluding breaks total test time is 2 hours 45 minutes. According to the UGC press release that announced the results of the examination "... we [the UGC] are now able to see a rather comprehensive picture of the English proficiency of university graduates under a common frame".¹⁴⁹ With the possible exception of the Hong Kong University of Science

¹⁴⁷ Ibid.

¹⁴⁸ Ibid. Common English Proficiency Assessment Scheme. Background. What is IELTS? <<http://www.ugccepa.com/news.asp>>(29 July 2003)

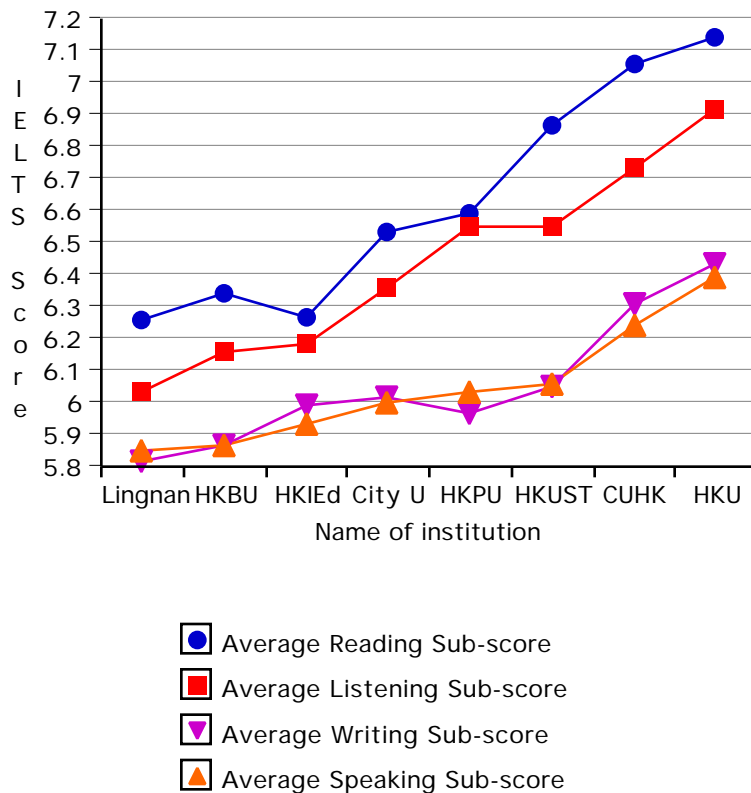
¹⁴⁹ University Grants Committee. 2003 (July 23). Common English Proficiency Assessment Scheme (CEPAS) [online document]<<http://www.ugc.edu.hk/english/documents/press/pr230703e.html>> (28 July 2003) Virtual library/Press Statements.

and Technology (HKUST) for which approximately 70% of all final year students sat for the examination, it is difficult to understand how the 2003 CEPAS results can provide “a rather comprehensive picture” of anything¹⁵⁰. No student would voluntarily alert his future employer that he had sat for the IELTS unless he were relatively certain that he could score well on it. CEPAS does not have a monopoly on the IELTS examination in Hong Kong¹⁵¹. In effect, the results provided by the 2003 IELTS and sponsored by CEPAS are necessarily biased, and we have little indication by how much. Moreover, HKUST, whose results probably demonstrate the least bias, is ranked third (from right to left) among all eight institutions and can hardly be considered representative of the entire group.

In this figure 2003 IELTS examination results for four categories of English language competence are plotted against UGC funded tertiary institutions ranked in order of overall competence from lowest (left) to highest (right). Though neither comprehensive nor conclusive what we observe is what we might expect from a society with insufficient real demand

for a language -- the passive skills of reading and listening are better represented than the active skills of writing and speaking. Also, apparent is the ever widening gap between passive and active knowledge with increasing overall average competence¹⁵². In [figure 18](#) below one can obtain a better idea about how the IELTS scores reported along the y-axis should be interpreted.

IELTS Performance by subject 2002-03



¹⁵⁰ Ibid. Annex B: Distribution of average overall scores and sub-scores of final year students in 2002-03 by institution.

¹⁵¹ According to the IELTS website disclaimer “[The]IELTS are made available world wide to all persons, regardless of age, gender, race, nationality, or religion.” International English Language Testing Service. Disclaimer [online document] <<http://www.ielts.org/>> (30 July 2003). /Disclaimer.

¹⁵² As no information with regard to statistical variance or frequency has yet been provided by the UGC it is difficult to know whether the observed differences are statistically significant.

Figure 18 - IELTS band labels and band descriptions

IELTS results are reported in 10 bands (Band 0 is a no-show. Band 9 is the highest band and is labelled Expert User indicating full operational command and complete understanding). Below are listed the band descriptions relevant to the CEPAS sponsored 2003 IELTS examination results depicted in [figure 17](#). Though it is not clear how to interpret the differences between operational, effective, and partial command, band 6 appears to represent a kind of grey area between someone with whom a native speaker might feel comfortable and one with whom he might not. In so far as Hong Kong's domestically produced cream of the crop has barely made it even after five additional years of English language education (forms VI and VII plus three years of university undergraduate training), one can easily imagine what things must be like at the HKCEE level among those with about 45% less training -- the remaining 95% of Hong Kong's residential population (see [Hong Kong English in Academia](#) for further information in this

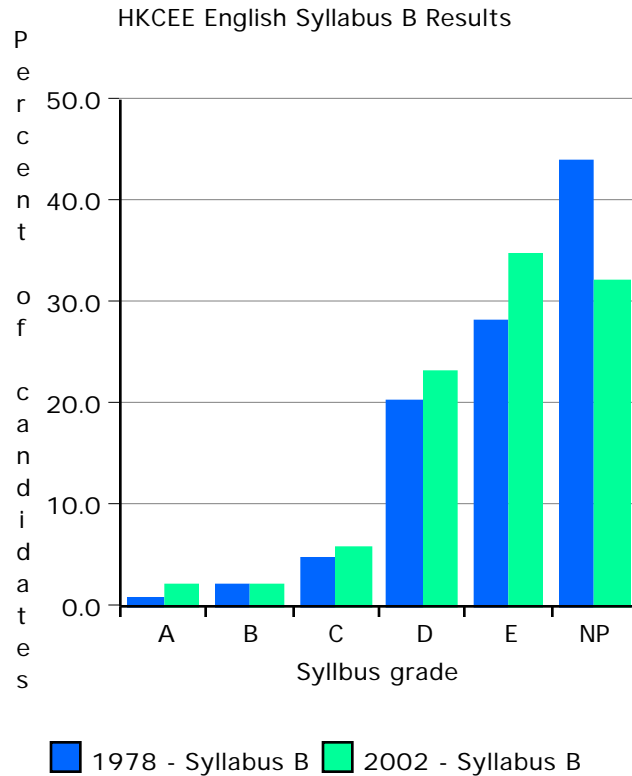
BAND LABEL	BAND DESCRIPTION
Band 8 Very Good User	Has fully operational command of the language with occasional unsystematic inaccuracies and inappropriacies. Misunderstandings may occur in unfamiliar situations. Handles complex detailed argumentation well.
Band 7 Good User	Has operational command of the language, though with occasional inaccuracies, inappropriacies and misunderstandings in some situations. Generally handles complex language well and understands detailed reasoning.
Band 6 Competent User	Has generally effective command of the language despite some inaccuracies, inappropriacies and misunderstandings. Can use and understand fairly complex language, particularly in familiar situations.
Band 5 Modest User	Has partial command of the language, coping with overall meaning in most situations, though is likely to make many mistakes. Should be able to handle basic communication in own field.
Band 4 Limited User	Basic competence is limited to familiar situations. Has frequent problems in understanding and expression. Is not able to use complex language.

Source: International English Language Testing Service. English for international opportunity. 2003 (September). IELTS Handbook, 4. [online document - pdf 760 KB] http://www.ielts.org/pdf/ielts_hb_2003.pdf (30 July 2003).

regard)¹⁵³.

Figure 19 - HKCEE English syllabus B results

Since 1978 the HKEAA has administered two English language syllabi -- Syllabus A and Syllabus B. Syllabus B is the more difficult of the two examinations and the one taken by most candidates. Grade E is the lowest passing grade. NP stands for No Pass¹⁵⁴. In 1978¹⁵⁵ and 2002¹⁵⁶, the first and final years of this study, the numbers of day school students sitting for both syllabi were 69,122 and 74,732, respectively. The failure rates for the combined syllabi for these same years were 45.1% and 36.8%, respectively. Thus, not only do we observe an increase in the absolute number of HKCEE candidates between 1978 and 2002, but also an increase in the proportion of candidates allowed to pass. The change in grade allocation for Syllabus B candidates between these same years is



¹⁵³ An average Hong Kong university gradu

aforementioned five years plus eleven years in primary and secondary school up to secondary form V. This does not include an additional one to two years in pre-primary school, where the English language is typically first introduced. Thus, (5 yrs. /11 yrs.) x 100 = 45.5% may or may not be a little high depending on who is more likely to attend pre-primary school - a university or secondary V graduate. Then too, most university students do not spend between 17-21% of their class time devoted to the study of English, as do their primary and secondary school counterparts. My former real estate agent completed secondary form V. The only subject he passed on the HKCEE was English. He received an E the lowest pass possible. His English and my Cantonese together permit limited conversation and good tennis.

¹⁵⁴ The NP designation is my own invention. It accounts for a change in the way grades were recorded between 1978 and 2002 and includes both the F and UNCL categories. Grade F, although a classified grade indicates failure to pass. Grade UNCL (unclassified) is not really a grade in so far as it includes everything that was not considered worthy of classification - obviously a substantial amount.

¹⁵⁵ Hong Kong Examinations and Assessment Authority. 1978 HKCEE Annual Report. Analysis of results of school candidates. Appendices B10 and B11. Available through the Hong Kong public library system.

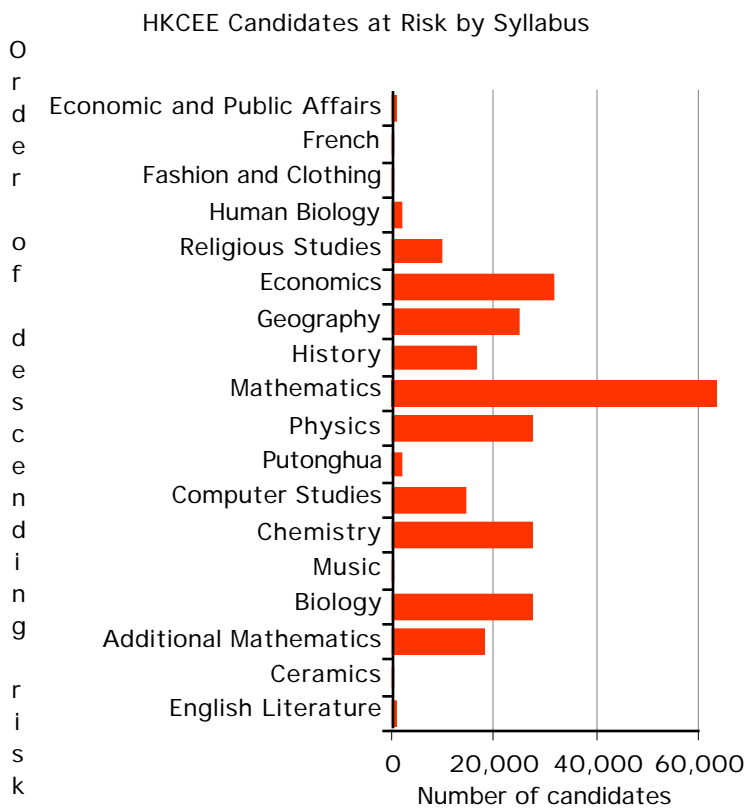
¹⁵⁶ Ibid. Hong Kong Certificate of Education Examination 2002. Table 4.2 Percentages of day school candidates awarded each grade by subject. [online document - pdf 1.1 MB]

<<http://www.hkeaa.edu.hk/doc/fd/2002cee/cestat4.pdf>> (June 2003) HKCEE/Exam report/Examination statistics/HKCEE 2002 Statistics.

depicted in [figure 19](#). What we note is a significant increase in the percentage of low level passes. Though the number of candidates awarded grade A more than doubled, they represent only a tiny minority of all candidates in comparison. A similar graph for Syllabus A candidates was prepared but is not depicted here, because there was little change in the proportion of those who passed and failed in the 1978 and 2002 reports. What appears to have occurred is a general lowering of standards to fill empty seats as university capacity increased.

Figure 20 - Candidates at risk by syllabus

As one of three core subjects including the Chinese language, the English language, and mathematics either of the HKCEE's two English language syllabi is a crucial hurdle for



many secondary form V students. This figure shows a list of subject syllabi whose failure rates for first time takers of the HKCEE in 2002 were all lower than that of the Syllabus B for English¹⁵⁷. Ceteris paribus, a student's inability to have passed syllabus B prohibited him from advancing his studies in any of the indicated areas for which he was able to obtain a pass¹⁵⁸. How many students were actually affected by this condition is of course difficult to know.

Each bar of the chart represents the total number of students who sat for each of the corresponding subjects indicated. Taken together they represent 55.5% of all syllabi administered in 2002. Obviously, among these 263,144 syllabi not all

students would have been affected; equally obvious is that many must have been affected. In 2002 the failure rate for Syllabus B was 32%, for Syllabus A it was 54.7%.

¹⁵⁷ Hong Kong Certificate of Education Examination 2002. Table 4.1 Percentages of day school first attempters awarded each grade by subject.

¹⁵⁸ Ceteris paribus is a latin term used in economics. It means all other things considered equal. In this context it would mean that a student had met all of the requirements necessary to obtain entry into a secondary form VI school but his English language syllabus.

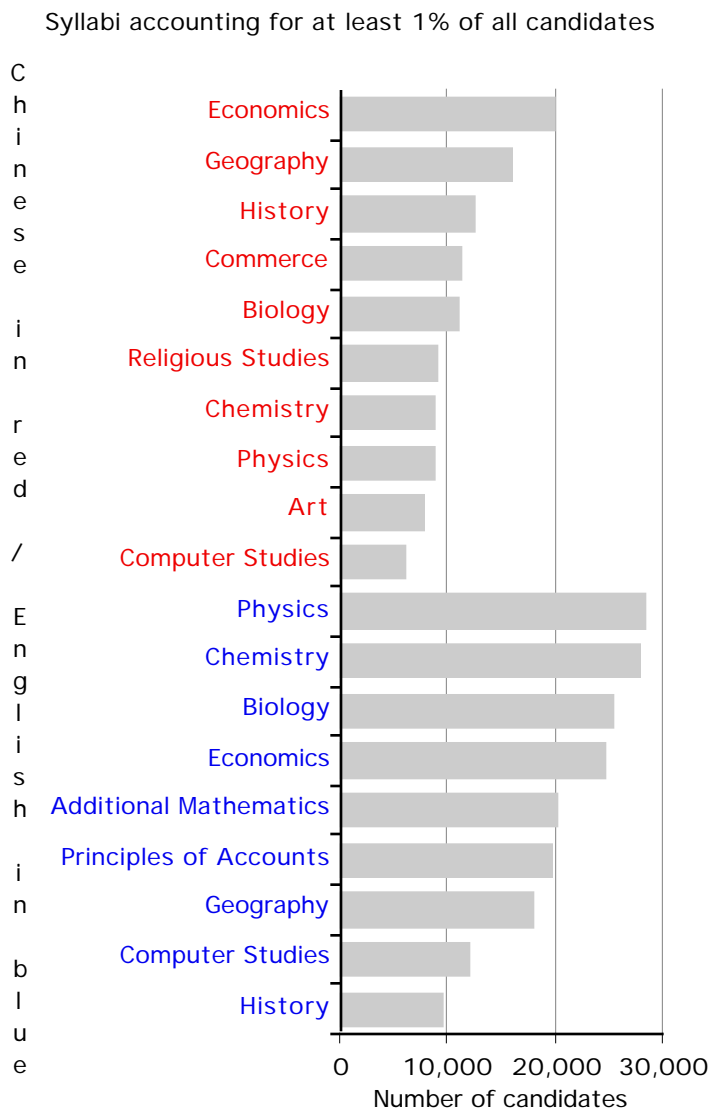


Figure 21 - Syllabi accounting for at least 1% of all candidates¹⁵⁹

With the exception of few syllabi, such as the English and Chinese language and literature syllabi, most HKCEE syllabi can be taken in either Chinese or English. In 2002 there were 417,131 bilingual syllabi administered. Of these 258,621 (62%) were administered in English and 158,510 (38%) in Chinese. Of the 54 HKCEE syllabi counted in the 2002 exam report only those that accounted for more than 1% of all bilingual syllabi taken are listed in this figure¹⁶⁰. The mathematics core syllabus results are not

¹⁵⁹ Although one candidate must sit for each syllabus, each candidate may sit for many syllabi. Thus, there is not a one-to-one converse mapping between the number of candidates and number of syllabi

¹⁶⁰ Hong Kong Examinations and Assessment Authority. Hong Kong Certificate of Education Examination 2002. Table 7.0 - Attendance statistics for subjects offering both language versions. [online document - 184 KB] <<http://www.hkeaa.edu.hk/doc/fd/2002cee/cestat10.pdf>>. Also, Table 4.3 Percentages of all candidates awarded each grade by subject <<http://www.hkeaa.edu.hk/doc/fd/2002cee/cestat4.pdf>> (June 2003) HKCEE/Exam report/Examination statistics.

shown¹⁶¹. Among the top ten syllabi that were administered in Chinese only commerce, religious studies, and art do not find their way into the top nine syllabi administered in English¹⁶². Among those syllabi accounting for at least 1% of all candidates in both categories only the Chinese syllabus for history accounted for more candidates than did the English version. In contrast only additional mathematics and principles of accounts -- two highly quantitative subject areas -- are found in the top nine syllabi administered in English, but not among the top ten syllabi administered in Chinese. What can we learn from this data?

Firstly, the number of syllabi administered in Chinese is extraordinarily out of proportion with the number of students enrolled in schools that claim the English language as their primary medium of instruction¹⁶³. Secondly, the most popular subjects taken in English (physics, chemistry, biology, and economics) are those in which Hong Kong students are most likely to have received the best secondary school training¹⁶⁴. Of these only economics ranked high among the top ten Chinese syllabi. Thirdly, those that are taking bilingual syllabi in English are strongly biased toward quantitative and scientific subjects -- subjects often dominated by mathematics and laboratory experiments for which English language terminology can often play a more important role than the language itself.

¹⁶¹ As a core subject area the number of candidates who sit for the mathematics syllabi rises far above the number of candidates sitting for other bilingual subjects. As an extreme outlier its inclusion would distort what can be learned from the bar chart as provided. So as to complete the picture with words, however, the number of candidates sitting for both the Chinese and English language mathematics syllabi was 92,050. The next highest bilingual syllabi in terms of total number of candidates sat was economics with 44,316 candidates. Economics is depicted in the chart. The mathematics syllabi results showed a roughly 70 (English) / 30 (Chinese) split.

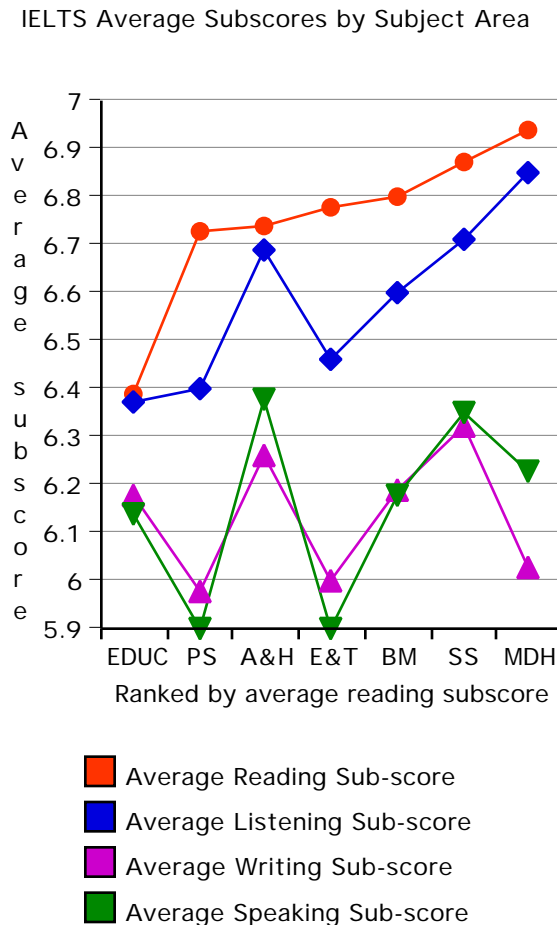
¹⁶² The commerce syllabi likely focus on the nuts and bolts of the Hong Kong economy and are offered as an alternative to those interested in business, but unlikely to find their way into a Hong Kong university. The commerce syllabi showed a roughly 20 (English) / 80 (Chinese) split.

¹⁶³ According to a senior researcher in the Language Education Division of the Education Manpower Bureau among the 514 public secondary schools registered by the language medium in which non-language subjects are taught only 400 qualify as English language medium of instruction (EMI) schools -- roughly speaking about a 80/20 split. Compare this with the roughly 60/40 split of English to Chinese syllabi.

¹⁶⁴ These are also the subject areas in which Hong Kong students receive the best education. See under College bound in Table 6 (Prioritisation of Hong Kong's secondary education) under Data Collection of EARTH's HKLNA-Project [online document] <<http://homepage.mac.com/moogoonghwa/earth/current/hklna/ff/data/tables/table6.html>> (August 2003). Data collection/Tables/Secondary school certification/

Figure 22 - IELTS Average sub scores by subject area

Comparing the passive average language sub scores from the most recent IELTS examination sponsored by CEPAS suggests that UGC tertiary undergraduates enrolled

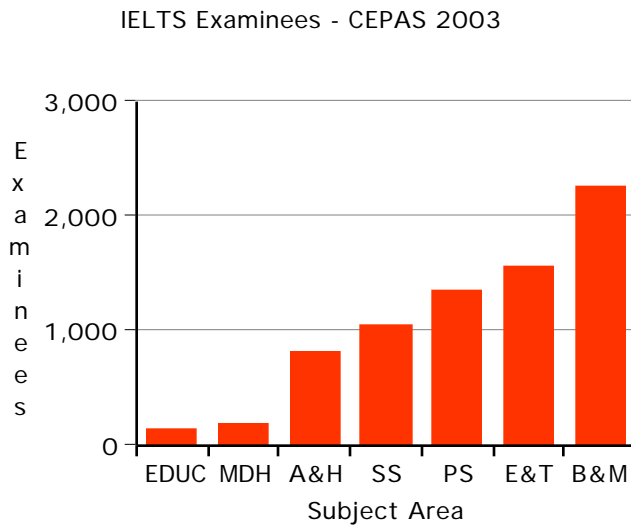


in programs other than education (EDUC), the arts and humanities (A&H), and medicine, dentistry, and health (MDH) are attending lectures in Cantonese and doing their homework in English. With regard to the active side of the language little divergence occurs between writing and speaking for particular subjects. Medicine, dentistry, and health (MDH) are perhaps an exception. Across subjects, however, active skills appear to show substantial difference, as students enrolled in the arts and humanities (A&H) and social sciences (SS) scored nearly a half point higher than those enrolled in either the physical sciences (PS) or engineering and technology (E&T). Education (EDUC) and business and management (BM) appear to be on a fairly equal footing with regard active English language skills -- slightly above the sub score average for all subject areas (writing = 6.13 and speaking 6.12)¹⁶⁵. When one looks to see what these scores mean in terms of the number of students, the overall situation becomes abysmally clear. See next figure.

Figure 23 - CEPAS 2003 IELTS examinees by subject area

Of the 7,357 final year students who sat for the IELTS under the CEPAS program this past year nearly 40% were enrolled in programs listed under either the physical sciences (PS) or engineering and technology (E&T). If one adds to these groups business management (BM) students one has accounted for more than 70% of all examinees. These latter scored only slightly above average in all subcategories of

¹⁶⁵ University Grants Committee. 2003 (July 23). Common English Proficiency Assessment Scheme (CEPAS). Press statement. Annex A: Distribution of Average Overall Scores and Sub-scores of Final Year Students in 2002-03 by Broad Discipline [online document] <<http://www.ugc.edu.hk/english/documents/press/pr230703e.html>> (28 July 2003) Virtual library/Press Statements.

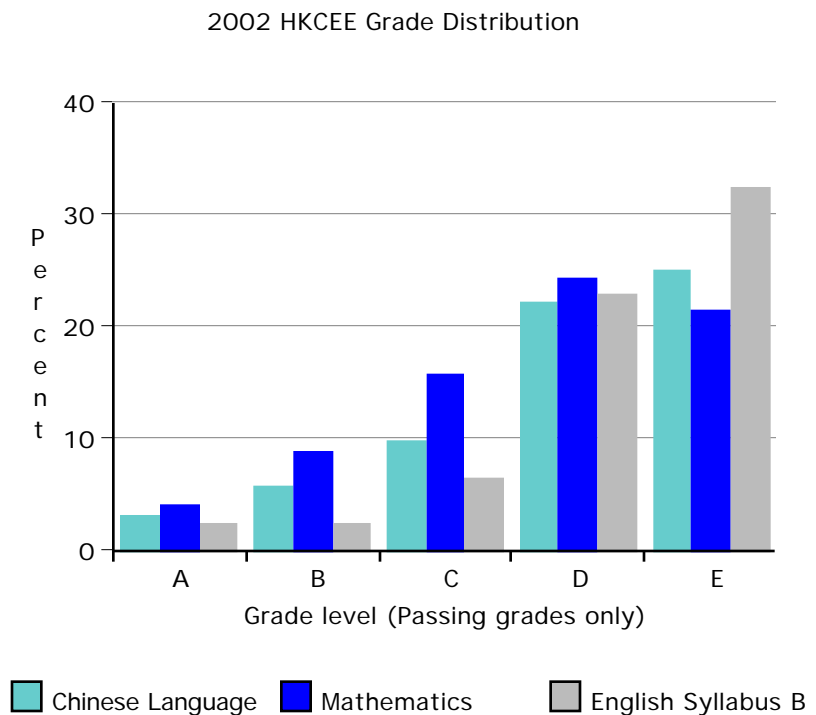


language competence¹⁶⁶. Thus, it is the relatively high speaking and writing performance of the few and high reading competence of the many that make Hong Kong tertiary students appear generally competent.

In a highly stratified system of education, where test performance and certification are often given priority over knowledge and one's ability to think, these results are not promising.

Figure 24 - 2002 HKCEE grade distribution

In this figure the distribution of passing grades for the Chinese language, mathematics, and English language syllabi are compared. With the exception of grades A and D for which all syllabi are closely ranked there are far fewer highly ranked English language syllabi than Chinese language and mathematics syllabi and a preponderance of lowly ranked English language syllabi. In other words of the three universal requisites for entry into a UGC-funded tertiary institution the English language syllabus is graded more harshly than either of the other two. This might account for why there were so many more candidates sitting



¹⁶⁶ Reading (BM 6.8 Overall 6.78), Listening (BM 6.6 Overall 6.56), Writing (BM 6.19 Overall 6.13), and Speaking (BM 6.18 Overall 6.12)

for the English language syllabi than for either the Chinese language or mathematics syllabus among all HKCEE candidates¹⁶⁷. Is there or is there not artificial pressure for Hong Kong students to learn English?

¹⁶⁷ In descending order of proportion for all 2002 HKCEE candidates the number of candidates sitting for the English language syllabi were 97.6%. For the Chinese language and mathematics syllabi there were only 77.5% and 75.4%, respectively. Source: Hong Kong Examinations and Assessment Authority. Hong Kong Certificate of Education Examination 2002. Table 5.3 - Patterns of subjects sat by all candidates [online document - 184 KB] <<http://www.hkeaa.edu.hk/doc/fd/2002cee/cestat5.pdf>> (June 2003).

SUPPLEMENTAL REFERENCE LIST Appendix II

Survey sampling and statistical analysis

- Ackroyd, S. and J. Hughes. 1983. Data collection in context. London: Longman.
- Austin, Homer W. 2002. Sample size: How much is enough? *Quality and Quantity*, 17, no.3, 239-245. In *Social Surveys. Sage Benchmarks in Social Research Methods*, 4, 51-57. David De Vaus, ed. London: Sage Publications.
- De Vaus, David. 1996. *Surveys in social research*. London: Routledge.
- Dillman, Donald A. 1978. *Mail and telephone surveys: the total design method*. New York: Wiley - Interscience.
- _____. 1999 (Winter/Spring). Mail and other self-administered surveys in the 21st century: the beginning of a new era. *The Gallup Research Journal* 121-140.
- _____. and K.J. Miller. 1998. Computer-assisted survey information collection, 475-497. In *Response Rates, Data Quality, and Cost Feasibility for Optically Scannable Mail Surveys by Small Research Centers*. M.P. Couper, R.P. Baker, J. Bethlehem, C.Z.F. Clark, J. Martin, W. L. Nichols II, and J. M. O'Reilly, eds. New York: Wiley.
- _____. 2000. *Mail and internet surveys: the tailored design method*, 2nd edition. Singapore: John Wiley & Sons, Inc.
- Forsyth, B. H. and J. T. Lesster. 1991. Measurement error in surveys, 393-418. In *Cognitive Laboratory Methods: A Taxonomy*. P.P. Biemer, R. M. Groves, L. E. Lysberg, N. A. Mathiowetz, and S. Sudman, eds. New York: Wiley.
- Fowler, F. 1985. *Improving survey questions: design and evaluation*. London: Harvester Wheatsheaf.
- _____. and T. Mangione. 1990. *Standardised survey interviewing: minimizing interviewer-related error*. London: Sage.
- Henerson, M., L. Morris, and C. Fitz-Gibbon. 1987. *How to measure attitudes*. London: Sage.
- Krueckeberg, D. A. and A. L. Silvers. 1974. *Urban planning analysis: methods and models*, 38. New York: Wiley.
- May, Tim. 2001. *Social research: issues, methods, and process*, 3rd edition. Buckingham: Open University Press.
- Oppenheim, A. 1992. *Questionnaire design, interviewing, and attitude measurement*. London: Pinter.
- Pierson, H. D., Fu G. S., and Lee S. Y. 1980. An analysis of the relationship between language attitudes and English attainment of secondary students in Hong Kong. *Language Learning* 30, 289-316.
- Rea, Louis M. and Richard M. Parker. 1997. *Designing and conducting survey research: a comprehensive guide*, 2nd edition. San Francisco: Jossey-Bass Publishers.
- Scafeffer, R. L., W. Mendenhall, and L. Ott. 1986. *Elementary survey sampling*, 3rd edition. Boston: PWS-Kent.
- Schuman, H. and S. Presser. 1981. *Questions and answers in attitude surveys: experiments on question form, wording, and context*. New York: Academic.
- _____. 1996. *Questions and answers in attitude surveys: Experiments on question form, wording, and context*. London: Sage.

Sjoberg, G. and R. Nett. 1968. *A methodology for social research*. New York: Harper-Collins.

Language Attrition

- Andersen, Roger W. 1982. Determining the linguistic attributes of language attrition. In *The Loss of Language Skills*, 83-118. D. Lambert and B.F. Freed, eds.
- Caramazza, A. and E.B. Zurif, eds. 1978. *Language acquisition and language breakdown: parallels and divergencies*. Baltimore: John Hopkins University Press.
- Cermak, L.S. 1978. The development and demise of verbal memory. In *Language Acquisition and Language Breakdown*, 277-289. A. Caramazza and E.B. Zurif, eds.
- Clark, John L.D. 1982. Measurement considerations in language attrition research. In *The Loss of Language Skills*, 138-152. R.D. Lambert and B.F. Freed, eds.
- _____. 1985. *Language Skills Attrition Project: Précis and Summary of Completed and Subsequent Activities*. Washington, D. C.: Center for Applied Linguistics.
- _____ and Eleanor H. Jordan. 1984. *A study of language attrition in former U.S. students of Japanese and implications for design of curriculum and teaching materials*. Final project report. Washington, DC: Center for Applied Linguistics.
- Clyne, Michael G. 1988. Linguistic and sociolinguistic aspects of language contact, maintenance and loss: towards a multifaceted theory. In *Maintenance and Loss of Minority Languages (August-September) 1992*, 17-36. W. Fasé et al, eds.
- Cohen, Andrew D. 1975. Forgetting a second language. *Language Learning* 25, 127-138.
- _____. 1986. Forgetting foreign-language vocabulary. In *Language Attrition in Progress* 143-158. B. Weltens et al., eds.
- _____ and Bert Weltens, eds. 1989. *Language attrition*. *SSLA* 11, 2.
- De Bot, Kees. 1991. Language attrition: competence loss or performance loss. In *Sprache und Politik* 63-65. B. Spillner. Frankfurt: Peter Lang, eds.
- _____ and Bert Weltens. 1995. Foreign language attrition. *Annual review of applied linguistics* 15, 151-164.
- Extra, Guus and Koen Jaspaert. 1987 (March). *Language loss versus language acquisition*. Symposium on Pidgin and Creole Languages, Duisburg, Germany.
- Fakhri, A. 1989. Variation in the use of referential forms within the context of foreign language loss. In *Variation in Second Language Acquisition* 11,180-201. S. Gass et al., eds. Clevedon: Multilingual Matters.
- Freed, Barbara F. 1980 (December). *The problem of language skill loss*. Mimeo. Annual Meeting of the Modern Language Association, New York.
- _____. 1982. *Language loss: current thoughts and future directions*. In *The Loss of Language Skills*, 1-5. R.D. Lambert and B.F. Freed, eds.
- _____ and Richard D. Lambert. 1980. *Report on language attrition conference*. *SLANT X*, 2, 65-68.
- Gardner, Robert C., R.N. Lalonde, and J. MacPherson. 1985. Social factors in second language attrition. *Language Learning* 35, 4, 519-540.
- _____, R.N. Lalonde, R. Moorcroft, and F.T. Evers. 1987. Second language attrition: the role of motivation and use. *Journal of language and social psychology* 6, 1, 29-47.

- Grendel, Marjon, Bert Weltens, and Kees De Bot. 1993 (August). Language attrition: Rise and fall of a research topic. *Toegepaste Taalwetenschap in Artikelen* 46, 47, 59-68.
- Grosjean, François. 1982. *Life with two languages: an introduction to bilingualism*. Cambridge, Boston: Harvard University Press.
- Hamel, R.E. 1995, (June). Language, discourse, and cultural models: three levels of language shift and maintenance. Symposium. *Language Loss and Public Policy*. Albuquerque: Linguistic Institute, University of New Mexico.
- Hansen, Lynne et al. 1999 (August). Language attrition: retrospection and future directions. Symposium. *AILA-12th World Congress of Applied Linguistics*. Tokyo: Waseda University.
- Henzl, Vera M. 1977. On similarity between language acquisition and language loss. *Second Annual Boston University Conference on Language Development*, Boston, MA.
- Hansen, Lynne and Jesse Newbold. 1997 (March). Literacy as an anchor for the spoken language: evidence from adult attriters of L2. In *Conference Abstracts*, 77. AAAL Annual Conference, Orlando, FL.
- _____ and Ching-Fen Chantrill. 1999. Literacy as a second language anchor: evidence from L2 Japanese and L2 Chinese. In *Representation and Process: Proceedings of the 3rd Pacific Second Language Research Forum* 1, 279-286. Peter Robinson, ed. Tokyo: Aoyama University.
- Hedgcock, John. 1991. Foreign language retention and attrition: a study of regression models. *Foreign Language Annals* 24, 43-55.
- Hill, Jane H. 1989. Language attrition in progress. Book review. *Language in Society* 18, 4, 594-598.
- Hyltenstam, Kenneth and Lorraine K. Obler, eds. 1989. *Bilingualism across the life span: aspects of acquisition, maturity, and loss*. Cambridge: CUP.
- Jaspaert, Koen and Sjaak Kroon. 1987. The relationship between global language proficiency tests and language loss. In *Linguistics in the Netherlands* 91-100. F. Beukema and P. Coopmans, eds. Dordrecht: Foris Publications.
- Kaufman, Dorit and Mark Aronoff. 1989. Morphological interaction between L1 and L2 in language attrition. In *Variation in Second Language Acquisition*, vol. II: *Psycho linguistic Issues*, 202-215. S. Gass, C. Madden, D. Preston and L. Selinker, eds. Clevedon: Multilingual Matters.
- Koike, Ikuo. 1990 (April). How the Japanese children lose English as a second language. In *Conference Abstracts AILA - 9th World Congress of Applied Linguistics*, vol.1, 8. Thessaloniki.
- Lambert, Richard D. 1980. Language skill attrition. *Conference initiates research in new subfield*. *The Linguistic Reporter* 23, 1, 1-3.
- _____. 1982. Setting the agenda. In *The loss of Language Skills*, 6-10. R.D. Lambert and B.F. Freed, eds.
- _____. 1989. Language attrition. *Review of Applied Linguistics* 83-84, 1-18.
- _____ and Barbara F. Freed, eds. 1982. *The loss of language skills*. Rowley, MA: Newbury House.
- _____ and Sarah J. Moore. 1984. Recent research on language skill attrition. *ERIC/CLL News Bulletin* 8, 1-8.
- _____ and Sarah J. Moore. 1986. Problem areas in the study of language attrition in progress. In *Language Attrition in Progress* 177-186. B. Weltens et al., eds.
- _____ and Richard Tucker. 1981. *Newsletter: Language Attrition Project*.

- Philadelphia: University of Pennsylvania 1, 1, 1-4.
- Loftus, E. 1980. *Memory: surprising insights into how we remember and why we forget*, Reading, MA: Addison-Wesley Publ. Co.
- Mackey, William F. and Donald G. Cartwright. 1979. Geocoding language loss from census data. In *Sociolinguistic Studies in Language Contact: Methods and Cases*, 69-96. W. F. Mackey and J. Ornstein eds. The Hague: Mouton.
- MacLeod, Colin M. 1976. Bilingual episodic memory: acquisition and forgetting. *JVLVB* 15, 347-364.
- _____. 1988. Forgotten but not gone: savings for pictures and words in long-term memory. *Journal of Experimental Psychology: Learning, Memory, and Cognition* 42, 2, 195-212.
- McMahon, A. 1994. *Understanding language change*. Cambridge: CUP.
- Moorcroft, R. and Robert C. Gardner. 1987. Linguistic factors in second-language loss. *Language Learning* 37, 3, 327-340.
- Nagasawa, Sumiko. 1999. The effects of initial achievement, learning experience, and classroom instruction on adult attrition/retention of L2 Japanese. In *Representation and Process: Proceedings of the 3rd Pacific Second Language Research Forum*, vol. 1, 287-296. Peter Robinson, ed. Tokyo: Aoyama University.
- Neisser, Ulric. 1984. Interpreting Harry Bahrick's discovery: what confers immunity against forgetting? *Journal of Experimental Psychology: General* 113, 1, 32-35.
- Nelson, Thomas O. 1971. Savings and forgetting from long-term memory. *JVLVB* 10, 568-576.
- _____. 1978. Detecting small amounts of information in memory: savings for non recognized items. *Journal of Experimental Psychology: Human Learning and Memory* 4, 5, 453-468.
- _____. 1989. Is second language attrition the reversal of second language acquisition? *SSLA* 11, 2, 151-165.
- Oxford, Rebecca L. 1982. Technical issues in designing and conducting research on language skill attrition. In *The Loss of Language Skills*, 119-137. R.D. Lambert and B.F. Freed, eds.
- Pan, Barbara and Jean Berko-Gleason. 1986. The study of language loss: models and hypotheses for an emerging discipline. *Applied Psycholinguistics* 7, 193-206.
- Polinsky, M. 1995. The grammar of language loss: cross-linguistic parallels. Symposium: *Language Loss and Public Policy*. Albuquerque: Linguistic Institute, University of New Mexico.
- Pons, C.R. 1989. Book review: *Language attrition in progress*. *SSLA* 11, 2, 217-218.
- Preston, Dennis. 1982. How to lose a language. *Interlanguage Studies Bulletin* 6, 2, 64-87.
- Sharwood Smith, Michael A. 1983. On explaining language loss. In *Language Development at the Crossroads. Papers from The Interdisciplinary Conference on Language Acquisition in Passau*, 49-59. S.W. Felix and H. Wode, eds. Tübingen: Gunter Narr Verlag.
- Selinker, Larry and Han Zhee Hong. 1997 (March). An interlanguage empirical/pedagogical approach to fossilisation. In *Conference Abstracts*, 66. 31st TESOL Annual Convention, Orlando, FL.
- Silva-Corvalán, Carmen. 1987 (July) Language loss and development: some implications for linguistic theory. *Second Language Acquisition: Contributions and*

- Challenges to Linguistic Theory Conference, Stanford, CA: Stanford University.
- _____. 1990. Book Review: Language attrition in progress. *Linguistics* 28, 1, 153-157.
- Thompson, R.T. 1982. Implications of language attrition research for national language policy. In *The Loss of Language Skills*, 202-206. R.D. Lambert and B.F. Freed, eds.
- Tomiyama, Machiko. 1994. The psycho linguistic study of second language attrition. *Bulletin of Toyo Gakuen University* 2, 65-76.
- _____. 1995 (March). A longitudinal study of natural second language attrition. In *Conference Abstracts*, 303. 29th TESOL Annual Convention, Long Beach, CA.
- _____. 1996 (March). A longitudinal study of natural second language attrition: stage II. 14th Second Language Acquisition Research Meeting, Tokyo.
- _____. 1997 (March). L2 attrition and L1 influence. In *Conference Abstracts*, 77. AAAL Annual Conference, Orlando, FL.
- _____. 1999. The later stages of natural L2 attrition. In *Representation and Process: Proceedings of the 3rd Pacific Second Language Research Forum* 1, 309-320. Peter Robinson, ed. Tokyo: Aoyama University.
- Trabert, J.A. 1980. Levels of aspiration and attrition in foreign language learning. In *The Sixth LACUS Forum 1979*, 380-392. W.C. McCormack and H.J. Izzo, eds. Columbia, SC: Hornbeam.
- Valdman, A. 1982. Language attrition and the administration of secondary school and college foreign language instruction. In *The Loss of Language Skills*, 155-175. R.D. Lambert and B.F. Freed, eds.
- Van der Linden, Elisabeth. 1990 (April). Fossilisation, attrition and monitor use. In *Conference Abstracts* 2, 490. AILA - 9th World Congress of Applied Linguistics, Thessaloniki.
- Van Els, Theo J.M. 1986. An overview of language attrition. In *Language Attrition in Progress*, 3-18B. Weltens et al., eds.
- _____. 1989. Errors in foreign language loss. In *Errors and foreign language learning: Analysis and treatment*, 104-110. R. Freudenstein, ed. Marburg: Philipps-Universität.
- _____. and Bert Weltens. 1989. Foreign language loss research from a European point of view. *ITL Review of Applied Linguistics* 83-84, 19-35.
- Van Marle, Jaap and Caroline Smits. 1988. Generalization strategies in language loss. In *discussion papers for the Sixth International Phonology Meeting and Third International Morphology Meeting*. W.U. Dressler et al. eds. Beiheft 8 of the *Wiener Linguistische Gazette* 8, 3, 13-15.
- Waas, Margit. 1990 (April). Theoretical aspects of language attrition, loss and shift. Institute of Language and Literature, Academy of Sciences, Tallinn, USSR.
- Weltens, Bert. 1987. The attrition of foreign-language skills: A literature review. *Applied Linguistics* 8, 22-37.
- _____. and Andrew D. Cohen. 1989. Language attrition research: An introduction. *SSLA* 11, 2, 127-133.
- Williamson, Susan G. 1982a. Appendix A. Summary chart of findings from previous research on language loss. In *The Loss of Language Skills*, 207-223. R.D. Lambert and B.F. Freed, eds.
- _____. 1982b. Appendix B. Bibliography: Language skill attrition project. In *The Loss of Language Skills*, 225-238. R.D. Lambert and B.F. Freed, eds.

CALENDAR OF EVENTS Appendix III

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Description of Events

Meeting of interested parties

◆ PURPOSE

- ◇ Introduce the HKLNA-Project to parties interested in the proposed research.
- ◇ Answer questions that interested parties might have with regard to the proposed research and the HKLNA-Project.
- ◇ Obtain constructive criticism about the proposed research.
- ◇ Discuss those aspects of the research proposal that have not yet been decided.
- ◇ Review the work schedule and budget plan and consider appropriate adjustments.
- ◇ Identify and allocate expertise with regard to various aspects of the proposed research.
- ◇ Find agreement on an appropriate electronic medium for file exchange.
- ◇ Set a date and agenda for the next meeting --brainstorming session.

◆ PREPARATION

- ◇ Identify potentially interested parties.
- ◇ Distribute copies of research proposal and letters of endorsement and sponsorship, if already available.
- ◇ Announce time and place of meeting.

◆ MATERIAL REQUIREMENTS

- ◇ Meeting place
- ◇ List of potential participants with contact numbers and addresses.
- ◇ Telephone, computer, and ISP connection.

Create a mailing list

◆ PURPOSE

- ◇ Provide a medium by which all project participants can keep abreast with the project's goings-on.
- ◇ A written record of shared online communication for further reference.

◆ PREPARATION

- ◇ Individual participants must be notified and sign on.

◆ MATERIAL REQUIREMENTS

- ◇ Mailing list software or access to mailing list software.
- ◇ Computer and ISP connection.

Advertising campaign

◆ PURPOSE

- ◇ Provide Hong Kong employers and residents with awareness of the HKLNA-Project and thereby spark community interest in the project and its objectives.
- ◇ Make it easier for the HKLNA-Project to recruit respondents and find sponsors.

◆ PREPARATION

- ◇ Prepare an article with a project announcement in Chinese and English that can be submitted to Hong Kong's Chinese and English language newspapers.

- ◇ Approach Hong Kong's business and civic organisations and request an opportunity to make a formal presentation of the HKNLA-Project and the proposed research.
- ◇ Approach Hong Kong's radio and television networks for a public interview.
- ◆ MATERIAL REQUIREMENTS
 - ◇ A letter of endorsement from the Hong Kong government that can be presented as a means to gather support within the Hong Kong community.
 - ◇ Letters of support from project sponsors.
 - ◇ Telephone, word processing software, computer, printer, and ISP connection.
- ◆ PERSONNEL REQUIREMENTS
 - ◇ Native speaker of Cantonese with good writing and presentation skills and familiarity with the HKLNA-Project and the proposed research.
 - ◇ Native speaker of English with good writing and presentation skills and familiarity with the HKLNA-Project and the proposed research.
 - ◇ A translator/interpreter to help facilitate the above, if necessary.

Brainstorming session

- ◆ PURPOSE
 - ◇ Report on progress since the [meeting of interested parties](#)
 - ◇ Elaborate on the issues set forth in the research proposal with special focus on questionnaire design including the content and format of key subject areas.
 - ◇ Identify particular problem areas that can be further explored through convenience sampling and the mini-survey, and consider appropriate strategies for obtaining information related to those areas.
 - ◇ Allocate research topics to be covered by the questionnaire.
- ◆ PREPARATION
 - ◇ Convene a special meeting from among those present at the [meeting of interested parties](#).
- ◆ PERSONNEL REQUIREMENTS
 - ◇ Experience in writing survey questions that measure respondents' behaviour, perception, and attitudes.
 - ◇ Familiarity with problems related to language use, language attrition, and the social, cultural, educational, political, and economic factors that contribute to language use and attrition.
 - ◇ Good familiarity with Hong Kong society and culture.
 - ◇ Expertise in cinematography and/or audio-visual marketing.
 - ◇ Good familiarity with the tools of statistical analysis outlined under the section entitled [analysis and assessment/statistical methods](#).

Location survey (convenience sampling)

- ◆ PURPOSE
 - ◇ Gather information from the general public with regard to Hong Kongers' use of English, attitudes toward the UEL requirement, and perceptions of what it means to be a trilingual-biliterate society. Specifically, obtain answers to questions that would otherwise require open-ended questions

on the questionnaire, as well as possible leads to potential questions that may be overlooked by researchers preparing the preliminary questionnaire

- ◇ Collect names, addresses, and contact number of potential respondents for the pilot study.

◆ PREPARATION AND EXECUTION

- ◇ Prepare a properly formatted interview schedule that addresses the aforementioned issues, and can be easily utilised by non-experts to obtain information from potential respondents at designated public locations.
- ◇ Train these non-experts in how to attract potential respondents, obtain the desired information, and summarise and record it.
- ◇ Create attractive and easily transportable signs, stands, tables, booths, and other paraphernalia that can be placed at various locations around Hong Kong for the purpose of gather respondents' input.
- ◇ See [brainstorming session](#) above.

◆ MATERIAL REQUIREMENTS

- ◇ Obtain through lease or other means a vehicle to transport the aforementioned trappings.
- ◇ A garage or workshop where these trappings can be created, assembled, and stored.
- ◇ Various woodworking, sign-painting, and other supplies necessary to created attractive interviewing stations.

◆ PERSONNEL REQUIREMENTS

- ◇ Creative talent familiar with interviewing station design and placement.
- ◇ Street-sale marketing techniques and sales experience that appeals to a broad age group.
- ◇ Experienced interviewer to train those with no or little experience in good interviewing techniques.
- ◇ Able bodies willing to be trained and participate in convenience sampling.
- ◇ A licensed vehicle operator.

Mini-survey and random sampling

◆ PURPOSE

- ◇ Identify potential respondents for participation in the proposed study.
- ◇ Obtain contact information for the purpose of mailing invitations and approaching respondents' employers.
- ◇ Gather information that can be used to control for a change in attitude among respondents with regard to the UEL requirement before and after they sit for the examination and questionnaire.

◆ PREPARATION

- ◇ Identification of an experienced polling team.
- ◇ A basic understanding of the proposed study's hypothesis with regard to artificially created language need and the likely myths that have been subsequently generated to justify that need.
- ◇ Orientation and training of telephone pollsters with regard to the administration of the mini-survey

◆ MATERIAL AND PERSONNEL REQUIREMENTS

- ◇ Facilities and manpower sufficiently large to identify between 10,000 to 16,000 eligible and willing Hong Kongers for participation in the HKLNA-Project. The actual number of people needed to be contacted will be much

higher.

- ◇ Experience in creating and administrating questionnaires for telephone surveys.

Mailings (1st, 2nd, 3rd, and 4th)

◆ PURPOSE

- ◇ Encourage respondents to participate in the research project through repeated solicitation.
- ◇ Provide respondents with news about the project

◆ PREPARATION AND EXECUTION

- ◆ 1st Mailing - After potential respondents have been contacted by telephone and their ages, names, contact numbers, e-mail and postal addresses have been obtained (see [mini-survey](#) above) they will be sent the following by e-mail or postal mail.

- ◇ A written invitation to participate in the project including an introduction to the HKLNA-Project, EARTH, and the study for which their participation has been requested.
- ◇ A letter of endorsement from the Hong Kong Education and Manpower Bureau signed by the Deputy Secretary or higher EMB official.
- ◇ Letters of reference from potential sponsors encouraging potential respondents to participate.
- ◇ A special announcement with regard to the free raffle and prizes for their participation.

- ◇ 2nd Mailing - As it is likely that many potential respondents will ignore the first invitation, they will be sent a second, but less formal invitation.

- ◇ 3rd Mailing - If a respondent has not responded by the third mailing, it is likely that he or she has thrown away the first invitation, and a mailing similar to the first one should be sent again.

- ◇ 4th Mailing - The fourth mailing serves as a reminder about the time and location of the examination and questionnaire to those whose willingness to participate has already been confirmed. Respondents should receive it just prior to the day of the examination and questionnaire.

◆ MATERIAL AND PERSONNEL REQUIREMENTS

- ◇ With between 400 to 600 (60% respondent rate) potential respondents for each age group -- depending on the examination approach selected and the response rate -- enough paper, stamps, and envelopes would be required for up 26,600 Hong Kong residents.
- ◇ Government or private mass mailing service must be contracted.
- ◇ A special post office box would be required to handle the large volume of incoming mail.
- ◇ A sufficient number of HKLNA-Project staff to process incoming mail.

Preparation of audio-visuals

◆ PURPOSE

- ◇ Provide a standardised set of audio-visual clippings that capture the principal uses of the English language in Hong Kong society. These audio-visual clips must be ready for the pilot test, so that their effectiveness as a tool in capturing Hong Kongers' perception of language use and utility

- ◇ can be tested before the final questionnaire is administered.
- ◇ Provide a consistent procedural format and set of instructions that can be easily understood by all respondents and utilised by examination proctors to provide uniformity across many different testing locations.
- ◆ PREPARATION
 - ◇ Information obtained from the location surveys should be incorporated into the selection and creation of audio-visual clips.
 - ◇ Audio-visual clips should be prepared in such a way that they can be quickly summarised by single frames for the purpose of rapid recall, comparison, and ranking.
 - ◇ The audio-visual clips should be professional in design, so as to provide respondents with an appropriate incentive for viewing and response.
 - ◇ Audio-visual clips should capture the most likely uses of English in Hong Kong society in situations familiar to most Hong Kongers.
- ◆ MATERIAL REQUIREMENTS
 - ◇ Film studio
 - ◇ Film and film editing equipment.
 - ◇ Access to a library of Hong Kong audio-visual clips.
- ◆ PERSONNEL REQUIREMENTS
 - ◇ Film-making experience.
 - ◇ Good familiarity with English language use in Hong Kong.
 - ◇ Understanding of the use of multidimensional scaling and its use as a tool for measuring perception and determining the standards for that perception.

Pilot study and pilot study preparation

- ◆ PURPOSE
 - ◇ Identify potential procedural problems that could be encountered when administering the final examination and questionnaire.
 - ◇ Obtain estimates of variances for examination scores and survey questions, so as to better estimate required sample size.
 - ◇ Identify questions that respondents find difficult to answer and are likely to omit on the final questionnaire.
 - ◇ Identify questions that are redundant, offer spurious or uninterpretable results, and can be eliminated.
 - ◇ Identify new problem areas that the pilot test does not explore, but could be explored on the final questionnaire.
 - ◇ Provide an opportunity to determine probable analytical needs for the final examination and questionnaire.
 - ◇ Serve as a training ground for researchers, project developers, and technicians, so as to insure the overall success of the final examination and questionnaire.
- ◆ PREPARATION AND EXECUTION
 - ◇ Identify locations for the purpose of administering the examination and questionnaire.
 - ◇ As the purpose of the pilot study is to test procedure as well as identify problems related to the questionnaire, an examination should be obtained

for administration along with the questionnaire¹⁶⁸.

- ◇ Provide instruction with regard to the goals of the HKLNA-Project, the purpose of the study, and nature of the examination and questionnaire.
- ◇ Provide those who assist in the administration of the examination and questionnaire with what they need to know to perform their duties.
- ◇ As the HKEAA is probably the most knowledgeable and efficiently run organisation with regard to the administration of mass examinations in Hong Kong, they should be approached first and offered the task of administering both the examination and questionnaire¹⁶⁹.
- ◆ MATERIAL AND PERSONNEL REQUIREMENTS
 - ◇ As the pilot study is only a test run, a sophisticated questionnaire booklet is probably not necessary. Thus, any standard black and white printer with grey-scaling and several reams of paper would likely be sufficient.
 - ◇ Depending on the willingness of the HKEAA to administer the pilot study and eventually the final examination and questionnaire, the HKLNA-Project may have to hire temporary staff to administer the examination and questionnaire.

Pilot study analysis and focus groups

- ◆ PURPOSE
 - ◇ Make effective use of the pilot study by comparing HKLNA-Project researchers' interpretation of the results with those of pilot study respondents.
 - ◇ Clarify difficult to interpret responses.
 - ◇ Determine ways to streamline the questionnaire and procedure, so as to obtain better co-operation on the part of those who sit for the final examination and questionnaire.
 - ◇ Satisfy all of the objectives stated under the heading [pilot study and pilot study preparation](#).
- ◆ PREPARATION AND EXECUTION
 - ◇ After the pilot examination and questionnaire have been completed researchers should sift through the data both individually and collectively in order to determine procedural shortfalls and weaknesses in the questionnaire; whereupon post-pilot study focus groups should be initiated.
 - ◇ Select from among the respondents sitting for the pilot study several groups of 12 to 15 respondents. The selection need not be random and can be determined by various other factors such as location, profession, nationality, age, schooling, etc. The more homogeneous a group the greater the opportunity for discussion to take place.
 - ◇ Send out invitations to the respondents inviting them to participate in a focus group and provide, as an incentive, food and drink at a local

¹⁶⁸ Unlike the questionnaire, whose content and format are likely to be influenced by the outcome of the pilot study, the examination itself will not be changed. Thus, it may not be particularly important which examination is administered. Almost any comprehensive English examination that could provide a rough estimate of variance across each age groups would probably be sufficient.

¹⁶⁹ Not only would this permit HKLNA-Project staff to concentrate on other aspects of the study with which they are more familiar, but it would serve as warm up for HKEAA staff with regard to the final examination and questionnaire.

restaurant or other public gathering place, where the focus group takes place.

- ◇ Select a monitor and group of note-takers different from respondents for each focus group.
- ◇ Prepare a set of questions for each focus group and a set of discussion rules for respondents to follow. Both the rules and the questions should maximise a free-flow of channelled information. Several Japanese round-tables each followed by more pointed questions from the focus group's monitor. Before closing an open debate.
- ◇ A second round after the monitor and the note takers have met to compare notes and identify outstanding questions. Respondents, monitor, and note takers should then regroup and follow the same pattern as above.
- ◇ After all focus groups have met, the note takers and monitor(s) should assemble and summarise what they have learned. This information should then be passed onto the researchers to be incorporated into the final questionnaire.
- ◆ MATERIAL REQUIREMENTS
 - ◇ Reserve a room or rooms at a restaurant or other public gathering place where a small group of respondents can be assembled to discuss the results of the pilot study.
 - ◇ Notepads for each of the note takers and monitor.
 - ◇ A meeting place for the researchers after the data has been collected and individually analysed.
- ◆ PERSONNEL REQUIREMENTS
 - ◇ Two or three note takers for each focus group. They may be the same or different people depending on scheduling, time, and funding constraints
 - ◇ A monitor for each group, or one monitor for all groups at different times.
 - ◇ Researchers involved in the preparation of the questionnaire and those expected to be involved in the final analysis.
 - ◇ As the number of people participating in the pilot study will be substantially less, machine scoring may not be necessary, in which case HKLNA-Project staff will be required to perform the tallying.

Preparation of final questionnaire

- ◆ PURPOSE
 - ◇ Provide a top quality paper document that will encourage respondents to provide their best response possible and serve as a reliable tool for gathering data.
 - ◇ Combine audio-visual clips, examination, and questionnaire into a single well-integrated final survey instrument.
 - ◇ Provide a ticket to attend the end-of-project celebration.
- ◆ PREPARATION AND EXECUTION
 - ◇ Assemble information from the pilot study and post-pilot study focus groups and rework the pilot study's questionnaire and audio-visual clips into a better integrated tool for measuring English language use in Hong Kong society, Hong Kongers' perception of the UEL requirement, and its usefulness as a tool for increased educational, intellectual, social, and employment opportunity for each and every Hong Konger.
 - ◇ Consult with team researchers with regard to each section of the final

- survey instrument, and recommend changes for each.
- ◇ Create a final draft, distribute it to each of the HKLNA-Project team researchers for review and consultation¹⁷⁰.
- ◇ Meet with all HKLNA-Project participants to hammer out and fine tune the final document.
- ◇ Submit the document to a printer for publishing.
- ◆ MATERIAL REQUIREMENTS
 - ◇ In order to produce a quality document the final draft of the questionnaire must be sent to a professional printer for processing
 - ◇ Meeting place for HKLNA-Project team participants and sponsors.
 - ◇ Film studio and audio-visual equipment.
- ◇ PERSONNEL REQUIREMENTS- HKLNA-Project staff and other parties previously described.

Dress rehearsal and final approval

- ◆ PURPOSE
 - ◇ Provide proctors with a group dress rehearsal for the administration of the examination and survey instrument.
 - ◇ Provide an opportunity for researchers to view the final product and recommend last minute changes.
 - ◇ Assign proctors their testing times and locations.
 - ◇ Instruct proctors about the delivery and handling of test materials and the questionnaire booklet
- ◆ PREPARATION
 - ◇ Reserve a testing room.
 - ◇ Assemble the necessary audio-visual equipment, examination materials, questionnaire booklets, and answer sheets
 - ◇ Notify researchers, proctors, and the HKLNA-Project staff.
- ◆ MATERIAL AND PERSONNEL REQUIREMENTS
 - ◇ See preparation above.

Final preparations

- ◇ PURPOSE - Ensure that everything is in place and ready to go on the scheduled days and times of the examination and questionnaire.
- ◆ PREPARATION
 - ◇ Contact the administrators of each test locations and arrange for onsite dress rehearsals of equipment and testing procedures.
 - ◇ Insure that a sufficient number of examinations and questionnaires are available for delivery to each test location.
- ◆ MATERIAL REQUIREMENTS
 - ◇ Audio-visual equipment
 - ◇ Examinations, questionnaire booklets, and answer sheets
 - ◇ Means of transportation
- ◆ PERSONNEL REQUIREMENTS
 - ◇ Proctors
 - ◇ HKLNA-Project staff

¹⁷⁰ Others might include people from the Education and Manpower Bureau, UGC, VTC, HKEAA, or any other sponsoring and interested party that would like to take advantage of the survey to obtain special information from respondents related to the study's overall goals and objectives.

Administration of final examination and questionnaire

- ◆ **PURPOSE**
 - ◇ Gather the information necessary to test this study's general hypothesis with regard to language attrition and artificially created demand.
 - ◇ Assess the nature and level of English language usage among post-secondary school Hong Kong citizens.
 - ◇ Examine attitudes toward the UEL requirement across all sectors of the local population.
- ◆ **PREPARATION**
 - ◆ Much of the preparation for the final examination and questionnaire will have already taken place including
 - ◇ Recruitment of respondents
 - ◇ Reservation of testing locations
 - ◇ Preparation of examinations, questionnaire booklets, and audio-visual language use clips
 - ◇ Standardised procedural format with audio-visual aids to insure uniformity across testing sites.
 - ◇ Co-ordination with either the HKEAA (repeated test or second test approach) or IELTS (second test approach only) with regard to testing locations, testing times, and data collection, tabulation, and format.
- ◆ **MATERIAL REQUIREMENTS**
 - ◇ A large number of testing locations to accommodate between 10,000 (repeated test approach) to 16,000 (second test approach) respondents¹⁷¹.
 - ◇ Coded examinations, questionnaire booklets, and electronically scorable answer sheets.
 - ◇ Machinery to score the answer sheets, collect, and tabulate the data.
- ◆ **PERSONNEL REQUIREMENTS**
 - ◇ A sufficient number of proctors hired by either the HKEAA, IELTS, or the HKLNA-Project.
 - ◇ Competent data processors with experience in handling large data sets.

Final analysis

- ◇ **PURPOSE** - Understand and interpret the data collected from the final examination and questionnaire using sophisticated analytical techniques that draw on a wide range of expertise from the fields of linguistics, social science, education, and statistics.
- ◆ **PREPARATION AND EXECUTION**
 - ◇ Allocate the analytical workload according to interest and fields of expertise among HKLNA-Project team members.
 - ◇ Conduct statistical analyses similar to those performed in conjunction with the pilot test and compare the results.
 - ◇ Perform new tests based on the new information obtained from the final examination and questionnaire and summarise the results for each test performed.
 - ◇ Construct attrition contour maps based on age and a large number of carefully selected socio-linguistic variables obtained from the questionnaire

¹⁷¹ These numbers assume a year-by-year assessment of attrition with 95% confidence and plus or minus 5% measurement error.

and other data bases.

- ◇ Construct other graphical representations for inclusion in the final report.
- ◇ Maintain contact with individual researchers in an effort to stay on top of findings as they are discovered, so as to delegate and co-ordinate additional analyses as needed.
- ◆ MATERIAL AND PERSONNEL REQUIREMENTS
 - ◇ HKLNA-Project team
 - ◇ Government agencies and research institutions with relevant data bases.
 - ◇ Appropriate software for use with large data sets - SAS Institute.

Progress report

- ◇ PURPOSE - Assemble the HKLNA-Project research team in order to discuss analytical findings, formulate an outline for the final report, and allocate the work load.
- ◆ PREPARATION AND EXECUTION
 - ◇ Contact members of the HKLNA-Project research team, set a date and time, and reserve a room for an in depth discussion about what should be included in the final report.
 - ◇ Each researcher prepares a brief summary of his findings and current state of research
- ◆ MATERIAL AND PERSONNEL REQUIREMENTS
 - ◇ A meeting room
 - ◇ HKLNA-Project research team

Drafting of final reports

- ◆ PURPOSE
 - ◇ Produce a comprehensive report of the HKLNA-Project's research that combines the individual reports of each of the HKLNA-Project's research team into a unified, well-integrated, well-written whole.
 - ◇ Produce an executive summary for distribution to government policy makers, project sponsors, and interested others that is based on the comprehensive report.
 - ◇ Produce a journal article for submission in an appropriate scientific journal
- ◆ PREPARATION
 - ◇ Obtain informal summaries from the individual members of the HKLNA-Project team.
 - ◇ Reformulate them into an integrated whole according to the outline discussed during the post-analysis progress report.
- ◆ MATERIAL AND PERSONNEL REQUIREMENTS
 - ◇ Native English speaker with good proof reading ability.
 - ◇ HKLNA-Project director.
 - ◇ Word processing software capable of handling a large technical report.

Final review

- ◇ PURPOSE - Allow everyone who has a stake in the results of the comprehensive report and executive summary to express their opinions about what should be included or omitted before these documents go to press.
- ◆ PREPARATION AND EXECUTION
 - ◇ Circulate a preliminary final draft among all members of the HKLNA-

Project research term, HKLNA-Project sponsors, and other interested parties announcing the review.

- ◇ If necessary, hold a meeting to discuss the document's content.
- ◆ MATERIAL AND PERSONNEL REQUIREMENTS
 - ◇ Internet connection
 - ◇ Place of venue.
 - ◇ HKLNA-Project Director and HKLNA-Project Research Team
 - ◇ Sponsors and other interested parties.

Translation

- ◇ PURPOSE - Make the report available to the majority of Hong Kongers by providing copies of the report in a language that they can easily comprehend.
- ◇ PREPARATION AND EXECUTION - Submit the final reports to competent translators who are familiar with Hong Kong's educational system and who have experience in translating documents that employ language related to statistical analysis and socio-linguistic.
- ◇ MATERIAL AND PERSONNEL REQUIREMENTS - In order that the documents be translated in a timely manner, more than one translator will likely be required.

Website

- ◆ PURPOSE
 - ◇ Provide easy online access to the final report and executive summary.
 - ◇ Provide highlights of the report in an online format that is both attractive and easily understood in both Cantonese and English, and even Putonghua where applicable.
- ◆ PREPARATION AND EXECUTION
 - ◇ Prepare PDF documents of both the comprehensive report and the executive summary.
 - ◇ Collects portions of the final documents, questionnaire, audio-visual clips and other project highlights that when combined together provide an entertaining overview of the HKLNA-Project and its research, as well as a clear presentation of this study's findings and their implications to the average Hong Kong citizen.
- ◆ MATERIAL REQUIREMENTS
 - ◇ Dynamic web page producing software that can provide flexible access to both sophisticated and unsophisticated internet users.
- ◆ PERSONNEL REQUIREMENTS
 - ◇ A talented web designer.
 - ◇ HKLNA-Project staff to monitor the work's progress and finished product.

Printing

- ◆ PURPOSE
 - ◆ Provide a high quality executive summary to sponsors and key stake holders in the determination of Hong Kong future educational system.
 - ◇ If this study is well-performed, then it risks defeating the political agenda of the HKLNA-Project -- namely, the need for the elimination of the UEL requirement from primary form I to secondary form VII and beyond. As a confirmatory study an elaborate presentation would not be required.

- ◇ If the study demonstrates, on the other hand, that attrition is both widespread and serious, then this and further research will contribute substantially to the political goals of the HKLNA-Project, and everything should be done to move the project forward. In this latter instance a high-gloss, corporate quality, executive summary would be in order.
- ◇ Provide a high quality comprehensive report that is easy to read, well organised, thoroughly sourced, and neatly presented. As it is destined for researchers who will likely make aggressive use of it; the document should be bound in strong paper that is easy on the eyes.
- ◇ PREPARATION - Identify a suitable publisher. Perhaps the Hong Kong government, if the Hong Kong language fund contributes to the project.
- ◇ MATERIAL AND PERSONNEL REQUIREMENTS - HKLNA-Project management.

Distribution

- ◇ PURPOSE - Insure that copies of the final reports are obtained by those who desire them.
- ◆ PREPARATION
 - ◇ Preparation of mailing list and labels.
 - ◇ Ordering of envelopes that bear the HKLNA-Project logo and return address.
 - ◇ Hard copies must be packaged and mailed.
- ◆ MATERIAL REQUIREMENTS
 - ◇ Mailing labels
 - ◇ Envelops (see above)
- ◇ PERSONNEL REQUIREMENTS - HKLNA-Project staff.

Announcement of project completion

- ◇ PURPOSE - Bring to the attention of the general public that the first research project of the HKLNA-Project has been completed, the results are in, and a period of consultation will begin.
- ◇ Announce the date, time, and place of a public lecture to be convened for the purpose of informing the general public about the HKLNA-Project's results.
- ◆ PREPARATION
 - ◇ Fix a date and arrange a meeting place for the public consultation to take place.
 - ◇ Contact Hong Kong's many press agents, so as to notify them about the meeting.
 - ◇ Send out invitations to those who express an interest in attending and all of those who participated in the survey.
- ◆ MATERIAL REQUIREMENTS
 - ◇ Envelopes and mailing labels
 - ◇ Paper
 - ◇ ISP that permits mass mailings.
- ◆ PERSONNEL REQUIREMENTS
 - ◇ HKLNA-Project staff

End-of-Study Celebration

- ◆ PURPOSE

- ◇ Say thank you to everyone who helped make the HKLNA-Project a success.
- ◇ Select and announce winners for the prizes promised to participating respondents.
- ◇ Announce a public consultation.
- ◇ Encourage those in attendance to continue to support the HKLNA-Project through participation, donations, and by word-of-mouth.
- ◆ PREPARATION
 - ◇ As tickets to the celebration will have been included in the questionnaire booklet, there will be no need to send out invitations -- only announce the time and meeting place. If a time and place with sufficient flexibility can be arranged before the examination and questionnaire are administered, there will be no need to make a special announcement, as the information can be included in the questionnaire booklet along with the detachable ticket.
 - ◇ Hire a catering service to provide food and beverages based for those lucky winners who are allowed to participate.
 - ◇ As individual respondents will have already been assigned numbers, preparations for the raffle can be made in advance.
 - ◇ Send out special invitations to sponsors and participating employers.
- ◆ MATERIAL REQUIREMENTS
 - ◇ A raffling device.
- ◇ PERSONNEL REQUIREMENTS- HKLNA-Project staff.

Public lecture and consultation

- ◇ PURPOSE - Provide the general public, Hong Kong press, and others with an opportunity to learn about the HKLNA-Project's findings, asks questions, and offer comments in a public forum.
- ◆ PREPARATION
 - ◇ Reserve a lecture hall
 - ◇ Issue tickets upon request and appropriate review, so as to insure that there is seating for everyone.
 - ◇ Schedule another lecture when the number of interested parties exceeds those for which room is available.
 - ◇ As the material to used for presentation can be obtained from the HKLNA-Project website, executive summary, little additional preparation will be required.
- ◆ MATERIAL REQUIREMENTS
 - ◇ Properly equipped lecture hall
 - ◇ A handout which highlights the main points of the lecture and provides those in attendance with the information they require to obtain copies of the comprehensive report and executive summary, as well as access to the HKLNA-Project website.
- ◆ PERSONNEL REQUIREMENTS
 - ◇ HKLNA-Project research team.
 - ◇ HKLNA-Project staff.

Weekly schedule of events

	A	B	C	D	E	F	G	H
1								
2				Weekly Schedule of Events				
3	Week number							
4	1	2	3	4	5	6	7	8
5	Advertising campaign					Location survey		
6	Meeting of interested parties			Questionnaire brainstorming	Mini-survey and random sampling			
7								1st mailing
8								
9	9	10	11	12	13	14	15	16
10	audiovisuals			Pilot study				
11	Pilot study preparation					Pilot study analysis		
12	1st progress report	2nd mailing			3rd mailing		Focus groups	
13								
14								
15	17	18	19	20	21	22	23	24
16	Preparation of final questionnaire			Administration of final examination and survey			Final analysis	
17			4th mailing					
18								
19	25	26	27	28	29	30	31	32
20	analysis				Final review		Translation	
21		Progress report	Drafting of final reports				Website	
22								
23								
24	33	34	35	36	37	38	39	40
25	Printing		Distribution	Celebration				
26			Announcement	Public lecture and consultation				
27								
28	Due to space considerations not all events listed under the calendar of events have been entered.							

Hong Kong Language Needs Assessment Project

English or languish - Probing the ramifications of Hong Kong's language policy

A problem of severe market distortion with simultaneous excess demand and oversupply.

[Guide](#)

[Introduction](#)

[Artificial demand](#)

[Research strategy](#)

[Hypothesis testing](#)

[Quality assessment](#)

[Economic modelling](#)

[Research schedule](#)

[Statistical toolbox](#)

[Data collection](#)

[Project fund](#)

[Documents](#)

[Sitemap](#)

[Links](#)

[Machine translation](#)

Miscellaneous notes and ideas
(restricted use)



Caution: This site is constantly upgraded. New additions are

indicated with the bright red **NEW!** symbol. If there is something that is missing that you would like to see, or something you would like to see removed, please contact [EARTH](#), and let's think it through.

