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The Contribution of Minority Languages and Dialects to Hong Kong's Linguistic Landscape

少數族裔語言和方言在香港語言景觀的作用

Final Report

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Table of Contents

The Contribution of Minority Languages and Dialects to Hong Kong's Linguistic Landscape *1*

少數族裔語言和方言在香港語言景觀的作用 *1*

Executive Summary *3*

Chapter 1: Introduction *6*

Chapter 2 Study Objectives *7*

Chapter 3 Research Methodology *8*

Research Results/Findings *10*

Chapter 4 Language Use across District Council Constituency Areas (DCCA) *10*

Chapter 5 Language Use in the Workplace *16*

Chapter 6 Language and Employment *26*

Chapter 7 Language Competence and Education, Occupation, Industry and Ethnicity *28*

Chapter 8 Language and Personal Income *33*

Chapter 9 Language Use in Social Networks *35*

Chapter 10 Language use in signs in Yau Tsim Mong (YTM) District *41*

Chapter 11 Policy Implications and Recommendations *49*

11.1 Language diversity over geography and time **49**

11.2 Language in workplace, employment and personal income **51**

11.3 Language and domains of use **52**

11.4 Linguistic landscapes **52**

11.5 Recommendations: **54**

Chapter 12 Details of the Public Dissemination *55*

Chapter 13 Conclusion *56*

Bibliography *58*

Executive Summary

Abstract of the Research

This report presents the results of a research project investigating minority languages and dialects in Hong Kong society. The various chapters of the report discuss a range of questions, including language use in the workplace; language and employment; language competence; education and occupation; language and income; language and social networks; and language and public signage. The report's findings contribute to increasing our knowledge of linguistic diversity in the community, the importance of language in the employment sector, and the needs of linguistic minorities in Hong Kong society.

Layman Summary on Policy Implications and Recommendations

Findings

This project has produced a number of interesting and relevant findings. These include:

(1) Detailed information concerning linguistic diversity and the distribution of different language groups throughout the Hong Kong SAR territory;

(2) A detailed analysis of language use in the workplace, indicating the wide yet differentiated use of the three main spoken languages (Cantonese, English, Putonghua), as well as written forms of English and Chinese;

(3) Results relating to the importance of language and employment, highlighting the desirability for proficiency in the three major languages;

(4) Findings about the relationship between language and income, noting the related effects of language abilities as well as educational level;

(5) The analysis of data related to the use of language in social networks, where a total of 45 different languages and dialects was recorded; and

(6) An innovative study of street signage in Yau Tsim Mong district, where the use of languages in signage varied considerably across District Council Constituencies Areas (DCCA).

Recommendations

(1) That the government, together with other stakeholders, recognise linguistic diversity as an integral part of Hong Kong culture;

(2) That linguistic diversity should be regarded as an important feature of HKSAR life;

(3) That the government should continue to monitor patterns of Chinese literacy in minority groups, such as speakers of Chinese as a second language;

(4) That the government and other interested parties should recognise the importance of language and education in enabling the integration and contribution of members of such minority groups;

(5) That recent and ongoing initiatives designed to enable members of minority groups, particularly speakers of Chinese as a second language, to gain literacy in written Chinese should be continued and expanded;

(6) That the government continue to monitor and promote literacy in English in the majority population as well as minority groups;

(7) That the government continue to regularly monitor language diversity and multilingualism in Hong Kong society.

行政摘要

研究摘要

本報告展示了一項調查香港社會少數族裔語言和方言的研究專案的結果。 報告的各個章節討論了一系列問題，包括工作場所的語言使用；語言和就業；語言能力；語言、教育和職業；語言和收入；語言和社交網路；以及語言和公共標誌。 報告的研究結果有助於加深我們對社區語言多樣性、語言在就業中的重要性以及香港社會語言少數群體的需求的認識。

研究項目對政策影響和政策建議的摘要

調查結果

本報告的相關研究結果包括：

（1）有關語言多樣性和不同語言群體在香港特別行政區境內分佈情況的詳細資料;

（2）工作場所語言使用的詳細分析，指出三種主要口語（粵語、英語、普通話）以及書面語（英文和中文）在使用上存在的廣泛而有差異的情況;

（3）語言和就業的重要性及其相關結果，突出了熟練掌握三種主要語言的期望;

（4）關於語言與收入之間關係的研究結果，且注意到語言能力和教育水平的相關影響;

（5）社交網絡中語言使用相關數據分析，共記錄了 45 種不同的語言和方言；以及

（6）一項對油尖旺區街道標誌的創新研究。調查發現該地區在不同的區議會選區（DCCA）區內標誌中使用的語言差異很大。

建議

（一）政府與其他持份者一起，承認語言多樣性是香港文化不可分割的一部分;

（二）語言多樣性應被視為香港特區生活的重要特徵;

（三）政府應繼續監測少數群體的中文讀寫能力情況，例如以中文為第二語言的人士;

（四）政府和其他有關方面應認識到語言與教育對促進這些少數群體成員的融入和貢獻的重要性;

（五）政府應繼續並擴大近期以及那些正在進行中的措施，使少數群體成員（特別是以中文作為第二語言的成員）能夠獲得並提高中文讀寫能力;

（六）政府繼續監察並推廣多數人口及少數群體的英文讀寫能力;

（七）政府繼續定期監察香港社會的語言多樣性和使用多種語言的情況。

Chapter 1: Introduction

The history, geography, and demographic composition of Hong Kong have all contributed to the unique linguistic profile of the Hong Kong community. While much previous research has concentrated on issues connected with official languages of the HKSAR, that is, Cantonese, English and Putonghua (CEP), recent research on multilingualism in the community has also drawn attention to the existence of ethnic and linguistic minorities in the local community. As demonstrated by this team in a previous Public Policy Research Funding Scheme report (available from The University of Hong Kong Social Sciences Research Centre website), Hong Kong is home to a large number of minority languages (we listed a total of 27 separate languages identified in recent census results). Language learning and language use are key areas of public policy debate, with rather less discussion of the role of minority languages as opposed to official languages in our society. Despite the very different economic and social contexts of language use by linguistic minorities, there has been little empirical investigation of the ways in which language, education, employment, and engagement in the community interact, or the ways in which these interactions may be very different for those using minority languages. We use a mixed-methods approach to investigate such issues.

Chapter 2 Study Objectives

1. To understand the economic and educational success of minority language speakers compared with Cantonese, English and Putonghua speakers who do not speak minority languages.
2. To investigate how patterns of relative success have changed over time, within linguistic minority communities.
3. To better understand the needs, achievements, physical, economic and social environment of minority language speakers in HK in the context of their local communities.
4. To investigate how language and education relate to employment and engagement in the community amongst those who speak languages other than the official languages.
5. To understand the benefits of both reading and writing different languages.

Chapter 3 Research Methodology

The original plan for the reanalysis of census data was to compare language findings across censuses. However, as the 2011 census only covered spoken languages and the preceding censuses did not cover language, we changed our reanalysis plan to focus on more detailed analysis of the 2016 by-census and adding reanalysis of the 2018 Thematic Household Survey (THS) No. 66, which collected data on language proficiency, language use in the workplace, employment and barriers to employment for those not employed and hence is far more useful than analyses of the earlier censuses. For the comparison over time, we focus on the langauges understood reported in the 2011 census and 2016 by-census. The comparison between the 2016 by-census and 2018 THS is complex as there is bias in the 2018 THS, which only covered households with at least one available respondent who understood Chinese. However, the 2018 THS has the advantage over the 2016 by-census of collecting data on level of language competence and use of language in the workplace. Hence, we examine the variation of languages across districts and District Council Constituencies Areas (DCCA) in the 2011 census and 2016 by-census in Chapter 4 and also how language plays a role in employment (in Chapter 6) and in personal income for the employed (in Chapter 8) in the 2016 by-census and 2018 THS. This analysis takes full advantage of the data collected and hence goes far beyond what was reported in the official 2016 by-census and 2018 THS reports. All the quantitative analysis only includes results which are statistically significant at $p<0.1\%$, which is very conservative, so the key questions are not about whether associations exist, but rather, how important they are and their credibility as causes, given that the data are all cross-sectional and hence cannot prove causation. The focus of our quantitative analysis is on things that can be changed (such as education and language), rather than those which cannot (such as age, gender, ethnicity, place of birth) or are not appropriate for government action at the individual level (such as marital status), although our statistical analysis controls for age, gender and marital status, so that we can examine the role of education and language, after removing the effects that we cannot change. We also examine language use in the workplace in the 2016 by-census and 2018 THS (in Chapter 5) and how language competence is associated with education, occupation, industry and ethnicity (in Chapter 7) in the 2016 by-census and 2018 THS.

For the qualitative sample, we originally planned to undertake street-based fieldwork from seven DCCAs with many speakers of languages other than CEP, collecting data on language use in images along streets and on buildings and collecting data on language, employment and community engagement from those who speak languages other than CEP. However, the Covid-19 virus made the original data collection strategy unsafe, so we chose a safer strategy that used Google Streetview images to cover the whole of Yau Tsim Mong (YTM) district (which contains nineteen linguistically diverse DCCAs) to replace the manual image collection and contacted a wide range of CEP and non CEP speakers via intermediaries for the collection of data on language, employment and social networks. This change yields a wider range of data on language across a wider range of DCCAs than we originally planned. By taking advantage of Google Streetview, we are able to collect a much larger number of images than we could have originally managed and link to location within YTM. This phase of the research was specifically intended to connect with 'linguistic landscape' research in other parts of the Asian region and worldwide, as discussed in Chapter 10. The revised data collection of language speakers has yielded more than 1,000 speakers of languages other than CEP from

all 18 districts, instead of the original 251 speakers from 4 districts. In short, we have turned a challenge into an opportunity, by linking with data collection for an LWB project (see next paragraph). This data enabled us to examine the connection of language with social connections across Hong Kong (discussed in Chapter 9).

These changes to the research design ensure that for the Hong Kong government, this project continues to have a strong potential to inform language policy in relation to bilingualism and multilingualism, in both educational and other official contexts. While the design is less useful for objective two than originally anticipated, in that we do not examine the success over time in a comparable manner, it provides multiple analyses that address all the other objectives using multiple datasets, increasing the robustness of the findings. Indeed, this public report will be presented to Labour and Welfare Bureau (LWB) as input to commissioned research on facilitating employment of women, as we include both men and younger women as potential contrast groups and highlight the role of language and education in employment, whereas the LWB commissioned research had a narrow focus on older women who are unemployed, ethnic minorities or not in the labour force.

Research Results/Findings

Chapter 4 Language Use across District Council Constituency Areas (DCCA)

This analysis covers languages understood (i.e. listening) and languages read (for simplicity, we do not cover languages spoken or written, which show similar findings). The 2016 By-census used a 10% sample, with a population of about 7.3M, divided quite evenly across 431 DCCA (excluding Marine), yielding a sample size per DCCA of around 1,700. We report percentages to 2 decimal places, so the main weakness is that any reported zeroes should not be regarded as precise, given the sampling error[1]. For languages understood, we also compare the results across DCCA with the 2011 census, which also used a 10% sample for the full questionnaire, which is what we use here.

Strengths of census data

a) Best coverage overall, most representative and largest sample, so lowest sampling and non-sampling error and good coverage of all ethnic groups
b) For 2016 we have written languages as well as oral, covering many languages and dialects, not just Cantonese, English and Putonghua

Weaknesses of census data

a) Only collected every 5 years
b) No questions cover language use and there is only a limited scale for the number of years in HK

Tables 4.1 and 4.2 show the minimum and maximum percentages for languages understood and read across districts (DC) and across DCCA in the 2016 by-census, including identification of which DC and DCCA have the maximum values (please note that zeroes should not be interpreted as definitive absence of language speakers for the reasons given above). Table 4.3 shows a comparison of the languages understood across DCCA for 2016 and 2011. All percentages for languages understood are amongst those aged 5 and above who are not mute, while for languages read, they are amongst those aged 5 and above (i.e., unlike C&SD, we include those who are illiterate as this is something changeable through education, unlike being mute).

Table 4.1 shows that across districts, Wong Tai Sin has the highest percentage of those who understand Cantonese (99.0%), Wanchai district has the highest percentage of those who understand English (73.2%) and Tsuen Wan district has the highest percentage of those who understand Putonghua (51.7%). The highest percentages for other languages in districts are 9.8% for Hakka (in North), 8.7% for Filipino (in Wanchai), 8.3% for Fukien (in Eastern), 5.7% for Chiu Chau (in Wong Tai Sin), 4.1% for Sze Yap (in Sham Shui Po), 4.0% for Indonesian (in Wanchai), 3.8% for Nepali (in Yau Tsim Mong), 3.2% for French (in Central & Western), 2.7%

[1] Using the hypergeometric distribution, the chance of observing 0 in the sample in a DCCA is less than 0.5% if the true proportion is at least 0.3%, so we can only safely conclude that the true proportion is less than 0.3% for any observed zero, not that the true proportion is zero.

for Japanese (in Wanchai), 2.7% for Hindi (in Yau Tsim Mong), 2.1% for Shanghainese (in Wanchai), 1.1% for Spanish (Central & Western), 1.0% for German (in Central & Western).

Table 4.1 also shows that across DCCAs, San King in Tuen Mun district has the highest percentage of those who understand Cantonese (99.9%), the Peak in Central & Western district has the highest percentage of those who understand English (92.3%) and Yeung Uk Road in Tsuen Wan has the highest percentage of those who understand Putonghua (65.0%). The highest percentages for other languages in DCCAs are 34.3% for Nepali (Jordan North in Yau Tsim Mong), 25.1% for Hakka (Sha Ta in North), 24.5% for Filipino (Bays Area in Southern) 23.7% for Fukien (Mount Parker in Eastern), 14.2% for Hindi (Tsim Sha Tsui in Yau Tsim Mong), 12.8% for Sze Yap (Sau Mau Ping South in Kwun Tong), 11.6% for Chiu Chau(Lung Shing in Kowloon City), 11.2% for French (Bays Area in Southern), 8.2% for Indonesian (Fairview Park in Yuen Long), 6.6% for Japanese (East TST in Yau Tsim Mong), 5.0% for Shanghainese (Causeway Bay in Wanchai), 4.2% for Urdu (Sung Wong Toi in Kowloon City), 3.9% for German (Discovery Bay in Islands), 2.9% for Spanish (Peak in Central & Western), 2.5% for Vietnamese (Nam Cheong Central in Sham Shui Po), 2.4% for Dutch (Ping Shan North in Yuen Long), 2.3% Thai (Fort St in Eastern), 2.2% for Bengali (Yau Ma Tei North in Yau Tsim Mong) and and 1.8% for Punjabi (Lai Chi Kok South in Sham Shui Po).

Table 4.1 Percentages who can understand languages across DC and DCCA in 2016

Language	Overall	MinDC	MaxDC	DCMax	MinDCCA	MaxDCCA	DCCAMax
Cantonese	94.56%	82.65%	98.00%	Wong Tai Sin	51.24%	99.90%	Tuen Mun:San King
English	53.05%	44.90%	73.20%	Wan Chai	29.39%	92.32%	Central & Western:Peak
Putonghua	48.49%	40.40%	51.66%	Tsuen Wan	26.67%	64.97%	Tsuen Wan:Yeung Uk Road
Hakka	4.12%	1.08%	9.78%	North	0.15%	25.13%	North:Sha Ta
Fukien	3.54%	1.41%	8.28%	Eastern	0.00%	23.74%	Eastern:Mount Parker
Chiu Chau	3.33%	1.85%	5.72%	Wong Tai Sin	0.58%	11.61%	Kowloon City:Lung Shing
Other Chinese	2.84%	1.52%	3.96%	Yau Tsim Mong	0.32%	9.07%	Kowloon City:To Kwa Wan North
Filipino	2.68%	0.87%	8.67%	Wan Chai	0.00%	24.51%	Southern:Bays Area
Indonesian	2.68%	1.85%	3.98%	Wan Chai	0.23%	8.18%	Yuen Long:Fairview Park
Japanese	1.59%	1.18%	2.66%	Wan Chai	0.30%	6.57%	Yau Tsim Mong:East TST & King's Park
Sze Yap	1.42%	0.42%	4.12%	Sham Shui Po	0.00%	12.78%	Kwun Tong:Sau Mau Ping South
Shanghai	1.02%	0.52%	2.11%	Wan Chai	0.00%	5.01%	Wan Chai:Causeway Bay
French	0.64%	0.18%	3.17%	Central & Western	0.00%	11.16%	Southern:Bays Area
Hindi	0.52%	0.05%	2.71%	Yau Tsim Mong	0.00%	14.17%	Yau Tsim Mong:Tsim Sha Tsui Central
Korean	0.47%	0.31%	0.81%	Islands	0.00%	2.06%	Islands:Tung Chung North
Nepali	0.37%	0.00%	3.81%	Yau Tsim Mong	0.00%	34.30%	Yau Tsim Mong:Jordan North
Spanish	0.30%	0.12%	1.10%	Central & Western	0.00%	2.93%	Central & Western:Peak
Thai	0.30%	0.15%	0.66%	Islands	0.00%	2.25%	Eastern:Fort Street
German	0.26%	0.08%	1.02%	Central & Western	0.00%	3.94%	Islands:Discovery Bay
Urdu	0.24%	0.02%	0.63%	Kwai Tsing	0.00%	4.24%	Kowloon City:Sung Wong Toi
Vietnamese	0.11%	0.04%	0.28%	Sham Shui Po	0.00%	2.54%	Sham Shui Po:Nam Cheong Central
Punjabi	0.10%	0.00%	0.32%	Islands	0.00%	1.79%	Sham Shui Po:Lai Chi Kok South
Other Asian	0.10%	0.02%	0.51%	Islands	0.00%	3.21%	Yau Tsim Mong:Tsim Sha Tsui Central
Malay	0.10%	0.03%	0.38%	Islands	0.00%	1.27%	Islands:Tung Chung North
Other	0.10%	0.01%	0.64%	Islands	0.00%	2.55%	Yau Tsim Mong:Tsim Sha Tsui Central
Other European	0.08%	0.01%	0.67%	Islands	0.00%	3.19%	Islands:Lamma & Po Toi
Italian	0.08%	0.02%	0.40%	Wan Chai	0.00%	1.36%	Islands:Discovery Bay
Bengali	0.06%	0.01%	0.32%	Yau Tsim Mong	0.00%	2.21%	Yau Tsim Mong:Yau Ma Tei North
Arabic	0.05%	0.00%	0.15%	Southern	0.00%	0.75%	Southern:Pokfulam
Dutch	0.04%	0.00%	0.17%	Central & Western	0.00%	2.35%	Yuen Long:Ping Shan North
Russian	0.04%	0.01%	0.17%	Islands	0.00%	0.76%	Wan Chai:Tai Fat Hau
Portuguese	0.03%	0.01%	0.15%	Islands	0.00%	0.69%	Sai Kung:Sai Kung Central
Sinhali	0.02%	0.00%	0.12%	Islands	0.00%	0.84%	Islands:Lamma & Po Toi

The much higher maximum percentages who understand many minority languages at DCCA level than district level indicates that minority language communities in Hong Kong are often concentrated in quite small areas.

The Census & Statistics Department did not distinguish between Simplified and Traditional Chinese in the 2016 Census, so 'Reading Chinese' means reading either Simplified or Traditional Chinese characters. We specifically examine the 4 combinations of reading Chinese and English.

Table 4.2 Percentages who can read languages across DC and DCCA in 2016

Language	Overall	MaxDC	DCMax	MaxDCCA	DCCAMax
Chinese & English	62.07%	65.87%	Eastern	80.62%	Sham Shui Po:Lai Chi Kok Central
Chinese Not English	27.34%	33.88%	Kwun Tong	46.31%	Sha Tin:Pok Hong
English Not Chinese	6.17%	18.69%	Wan Chai	48.96%	Islands:Discovery Bay
Not Chinese & Not English	4.42%	5.76%	Southern	22.45%	Southern:Ap Lei Chau Estate
Chinese	89.41%	92.96%	Tuen Mun	97.30%	Yuen Long:Wang Yat
English	68.24%	82.98%	Wan Chai	95.74%	Southern:Bays Area
Bengali	0.03%	0.21%	Yau Tsim Mong	2.06%	Yau Tsim Mong:Yau Ma Tei North
Filipino	2.35%	7.79%	Wan Chai	22.59%	Southern:Bays Area
Hindi	0.31%	1.48%	Yau Tsim Mong	10.71%	Yau Tsim Mong:Tsim Sha Tsui Central
Indonesian	2.34%	3.76%	Wan Chai	7.48%	Yuen Long:Fairview Park
Japanese	1.86%	2.64%	Wan Chai	7.10%	Yau Tsim Mong:East TST & King's Park
Korean	0.48%	0.77%	Islands	1.78%	Islands:Tung Chung North
Nepali	0.30%	3.27%	Yau Tsim Mong	30.85%	Yau Tsim Mong:Jordan North
Urdu	0.18%	0.46%	Kwai Tsing	2.70%	Kowloon City:Sung Wong Toi
Sinhala	0.01%	0.08%	Wan Chai	0.84%	Islands:Lamma & Po Toi
Thai	0.21%	0.43%	Islands	2.18%	Eastern:Fort Street
Vietnamese	0.09%	0.22%	Sham Shui Po	2.48%	Sham Shui Po:Nam Cheong Central
Malay	0.09%	0.49%	Islands	1.80%	Islands:Tung Chung North
Punjabi	0.04%	0.18%	Islands	1.05%	Yau Tsim Mong:Yau Ma Tei South
Arabic	0.02%	0.06%	Islands	0.42%	Central & Western:Chung Wan
Other Asian	0.06%	0.21%	Islands	1.33%	Yau Tsim Mong:Tsim Sha Tsui Central
French	0.63%	2.85%	Central & Western	9.86%	Southern:Bays Area
German	0.24%	0.74%	Central & Western	3.12%	Islands:Discovery Bay
Italian	0.06%	0.32%	Wan Chai	1.27%	Wan Chai:Southorn
Portuguese	0.02%	0.11%	Wan Chai	0.47%	Wan Chai:Causeway Bay
Spanish	0.25%	0.76%	Wan Chai	2.30%	Southern:Bays Area
Dutch	0.03%	0.14%	Central & Western	2.54%	Yuen Long:Ping Shan North
Russian	0.03%	0.10%	Islands	0.53%	Tai Po:Tai Po Hui
Other Euro	0.07%	0.46%	Islands	2.41%	Islands:Discovery Bay
Other	0.04%	0.32%	Islands	1.83%	Eastern:Kam Ping

Table 2.2 shows that the highest percentage of the population aged 5+ who read both Chinese and English across districts was 65.9% in Eastern district; while for Chinese and not English, the highest was 33.9% in Kwun Tong; for English and not Chinese, the highest was 18.7% in Wanchai; and for neither English nor Chinese, the highest was 5.8% in Southern. For languages other than Chinese and English we see similar patterns for written and oral languages. The highest percentages for reading are 7.8% for Filipino (Wanchai), 3.8% for Indonesian (Wanchai), 3.3% for Nepali (in Yau Tsim Mong), 2.9% for French (Central & Western), 2.6% for Japanese (Wanchai), 1.5% for Hindi (Yau Tsim Mong).

Table 2.2 also shows that the highest percentage of the population aged 5+ who read both Chinese and English across DCCAs was 76.8% in Ma On Shan Town Centre of Shatin; while for Chinese and not English, the highest was 45.4% in Sha Kok of Shatin; for English and not Chinese, the highest was 45.7% in Bays Area of Southern; and for neither English nor Chinese, the highest was 22.1% in Ap Lei Chau Estate of Southern (which is an estate where many illiterate fishermen were resettled). For languages other than Chinese and English we see similar patterns for written and oral languages. The highest percentages for reading are 31.7% for Nepali (Jordan North of Yau Tsim Mong), 21.9% for Filipino (Bays Area of Southern), 11.1% for Hindi (Tsim Sha Tsui Central of Yau Tsim Mong), 10.7% for French (Bays Area of Southern), 7.3% for Japanese (East TST in Yau Tsim Mong), 7.3% for Indonesian (Fairview Park of Yuen Long), 4.5% for German (Discovery Bay of Islands), 3.4% for Urdu (Sung Wong Toi of Kowloon City), 3.1% for Spanish (Bays Area of Southern), 2.4% for Dutch (Ping Shan North of Yuen Long),

2.3% for Vietnamese (Nam Cheong Central in Sham Shui Po), 2.1% for Thai (Fort Street of Eastern), 2.0% for Bengali (Yau Ma Tei North in Yau Tsim Mong).

Similarly to understanding languages, the much higher maximum percentages who can read many minority languages at DCCA level than district level also indicates that minority language communities in Hong Kong are often concentrated in quite small areas.

Table 4.3 shows the change in percentages of those who understand languages overall, across districts and across DCCAs from 2011 to 2016. It is important to recognise that some DCCA boundaries changed between 2011 and 2016, especially in Yau Tsim Mong (YTM), making some comparisons in YTM difficult.

Overall, we can see change in only a few languages, with important increases in English (46.1% to 53.1%), Filipino (1.7% to 2.7%), Korean (0.2% to 0.5%) and Bengali (0.03% to 0.06%). At the district level, we can see little change. At the DCCA level, we can also see that Fukien and Thai are less concentrated than before, while Sze Yap and Vietnamese are more concentrated.

Table 4.3 Percentages who can understand languages across DC and DCCA in 2016 and 2011

Language	Overall 16	Overall 11	MaxDC 16	DCMax 16	MaxDC 11	DCMax 11	MaxDCCA 16	DCCAMax 16	MaxDCCA 11	DCCAMax 11
Cantonese	94.56%	95.84%	98.00%	Wong Tai Sin	98.42%	North	99.90%	Tuen Mun:San King	99.76%	TaiPo:FuMingSun
English	53.05%	46.07%	73.20%	Wanchai	69.50%	Wanchai	92.32%	Central & Western:Peak	93.17%	Central and Western:Peak
Putonghua	48.49%	47.85%	51.66%	Tsuen Wan	52.93%	Tsuen Wan	64.97%	Tsuen Wan:Yeung Uk Road	64.19%	Eastern:Kam Ping
Hakka	4.12%	4.73%	9.78%	North	10.67%	North	25.13%	North:Sha Ta	27.40%	North:Sha Ta
Fukien	3.54%	3.50%	8.28%	Eastern	8.97%	Eastern	23.74%	Eastern:Mount Parker	30.81%	Eastern:Kam Ping
Chiu Chau	3.33%	3.77%	5.72%	Wong Tai Sin	6.74%	Wong Tai Sin	11.61%	Kowloon City:Lung Shing	11.64%	Kowloon City:Lung Shing
Filipino	2.68%	1.65%	8.67%	Wanchai	6.63%	Wanchai	24.51%	Southern:Bays Area	18.40%	Central and Western:Peak
Indonesian	2.68%	2.43%	3.98%	Wanchai	4.00%	Wanchai	8.18%	Yuen Long:Fairview Park	7.80%	Wan Chai:Causeway Bay
Japanese	1.59%	1.53%	2.66%	Wanchai	2.98%	Wanchai	6.57%	Yau Tsim Mong:East TST & King's Park	8.15%	Yau Tsim Mong:Tsim Sha Tsui West
Sze Yap	1.42%	1.54%	4.12%	Sham Shui Po	4.32%	Sham Shui Po	12.78%	Kwun Tong:Sau Mau Ping South	8.66%	Sham Shui Po:Nam Cheong Central
Shanghainese	1.02%	1.13%	2.11%	Wanchai	2.43%	Kowloon City	5.01%	Wan Chai:Causeway Bay	6.53%	Tsuen Wan:Fuk Loi
French	0.64%	0.60%	3.17%	Central & Western	2.93%	Wanchai	11.16%	Southern:Bays Area	11.42%	Islands:Discovery Bay
Hindi	0.52%	0.49%	2.71%	Yau Tsim Mong	2.12%	Yau Tsim Mong	14.17%	Yau Tsim Mong:Tsim Sha Tsui Central	13.22%	Yau Tsim Mong:Tsim Sha Tsui East
Korean	0.47%	0.21%	0.81%	Islands	0.57%	Islands	2.06%	Islands:Tung Chung North	2.04%	Islands:Tung Chung North
Nepali	0.37%	0.24%	3.81%	Yau Tsim Mong	2.25%	Yau Tsim Mong	34.30%	Yau Tsim Mong:Jordan North	9.85%	Yau Tsim Mong:Yau Ma Tei
Spanish	0.30%	0.24%	1.10%	Central & Western	1.32%	Central & Western	2.93%	Central & Western:Peak	3.10%	Central and Western:Mid Levels East
Thai	0.30%	0.33%	0.66%	Islands	0.87%	Islands	2.25%	Eastern:Fort Street	3.68%	Kowloon City:Lung Shing
German	0.26%	0.23%	1.02%	Central & Western	0.93%	Central & Western	3.94%	Islands:Discovery Bay	5.27%	Islands:Discovery Bay
Urdu	0.24%	0.24%	0.63%	Kwai Tsing	0.81%	Yau Tsim Mong	4.24%	Kowloon City:Sung Wong Toi	3.80%	Yau Tsim Mong:Jordan West
Vietnamese	0.11%	0.09%	0.28%	Sham Shui Po	0.20%	Islands	2.54%	Sham Shui Po:Nam Cheong Central	1.52%	Tuen Mun:San Hui
Punjabi	0.10%	NA	0.32%	Islands	NA	NA	1.79%	Sham Shui Po:Lai Chi Kok South	NA	NA
Malay	0.10%	0.09%	0.38%	Islands	0.28%	Wanchai	1.27%	Islands:Tung Chung North	1.23%	North:Yu Tai
Italian	0.08%	0.07%	0.40%	Wanchai	0.51%	Central & Western	1.36%	Islands:Discovery Bay	1.77%	Central and Western:Mid Levels East
Bengali	0.06%	0.03%	0.32%	Yau Tsim Mong	0.10%	Yau Tsim Mong	2.21%	Yau Tsim Mong:Yau Ma Tei North	0.94%	Yau Tsim Mong:Jordan East
Arabic	0.05%	NA	0.15%	Southern	NA	NA	0.75%	Southern:Pokfulam	NA	NA
Dutch	0.04%	0.04%	0.17%	Central & Western	0.15%	Wanchai	2.35%	Yuen Long:Ping Shan North	1.01%	Sai Kung:Pak Sha Wan
Russian	0.04%	0.03%	0.17%	Islands	0.10%	Central & Western	0.76%	Wan Chai:Tai Fat Hau	0.46%	Southern:Pokfulam
Portugese	0.03%	0.03%	0.15%	Islands	0.12%	Central & Western	0.69%	Sai Kung:Sai Kung Central	0.71%	Southern:Bays Area
Sinhali	0.02%	0.02%	0.12%	Islands	0.06%	Yau Tsim Mong	0.84%	Islands:Lamma & Po Toi	0.53%	Sai Kung:Hang Hau West

In summary, we can see continuing diversity of language in Hong Kong across DCCAs, for both oral and written languages, in particular, in Yau Tsim Mong and Wanchai districts.

As regards diversity across districts, Wong Tai Sin has the highest percentage of those who understand Cantonese (99.0%), Wanchai district has the highest percentage of those who

understand English (73.2%) and Tsuen Wan district has the highest percentage of those who understand Putonghua (51.7%), while the highest rate for reading both Chinese and English was 65.9% in Eastern district, for Chinese and not English, 33.9% in Kwun Tong, for English and not Chinese, 18.7% in Wanchai, for neither English nor Chinese, 5.8% in Southern. The highest percentages for understanding other languages are 9.8% for Hakka (in North), 8.7% for Filipino (in Wanchai), 8.3% for Fukien (in Eastern), 5.7% for Chiu Chau (in Wong Tai Sin), 4.1% for Sze Yap (in Sham Shui Po), 4.0% for Indonesian (in Wanchai), 3.8% for Nepali (in Yau Tsim Mong), 3.2% for French (in Central & Western), 2.7% for Japanese (in Wanchai), 2.7% for Hindi (in Yau Tsim Mong), 2.1% for Shanghainese (in Wanchai), 1.1% for Spanish (Central & Western), 1.0% for German (in Central & Western); while for reading, the highest percentages are 7.8% for Filipino (Wanchai), 3.8% for Indonesian (Wanchai), 3.3% for Nepali (in Yau Tsim Mong), 2.9% for French (Central & Western), 2.6% for Japanese (Wanchai), 1.5% for Hindi (Yau Tsim Mong).

As regards diversity across DCCAs, San King in Tuen Mun district has the highest percentage of those who understand Cantonese (99.9%), the Peak in Central & Western district has the highest percentage of those who understand English (92.3%) and Yeung Uk Road in Tsuen Wan has the highest percentage of those who understand Putonghua (65.0%). The highest percentage of the population aged 5+ who read both Chinese and English across DCCAs was 76.8% in Ma On Shan Town Centre of Shatin; while for Chinese and not English, the highest was 45.4% in Sha Kok of Shatin; for English and not Chinese, the highest was 45.7% in Bays Area of Southern; and for neither English nor Chinese, the highest was 22.1% in Ap Lei Chau Estate of Southern (which is an estate where many illiterate fishermen were resettled); while for understanding other languages the highest rates are 34.3% for Nepali (Jordan North in Yau Tsim Mong), 25.1% for Hakka (Sha Ta in North), 24.5% for Filipino (Bays Area in Southern) 23.7% for Fukien (Mount Parker in Eastern), 14.2% for Hindi (Tsim Sha Tsui in Yau Tsim Mong), 12.8% for Sze Yap (Sau Mau Ping South in Kwun Tong), 11.6% for Chiu Chau(Lung Shing in Kowloon City), 11.2% for French (Bays Area in Southern), 8.2% for Indonesian (Fairview Park in Yuen Long), 6.6% for Japanese (East TST in Yau Tsim Mong), 5.0% for Shanghainese (Causeway Bay in Wanchai), 4.2% for Urdu (Sung Wong Toi in Kowloon City), 3.9% for German (Discovery Bay in Islands), 2.9% for Spanish (Peak in Central & Western), 2.5% for Vietnamese (Nam Cheong Central in Sham Shui Po), 2.4% for Dutch (Ping Shan North in Yuen Long), 2.3% Thai (Fort St in Eastern), 2.2% for Bengali (Yau Ma Tei North in Yau Tsim Mong) and and 1.8% for Punjabi (Lai Chi Kok South in Sham Shui Po); while the highest percentages for reading are 31.7% for Nepali (Jordan North of Yau Tsim Mong), 21.9% for Filipino (Bays Area of Southern), 11.1% for Hindi (Tsim Sha Tsui Central of Yau Tsim Mong), 10.7% for French (Bays Area of Southern), 7.3% for Japanese (East TST in Yau Tsim Mong), 7.3% for Indonesian (Fairview Park of Yuen Long), 4.5% for German (Discovery Bay of Islands), 3.4% for Urdu (Sung Wong Toi of Kowloon City), 3.1% for Spanish (Bays Area of Southern), 2.4% for Dutch (Ping Shan North of Yuen Long), 2.3% for Vietnamese (Nam Cheong Central in Sham Shui Po), 2.1% for Thai (Fort Street of Eastern), 2.0% for Bengali (Yau Ma Tei North in Yau Tsim Mong).

The much higher maximum percentages who understand and read many minority languages at DCCA level than district level indicates that minority language communities in Hong Kong are often concentrated in quite small areas.

Overall, we can see change in understanding for only a few languages from 2011 to 2016, with important increases in English (46.1% to 53.1%), Filipino (1.7% to 2.7%), Korean (0.2% to 0.5%) and Bengali (0.03% to 0.06%).

The Hong Kong Language Maps which are found at http://www.ssrc.hku.hk/hklangmaps/ have now been updated to cover the 2016 bycensus oral and written languages for all districts and DCCAs, as discussed in this chapter, in addition to the existing 2011 census results for oral languages. They have also been improved to better show DCCA and district boundaries. We believe that all the findings in this chapter are valuable in understanding the geographic patterns of both oral and written language use in Hong Kong, including how oral languages use has changed from 2011 to 2016, which is relevant for objective 2.

Chapter 5 Language Use in the Workplace

This chapter relies on analysis of the 2018 Thematic Household Survey No. 66, which has questions on: Self-perceived language competence on a 5-point scale in spoken Cantonese, English & Putonghua; written Chinese and English, Industry (amongst the employed), Frequency of use of these languages in work contexts on a 5-point scale, labour force participation plus willingness to take up jobs amongst those who are inactive; and top 3 considerations in taking up jobs.

The THS dataset covers the land-based non-institutional resident population of Hong Kong (excluding foreign domestic helpers) and includes around 10,000 households, including around 30,000 individuals, but only around 10,000 individuals (randomly selected individual aged 6-65 in each household) answered the question on language use of which only about 400 have non-Chinese mother tongue; around 7,500 were economically inactive aged 16-65 and hence answered the questions on willingness to take up jobs. Hence, we can estimate that around 2,500 respondents were both economically inactive and answered the language use questions and only around 100 were economically inactive and answered language questions and have non-Chinese mother tongue, suggesting that this dataset may have limited value for understanding non-native speakers of Chinese, compared to the 2016 bycensus.

Strengths of THS data

a) Includes key questions on willingness to get a job
b) Includes other relevant questions, such as language use in workplace and home
c) Recent data (2018)

Weakness of THS data

a) Relatively small sample size for language questions, so less useful for non-Chinese households
b) Failed to record whether there was a Foreign Domestic Helper (FDH)

This analysis examines work language use by education, occupation, industry (we exclude Agriculture and Fisheries as there are few respondents) and ethnicity in Tables 5.1, 5.2, 5.3 and 5.4. As the THS sample is relatively small for non-Chinese, we used a simplified set of ethnic groups: Chinese, (Other) Asians, Whites, Others. As the sample size for Others is relatively small (about 1% of the total sample, meaning the sampling error is large), so we only show the results for Chinese, Asians and Whites.

For internal meetings, Table 5.1 shows that for Education of S3 or less, more than a quarter do not have internal meetings. At least 65% of all education groups use Cantonese often or always; over 65% of S3 or less seldom or never use English, while at least 30% of Degree holders often or always use it. About 65% of all education groups seldom or never use Putonghua. Table 5.2 shows that for Service Sales, Craft, Plant Machine and Elementary workers, about 20% do not have internal meetings, while about 65% of all occupation groups use Cantonese often or always; about 60% of Service Sales, Craft, Plant Machine and Elementary workers seldom or never use English, while about 30% of Managers Admin and Professionals often or always use it. About 65% of all occupation groups seldom or never use

Putonghua. Table 5.3 shows that about 20% of Construction, Retail, Hotel Food and Transport Logistics employees do not have internal meetings. At least 65% of all industry groups use Cantonese often or always; over 60% of Manufacturing, Construction, Retail, Hotel Food, Transport Logistics and Real Estate employees seldom or never use English; over 30% of Finance/Insurance employees often or always use it. About 65% of all industry groups seldom or never use Putonghua. Table 5.4 shows Chinese almost always using Cantonese, while Asians and Whites almost always use English.

For external meetings, Table 5.1 shows that for Education of S3 or less, more than a quarter do not have external meetings. At least half of all educational groups use Cantonese often or always. For Education of S3 or less, at least half, seldom or never use English, while at least a quarter of those with a degree often or always use English. At least half of all educational groups seldom or never use Putonghua or do not have external meetings. At least half of all occupational groups use Cantonese often or always. At least 80% of Service Sales, Craft, Plant Machine and Elementary seldom or never use English or Putonghua or do not have external meetings, while a third of Managers/Admin or Professionals often or always use English. At least half of all industry groups use Cantonese in external meetings often or always. Around a third of Finance Insurance often or always use spoken English. Around half of all industry groups seldom or never use Putonghua or do not have external meetings. Table 5.4 shows Chinese almost always using Cantonese, while Asians and Whites almost always use English.

For internal emails/letters, at least a third of those with education of S3 or less do not send internal emails/letters. At least a third of all educational groups often or always use written Chinese. At least half of those with S3 education or less seldom or never use English, while at least two thirds of those with a degree often or always use written English. At least 30% of Craft, Plant Machine and Elementary occupations do not use internal emails/letters. About half of all occupational groups often or always use written Chinese. At least half of Managers/Admin, Professionals and Assoc. Professionals often or always use written English. Around a third of Ag Fish and Hotel Food do not use internal emails/letters, while around half of all other industry groups use written Chinese. Around two thirds of Info Comm and Finance Insurance use written English. While Asians and Whites almost always use English, the situation is more complex for Chinese.

Similarly, for external emails/letters, at least a third of those with education of S3 or less do not send external emails/letters. At least a third of all educational groups often or always use written Chinese. At least half of those with S3 education or less seldom or never use English, while at least two thirds of those with a degree often or always use written English. At least a third of Service Sales, Craft, Plant Machine and Elementary do not send external emails/letters. Around half of all occupational groups often or always use written Chinese. Around two thirds of Managers Admin and Professionals often or always use written English. Around half of Ag Fish and Hotel Food do not use internal emails/letters, while around half of all other industry groups use written Chinese. Around two thirds of Info Comm and Finance Insurance use written English. While Asians and Whites almost always use English, the situation is more complex for Chinese.

For written reports, at least half of all educational groups, except those with at least a Masters degree, often or always use written Chinese. At least two thirds of those with a degree, often

or always use written English. Around one fifth of Craft, Plant Machine and Elementary do not write written reports. Amongst Managers Admin and Professionals, around half often or always use written Chinese and around two thirds often or always use written English. Nearly half of Ag Fish do not write reports, while around half of all other industry groups use written Chinese. Around two thirds of Info Comm and Finance Insurance use written English. While Asians and Whites almost always use English, the situation is more complex for Chinese.

Table 5.1 Work Language Use by Level of Education

Work Language Use						
Cantonese internal meeting	**P6-**	**S1-S3**	**S4-S7**	**Diploma**	**Bachelor**	**Masters+**
Always	60.2	61.9	61.4	57.6	48.6	42.5
Often	5.2	8.2	17.6	27.1	33.4	30.0
Sometimes	0.8	0.6	1.4	2.4	4.1	8.6
Seldom	0.9	0.3	1.3	1.9	3.3	6.3
Not use	4.5	3.1	2.8	3.9	7.7	11.5
Not applicable	28.4	25.9	15.6	7.3	2.9	1.1
Spoken English internal meeting	**P6-**	**S1-S3**	**S4-S7**	**Diploma**	**Bachelor**	**Masters+**
Always	0.0	0.7	1.6	3.8	10.5	17.8
Often	2.2	1.8	7.1	11.7	19.4	27.7
Sometimes	3.6	2.8	13.9	16.0	24.0	21.4
Seldom	6.0	13.2	24.1	34.9	27.6	18.2
Not use	59.8	55.6	37.8	26.3	15.5	13.7
Not applicable	28.4	25.9	15.6	7.3	2.9	1.1
Putonghua internal meeting	**P6-**	**S1-S3**	**S4-S7**	**Diploma**	**Bachelor**	**Masters+**
Always	0.2	0.0	0.9	0.1	1.5	2.9
Often	2.7	1.8	5.9	4.6	9.1	9.6
Sometimes	4.5	4.5	11.1	10.3	15.7	14.8
Seldom	8.1	15.7	23.2	38.5	33.1	32.6
Not use	56.1	52.1	43.3	39.2	37.7	39.1
Not applicable	28.4	25.9	15.6	7.3	2.9	1.1
Cantonese external meeting	**P6-**	**S1-S3**	**S4-S7**	**Diploma**	**Bachelor**	**Masters+**
Always	45.2	48.6	47.3	46.9	39.8	35.4
Often	7.0	10.1	18.9	27.8	34.2	31.4
Sometimes	0.8	0.7	1.5	1.9	4.1	9.3
Seldom	0.4	0.3	1.0	2.7	3.4	4.7
Not use	8.1	4.3	4.5	4.4	7.9	11.4
Not applicable	38.5	36.0	26.8	16.4	10.7	7.8
Spoken English external meeting	**P6-**	**S1-S3**	**S4-S7**	**Diploma**	**Bachelor**	**Masters+**
Always	0.7	0.6	1.5	2.9	9.7	15.4
Often	0.9	2.1	7.7	12.3	19.2	28.5
Sometimes	4.6	2.2	14.1	24.5	28.0	24.2
Seldom	8.2	14.1	23.0	27.4	23.5	17.9
Not use	47.2	45.1	26.8	16.6	8.9	6.3
Not applicable	38.5	36.0	26.8	16.4	10.7	7.8
Putonghua external meeting	**P6-**	**S1-S3**	**S4-S7**	**Diploma**	**Bachelor**	**Masters+**
Always	0.6	0.1	0.9	0.1	1.2	1.9
Often	2.3	2.1	6.7	5.3	10.0	12.8
Sometimes	5.5	5.7	12.4	19.3	22.5	19.4
Seldom	9.2	14.3	21.6	32.9	29.3	30.8
Not use	43.9	41.7	31.5	26.0	26.3	27.4
Not applicable	38.5	36.0	26.8	16.4	10.7	7.8
Written Chinese internal emails/letters	**P6-**	**S1-S3**	**S4-S7**	**Diploma**	**Bachelor**	**Masters+**
Always	35.0	40.6	38.8	19.8	15.9	9.0
Often	6.2	10.6	23.7	36.4	33.3	30.1
Sometimes	1.0	1.7	6.0	15.9	14.4	14.7
Seldom	2.8	2.4	4.8	7.8	16.2	21.9
Not use	10.2	7.6	6.7	11.7	16.9	22.7
Not applicable	44.8	37.1	20.1	8.4	3.5	1.6
Written English internal emails/letters	**P6-**	**S1-S3**	**S4-S7**	**Diploma**	**Bachelor**	**Masters+**
Always	0.3	1.6	9.6	27.7	39.7	49.9
Often	2.1	1.3	13.1	21.3	26.3	29.6
Sometimes	3.1	3.5	17.4	17.1	13.4	8.0
Seldom	4.9	14.4	18.5	12.9	11.3	6.3
Not use	44.7	42.2	21.4	12.7	5.9	4.7
Not applicable	44.8	37.1	20.1	8.4	3.5	1.6
Written Chinese external emails/letters	**P6-**	**S1-S3**	**S4-S7**	**Diploma**	**Bachelor**	**Masters+**

Always	32.9	38.1	35.7	16.2	14.8	6.9
Often	4.0	10.7	23.6	38.1	33.0	30.0
Sometimes	1.8	1.4	6.0	14.8	14.2	16.8
Seldom	1.5	2.0	4.3	7.8	15.5	20.8
Not use	11.0	7.9	6.2	12.1	16.1	20.7
Not applicable	48.7	40.0	24.1	11.0	6.4	4.8
Written English external emails/letters	**P6-**	**S1-S3**	**S4-S7**	**Diploma**	**Bachelor**	**Masters+**
Always	1.0	1.3	8.8	27.2	37.6	45.5
Often	1.5	2.1	15.7	21.7	26.3	30.9
Sometimes	3.8	2.9	14.0	16.6	12.9	7.6
Seldom	4.8	12.3	17.3	13.4	11.5	7.7
Not use	40.1	41.5	20.1	10.1	5.4	3.5
Not applicable	48.7	40.0	24.1	11.0	6.4	4.8
Written Chinese reports	**P6-**	**S1-S3**	**S4-S7**	**Diploma**	**Bachelor**	**Masters+**
Always	54.3	57.4	45.5	21.4	16.7	7.1
Often	8.1	12.5	26.2	38.3	34.3	29.4
Sometimes	1.7	2.3	6.2	15.9	14.4	17.4
Seldom	2.2	2.0	4.0	8.4	15.5	19.9
Not use	8.3	4.9	6.4	11.7	17.5	25.3
Not applicable	25.4	21.0	11.8	4.3	1.6	0.9
Written English reports	**P6-**	**S1-S3**	**S4-S7**	**Diploma**	**Bachelor**	**Masters+**
Always	0.4	1.9	10.1	29.2	40.1	51.8
Often	3.7	2.8	16.1	21.1	26.5	29.5
Sometimes	3.5	2.4	15.6	15.6	13.0	6.5
Seldom	7.5	16.4	20.1	17.2	12.2	8.0
Not use	59.5	55.4	26.4	12.7	6.6	3.3
Not applicable	25.4	21.0	11.8	4.3	1.6	0.9

Table 5.2 Work Language Use by Occupation

Work Language Use								
Cantonese internal meeting	**Man Admin**	**Prof**	**Asso Prof**	**Clerk**	**Serv Sales**	**Craft**	**Plant Machine**	**Element**
Always	51.8	50.8	58.3	54.5	59.2	60.3	56.5	61.8
Often	28.8	30.8	27.7	30.6	15.8	8.9	6.7	7.6
Sometimes	4.3	5.3	2.6	2.6	1.8	1.5	1.3	0.2
Seldom	2.8	3.6	2.1	3.0	0.8	1.6	0.5	0.9
Not use	9.9	8.2	5.1	2.0	3.5	5.5	4.0	3.1
Not applicable	2.4	1.2	4.3	7.3	18.9	22.2	31.0	26.3
Spoken English internal meeting	**Man Admin**	**Prof**	**Asso Prof**	**Clerk**	**Serv Sales**	**Craft**	**Plant Machine**	**Element**
Always	13.2	12.3	6.1	3.1	2.3	1.3	1.0	0.1
Often	21.7	22.9	13.4	10.6	5.5	6.0	4.7	3.6
Sometimes	21.0	23.8	20.6	21.6	9.4	6.2	6.9	4.2
Seldom	24.8	23.5	30.2	32.4	22.6	14.3	15.1	10.1
Not use	16.9	16.3	25.4	25.0	41.4	50.0	41.3	55.6
Not applicable	2.4	1.2	4.3	7.3	18.9	22.2	31.0	26.3
Putonghua internal meeting	**Man Admin**	**Prof**	**Asso Prof**	**Clerk**	**Serv Sales**	**Craft**	**Plant Machine**	**Element**
Always	1.3	2.1	0.8	0.9	0.5	1.4	0.0	0.6
Often	11.0	8.7	6.2	7.5	4.0	3.5	3.6	3.0
Sometimes	20.4	13.4	12.7	14.0	7.8	5.3	6.9	5.4
Seldom	26.9	33.5	37.3	33.8	22.9	16.0	14.0	11.0
Not use	38.0	41.1	38.8	36.6	45.9	51.7	44.4	53.7
Not applicable	2.4	1.2	4.3	7.3	18.9	22.2	31.0	26.3
Cantonese external meeting	**Man Admin**	**Prof**	**Asso Prof**	**Clerk**	**Serv Sales**	**Craft**	**Plant Machine**	**Element**
Always	46.6	40.9	47.4	42.1	41.7	51.9	49.5	46.2
Often	28.5	32.9	29.2	30.9	18.4	9.4	9.7	8.4
Sometimes	5.7	6.1	2.4	2.2	1.4	1.2	1.3	0.6
Seldom	3.6	2.7	2.4	2.2	0.8	2.1	0.5	0.4
Not use	10.3	8.4	6.2	2.9	6.0	6.0	4.2	4.7
Not applicable	5.3	9.0	12.4	19.6	31.7	29.4	34.8	39.7
Spoken English external meeting	**Man Admin**	**Prof**	**Asso Prof**	**Clerk**	**Serv Sales**	**Craft**	**Plant Machine**	**Element**
Always	12.3	11.7	5.2	2.5	2.3	1.2	0.8	0.1
Often	24.5	23.2	13.3	10.6	5.7	5.6	5.2	3.4
Sometimes	24.8	26.9	26.0	23.0	10.9	6.2	7.4	4.6
Seldom	22.0	20.7	27.6	28.9	21.1	12.6	15.5	10.2
Not use	11.1	8.6	15.5	15.4	28.3	45.0	36.3	42.0
Not applicable	5.3	9.0	12.4	19.6	31.7	29.4	34.8	39.7
Putonghua external meeting	**Man Admin**	**Prof**	**Asso Prof**	**Clerk**	**Serv Sales**	**Craft**	**Plant Machine**	**Element**
Always	1.2	1.7	0.8	0.7	0.5	1.4	0.8	0.3
Often	13.4	10.2	7.5	7.9	4.2	3.9	4.7	3.6
Sometimes	27.3	19.7	20.1	16.3	11.6	5.0	8.2	5.4
Seldom	24.0	32.1	33.7	30.8	20.3	14.5	13.8	9.6
Not use	28.8	27.3	25.5	24.7	31.8	45.8	37.6	41.4
Not applicable	5.3	9.0	12.4	19.6	31.7	29.4	34.8	39.7
Written Chinese internal emails/letters	**Man Admin**	**Prof**	**Asso Prof**	**Clerk**	**Serv Sales**	**Craft**	**Plant Machine**	**Element**
Always	19.9	15.7	22.1	27.4	34.2	42.1	42.5	38.4
Often	33.4	31.8	31.1	38.0	19.7	11.4	13.3	8.1
Sometimes	12.7	14.2	14.6	13.4	4.9	2.0	1.5	1.3
Seldom	12.2	16.4	15.1	9.7	3.2	3.1	3.3	3.6
Not use	19.3	20.2	11.3	7.4	9.3	8.8	6.6	7.9
Not applicable	2.5	1.8	5.9	4.1	28.7	32.6	32.9	40.6
Written English internal emails/letters	**Man Admin**	**Prof**	**Asso Prof**	**Clerk**	**Serv Sales**	**Craft**	**Plant Machine**	**Element**
Always	42.9	44.2	29.2	23.5	7.9	3.9	0.7	1.1
Often	24.6	27.9	25.4	23.5	7.3	5.9	2.9	3.1
Sometimes	11.7	12.8	19.2	20.0	10.6	9.1	10.3	5.7
Seldom	9.2	8.3	11.2	18.2	18.9	11.6	18.3	11.4
Not use	9.1	5.0	9.0	10.8	26.5	37.0	34.9	38.1
Not applicable	2.5	1.8	5.9	4.1	28.7	32.6	32.9	40.6
Written Chinese external emails/letters	**Man Admin**	**Prof**	**Asso Prof**	**Clerk**	**Serv Sales**	**Craft**	**Plant Machine**	**Element**
Always	18.4	13.7	20.1	24.0	31.3	39.9	40.5	35.8

Often	34.8	30.8	32.9	37.9	19.1	10.7	12.5	7.6
Sometimes	12.5	15.4	13.5	13.7	4.5	2.4	2.0	1.4
Seldom	12.0	15.6	14.0	8.9	3.2	2.8	2.5	3.0
Not use	18.9	18.1	11.9	6.3	9.0	8.6	7.6	8.4
Not applicable	3.4	6.4	7.6	9.4	32.9	35.6	34.9	43.9
Written English external emails/letters	**Man Admin**	**Prof**	**Asso Prof**	**Clerk**	**Serv Sales**	**Craft**	**Plant Machine**	**Element**
Always	41.5	40.1	27.8	21.9	7.4	3.9	1.2	0.9
Often	25.5	27.9	26.5	25.3	7.7	8.8	6.3	4.4
Sometimes	11.8	12.4	17.5	16.9	9.2	6.9	7.5	4.6
Seldom	10.3	9.0	12.1	17.4	17.4	9.9	17.5	9.9
Not use	7.5	4.2	8.6	9.1	25.4	35.0	32.6	36.4
Not applicable	3.4	6.4	7.6	9.4	32.9	35.6	34.9	43.9
Written Chinese reports	**Man Admin**	**Prof**	**Asso Prof**	**Clerk**	**Serv Sales**	**Craft**	**Plant Machine**	**Element**
Always	20.1	15.2	23.8	27.1	44.1	53.7	53.5	58.7
Often	34.0	32.9	32.6	40.3	22.8	12.6	11.8	10.4
Sometimes	12.9	13.3	14.8	13.4	5.5	3.3	1.3	2.9
Seldom	12.8	17.4	13.3	8.5	2.8	2.0	4.4	2.6
Not use	19.0	20.4	12.7	8.1	8.6	8.4	6.1	4.5
Not applicable	1.4	0.9	2.8	2.6	16.2	20.1	23.0	21.0
Written English reports	**Man Admin**	**Prof**	**Asso Prof**	**Clerk**	**Serv Sales**	**Craft**	**Plant Machine**	**Element**
Always	43.1	44.4	28.9	24.3	9.5	4.9	1.4	1.4
Often	24.8	29.9	26.4	24.5	8.5	8.3	7.8	5.6
Sometimes	11.8	11.4	17.6	17.4	10.7	7.3	6.5	5.4
Seldom	10.0	8.8	14.1	20.2	21.1	14.3	18.6	13.4
Not use	8.9	4.5	10.1	11.1	34.2	45.2	42.7	53.3
Not applicable	1.4	0.9	2.8	2.6	16.2	20.1	23.0	21.0

Table 5.3 Work Language Use by Industry

Work Language Use	Industry												
Cantonese internal meeting	**Manu**	**Utility**	**Constr**	**Imp Whole**	**Exp**	**Retail**	**Hotel Food**	**Transp Logist**	**Info Comm**	**Finan Insur**	**Real Est**	**Prof Serv**	**Pub Adm Pers Serv**
Always	58.4	55.1	61.0	55.6		58.9	57.2	58.7	55.7	46.9	64.6	56.0	57.4
Often	22.1	29.1	12.3	28.2		19.2	12.1	16.0	27.7	32.7	30.2	21.4	22.7
Sometimes	1.5	1.0	1.8	2.7		0.7	1.8	2.9	5.1	4.6	1.5	2.9	2.0
Seldom	3.9	2.0	1.5	3.0		1.3	1.0	1.3	1.3	3.9	0.0	2.1	1.8
Not use	4.8	0.0	3.7	3.8		3.4	4.5	3.9	6.8	10.6	0.0	4.5	4.7
Not applicable	9.4	12.8	19.8	6.7		16.4	23.5	17.4	3.4	1.3	3.8	13.1	11.4
Spoken English internal meeting	**Manu**	**Utility**	**Constr**	**Imp Whole**	**Exp**	**Retail**	**Hotel Food**	**Transp Logist**	**Info Comm**	**Finan Insur**	**Real Est**	**Prof Serv**	**Pub Adm Pers Serv**
Always	4.7	0.0	2.0	4.5		2.1	2.7	2.4	7.6	15.9	0.0	4.5	5.1
Often	10.6	12.1	8.4	11.0		5.5	5.4	9.7	19.4	19.8	4.8	14.2	10.2
Sometimes	12.2	21.6	9.6	21.2		11.7	6.2	10.2	17.9	23.4	9.0	17.0	17.5
Seldom	23.1	12.7	16.0	32.5		24.9	14.1	19.4	33.6	25.3	34.3	20.2	26.0
Not use	40.0	40.9	44.1	24.1		39.5	48.2	40.9	18.1	14.4	48.1	31.1	29.9
Not applicable	9.4	12.8	19.8	6.7		16.4	23.5	17.4	3.4	1.3	3.8	13.1	11.4
Putonghua internal meeting	**Manu**	**Utility**	**Constr**	**Imp Whole**	**Exp**	**Retail**	**Hotel Food**	**Transp Logist**	**Info Comm**	**Finan Insur**	**Real Est**	**Prof Serv**	**Pub Adm Pers Serv**
Always	1.9	0.0	0.6	0.9		0.4	0.4	1.8	1.6	2.2	0.0	0.8	0.5
Often	10.5	4.2	4.9	9.1		4.4	4.2	4.4	10.9	8.8	2.3	6.6	4.1
Sometimes	11.0	15.2	6.0	16.2		10.6	5.0	9.5	11.8	22.5	11.0	12.3	8.9
Seldom	18.8	23.7	22.5	31.0		22.0	20.7	20.6	38.6	28.7	31.3	27.0	28.8
Not use	48.4	44.2	46.3	36.2		46.2	46.3	46.4	33.7	36.5	51.7	40.3	46.4
Not applicable	9.4	12.8	19.8	6.7		16.4	23.5	17.4	3.4	1.3	3.8	13.1	11.4
Cantonese external meeting	**Manu**	**Utility**	**Constr**	**Imp Whole**	**Exp**	**Retail**	**Hotel Food**	**Transp Logist**	**Info Comm**	**Finan Insur**	**Real Est**	**Prof Serv**	**Pub Adm Pers Serv**
Always	45.8	51.3	53.1	47.3		44.7	41.0	47.0	47.2	38.9	41.2	44.9	40.2
Often	23.5	25.9	13.7	28.5		21.6	12.7	17.2	31.8	31.4	38.0	21.3	25.0
Sometimes	0.8	0.0	1.9	1.4		1.1	1.9	2.3	4.4	6.9	1.5	3.8	1.8
Seldom	4.0	0.0	1.8	1.9		1.3	0.6	2.4	2.8	3.4	0.8	2.1	1.2
Not use	7.4	3.0	3.8	5.1		5.8	5.8	4.0	5.5	10.8	0.0	5.9	7.1
Not applicable	18.6	19.7	25.8	15.8		25.6	38.0	27.1	8.3	8.6	18.5	22.0	24.7
Spoken English external meeting	**Manu**	**Utility**	**Constr**	**Imp Whole**	**Exp**	**Retail**	**Hotel Food**	**Transp Logist**	**Info Comm**	**Finan Insur**	**Real Est**	**Prof Serv**	**Pub Adm Pers Serv**
Always	5.1	0.0	1.9	3.9		2.2	1.7	2.6	6.4	15.3	0.0	3.8	4.5
Often	10.1	13.7	8.2	13.3		6.9	4.6	9.3	18.5	20.8	8.5	15.7	8.9
Sometimes	13.4	21.8	11.5	22.2		14.6	7.0	9.3	24.5	27.7	15.1	18.1	20.8
Seldom	18.5	11.7	16.0	28.8		22.5	14.9	19.0	30.7	20.8	35.0	17.9	23.2
Not use	34.4	33.2	36.7	16.0		28.3	33.8	32.7	11.6	6.8	22.9	22.6	17.9
Not applicable	18.6	19.7	25.8	15.8		25.6	38.0	27.1	8.3	8.6	18.5	22.0	24.7
Putonghua external meeting	**Manu**	**Utility**	**Constr**	**Imp Whole**	**Exp**	**Retail**	**Hotel Food**	**Transp Logist**	**Info Comm**	**Finan Insur**	**Real Est**	**Prof Serv**	**Pub Adm Pers Serv**
Always	0.0	0.0	0.5	0.5		0.4	0.4	2.4	0.9	2.0	1.9	1.0	0.3
Often	10.0	4.2	5.5	11.9		6.1	3.1	5.4	11.2	10.9	6.6	6.3	4.3
Sometimes	14.5	15.2	8.1	17.1		14.5	7.3	9.5	22.2	29.8	11.7	16.6	14.4
Seldom	16.1	14.5	21.3	26.9		20.1	17.9	20.2	34.5	22.9	37.8	24.1	27.4
Not use	40.8	46.4	38.8	27.8		33.3	33.3	35.4	23.0	25.8	23.6	30.0	28.9
Not applicable	18.6	19.7	25.8	15.8		25.6	38.0	27.1	8.3	8.6	18.5	22.0	24.7
Written Chinese internal emails/letters	**Manu**	**Utility**	**Constr**	**Imp Whole**	**Exp**	**Retail**	**Hotel Food**	**Transp Logist**	**Info Comm**	**Finan Insur**	**Real Est**	**Prof Serv**	**Pub Adm Pers Serv**
Always	26.9	32.1	36.4	29.1		40.2	34.5	39.7	19.6	14.9	42.3	25.5	22.0
Often	28.2	33.8	14.5	35.2		26.1	12.9	18.3	28.6	33.6	29.2	25.0	28.7
Sometimes	10.9	0.0	5.2	13.7		3.3	2.2	4.7	13.9	17.5	5.1	8.7	11.4
Seldom	4.2	4.2	6.9	7.9		3.9	2.7	5.9	20.0	13.4	14.4	9.3	11.0
Not use	11.7	16.0	8.5	8.9		6.8	10.8	10.4	12.4	19.4	4.7	13.7	11.0
Not applicable	18.1	14.0	28.5	5.4		19.7	36.9	21.0	5.6	1.3	4.3	17.8	16.0
Written English internal emails/letters	**Manu**	**Utility**	**Constr**	**Imp Whole**	**Exp**	**Retail**	**Hotel Food**	**Transp Logist**	**Info Comm**	**Finan Insur**	**Real Est**	**Prof Serv**	**Pub Adm Pers Serv**
Always	11.1	25.1	12.4	25.9		7.7	4.2	8.8	38.5	44.3	10.6	23.1	23.6
Often	14.5	13.2	11.3	17.7		8.9	7.1	12.2	24.3	30.3	22.6	18.8	17.9
Sometimes	18.7	14.0	9.7	21.0		14.5	5.5	11.5	16.7	12.1	15.2	12.2	13.7
Seldom	12.3	8.9	9.6	17.8		23.6	11.6	19.4	6.4	8.5	21.0	9.3	14.9
Not use	25.3	25.0	28.5	12.3		25.6	34.7	27.1	8.5	3.7	26.3	18.9	13.9
Not applicable	18.1	14.0	28.5	5.4		19.7	36.9	21.0	5.6	1.3	4.3	17.8	16.0
Written Chinese external emails/letters	**Manu**	**Utility**	**Constr**	**Imp Whole**	**Exp**	**Retail**	**Hotel Food**	**Transp Logist**	**Info Comm**	**Finan Insur**	**Real Est**	**Prof Serv**	**Pub Adm Pers Serv**
Always	26.2	32.1	34.4	24.8		37.4	31.8	36.8	16.5	14.9	32.7	24.3	19.4
Often	26.2	36.4	14.5	36.9		25.4	12.0	18.0	30.4	32.4	34.6	24.6	28.8
Sometimes	12.4	0.0	4.7	13.4		3.5	1.7	5.0	13.9	17.8	5.9	9.4	10.9
Seldom	1.9	1.6	6.9	8.3		3.6	8088	4.6	18.5	11.9	12.5	9.3	9.9
							2.82						
Not use	12.3	16.0	8.3	8.2		7.2	10.0	10.3	12.7	18.8	1.5	13.4	10.5
Not applicable	21.1	14.0	31.2	8.5		23.0	41.7	25.4	8.0	4.3	12.8	19.0	20.6
Written English external emails/letters	**Manu**	**Utility**	**Constr**	**Imp Whole**	**Exp**	**Retail**	**Hotel Food**	**Transp Logist**	**Info Comm**	**Finan Insur**	**Real Est**	**Prof Serv**	**Pub Adm Pers Serv**
Always	10.1	25.1	11.3	24.7		7.7	3.6	8.3	36.7	41.8	10.3	22.5	21.6
Often	18.1	14.8	13.3	23.2		10.7	5.6	14.2	24.4	28.5	19.6	19.9	17.9
Sometimes	14.1	13.8	8.1	15.6		12.9	6.3	9.3	15.1	13.3	16.8	11.7	12.1
Seldom	13.7	7.4	9.5	18.0		20.8	11.4	17.5	10.1	8.1	18.2	8.3	14.5
Not use	23.0	25.0	26.6	10.1		25.0	31.5	25.4	5.9	4.0	22.3	18.6	13.4
Not applicable	21.1	14.0	31.2	8.5		23.0	41.7	25.4	8.0	4.3	12.8	19.0	20.6

Written Chinese reports	Manu	Utility	Constr	Imp Exp Whole	Retail	Hotel Food	Transp Logist	Info Comm	Finan Insur	Real Est	Prof Serv	Pub Adm Pers Serv
Always	34.5	38.5	48.7	29.0	45.4	51.7	46.0	18.3	16.2	40.5	33.8	27.0
Often	27.6	32.1	16.0	39.0	28.2	15.4	20.9	32.4	31.7	40.2	25.4	30.1
Sometimes	11.9	3.2	5.2	13.1	2.7	2.7	5.0	14.6	18.7	5.4	9.4	12.5
Seldom	3.5	1.6	6.0	7.3	4.3	1.1	5.1	17.8	11.6	8.6	11.0	10.3
Not use	13.4	17.0	7.6	8.5	7.4	9.0	10.0	14.1	20.6	4.1	10.4	11.7
Not applicable	9.1	7.6	16.5	3.2	11.9	20.1	13.1	2.9	1.3	1.3	10.0	8.4
Written English reports	**Manu**	**Utility**	**Constr**	**Imp Exp Whole**	**Retail**	**Hotel Food**	**Transp Logist**	**Info Comm**	**Finan Insur**	**Real Est**	**Prof Serv**	**Pub Adm Pers Serv**
Always	12.4	25.1	12.3	25.1	8.8	5.5	9.7	38.9	44.2	10.6	23.4	25.6
Often	14.1	15.3	13.9	21.3	9.3	8.3	15.2	25.0	28.4	17.1	20.3	19.5
Sometimes	15.6	13.3	8.3	17.6	14.3	4.5	10.4	14.7	13.7	19.2	11.6	12.0
Seldom	18.7	12.8	12.3	20.6	23.7	15.3	20.2	12.0	7.3	24.8	9.9	16.8
Not use	30.2	26.0	36.8	12.1	32.0	46.3	31.5	6.5	5.3	27.1	24.9	17.8
Not applicable	9.1	7.6	16.5	3.2	11.9	20.1	13.1	2.9	1.3	1.3	10.0	8.4

Table 5.3 Work Language Use by Ethnicity

Work Language Use			
Cantonese internal meeting	**Chinese**	**Asian**	**White**
Always	59	4	0
Often	22	2	4
Sometimes	2	0	4
Seldom	2	12	2
Not use	2	66	89
Not applicable	13	15	1
Total	100	100	100
Spoken English internal meeting	**Chinese**	**Asian**	**White**
Always	2	50	89
Often	10	19	10
Sometimes	15	7	0
Seldom	24	3	0
Not use	35	6	0
Not applicable	13	15	1
Total	100	100	100
Putonghua internal meeting	**Chinese**	**Asian**	**White**
Always	1	0	0
Often	6	2	4
Sometimes	11	0	3
Seldom	27	4	2
Not use	42	78	90
Not applicable	13	15	1
Total	100	100	100
Cantonese external meeting	**Chinese**	**Asian**	**White**
Always	47	2	0
Often	23	3	3
Sometimes	2	0	5
Seldom	2	9	1
Not use	3	60	85
Not applicable	23	25	6
Total	100	100	100
Spoken English external meeting	**Chinese**	**Asian**	**White**
Always	2	42	84
Often	11	14	8
Sometimes	17	11	2
Seldom	22	3	0
Not use	25	5	0
Not applicable	23	25	6
Total	100	100	100

Putonghua external meeting	Chinese	Asian	White
Always	1	0	0
Often	7	2	2
Sometimes	15	0	4
Seldom	24	3	3
Not use	30	70	86
Not applicable	23	25	6
Total	100	100	100
Written Chinese internal emails/letters	**Chinese**	**Asian**	**White**
Always	31	0	0
Often	26	2	4
Sometimes	9	0	5
Seldom	9	6	1
Not use	8	71	87
Not applicable	18	22	2
Total	100	100	100
Written English internal emails/letters	**Chinese**	**Asian**	**White**
Always	18	48	85
Often	16	16	13
Sometimes	14	4	0
Seldom	15	1	0
Not use	20	10	0
Not applicable	18	22	2
Total	100	100	100
Written Chinese external emails/letters	**Chinese**	**Asian**	**White**
Always	28	0	0
Often	26	2	3
Sometimes	9	0	5
Seldom	8	5	1
Not use	8	69	85
Not applicable	21	24	6
Total	100	100	100
Written English external emails/letters	**Chinese**	**Asian**	**White**
Always	17	45	84
Often	17	12	7
Sometimes	12	7	4
Seldom	14	2	0
Not use	19	10	0
Not applicable	21	24	6
Total	100	100	100
Written Chinese reports	**Chinese**	**Asian**	**White**
Always	37	2	0
Often	28	2	4
Sometimes	9	1	4
Seldom	8	6	1
Not use	8	77	89
Not applicable	10	12	1
Total	100	100	100
Written English reports	**Chinese**	**Asian**	**White**
Always	18	52	88
Often	18	14	8
Sometimes	12	11	3
Seldom	17	1	0
Not use	25	10	0
Not applicable	10	12	1
Total	100	100	100

In summary, industry grouping seems to best indicate the general use of language in the workplace although occupation is also important. Cantonese is widely used in oral communication, with spoken English most common in Finance and Insurance. However, while written Chinese is widely used for those industries with an expectation of written emails or reports, written English reports are common in specific industries (especially Information & Communication Services and Finance & Insurance) and higher-level occupations (Associate Professional, Manager Professional), but also about half of clerical staff. While Asians and Whites mainly use oral and written English, Chinese often use a combination of English and Chinese. This information is useful in objectives 1, 4 and 5 as we can see the importance of oral and written Chinese and English in the workplace for different ethnicities.

Chapter 6 Language and Employment

This analysis is done for both the 2016 By-census data and the 2018 THS data discussed in Chapter 3. This analysis uses logistic regression to examine how labour force participation depends on language and education, after controlling for age x gender x marital status. For the census data, we only have yes/no answers for language competence, while for the THS data, we have a 5 point ordinal scale (Very good, Good, Average, Not so good, No knowledge).

For the By-census data, we start from a baseline model with 19 parameters that fits all the 3 way combinations of five 10 year age groups (20-29, 30-39, 40-49, 50-59, 60-69), gender and marital status. All the terms in this model are statistically significant at p<.0001. This baseline model has a concordance of 68.9%, which we can use for reference in our more complex models below.

The next model we examine adds education level (on a 10 point ordinal scale, using the first digit of the census coding, excluding level 99). This addition is also statistically significant at p<.0001. It shows an increasing chance of being in the labour force as education increases across levels 0-4 (with levels 5-8 being similar to level 4). The concordance increases to 71.6%.

We now add 5 binary variables indicating ability to understand Cantonese, English and Putonghua and ability to read Chinese and English and the 3 interaction variables for understand and 1 interaction variable for reading, for a total of 10 added variables and hence 10 parameters (without Education being included), all of which are statistically significant at p<.0001. The most important element of these variables is the ability to read Chinese. The concordance increases to 77.0%, showing that language abilities are more important than education in determining labour force participation.

We now include both the education and language variables discussed above. Reading Chinese remains the most important element of language, while for education, we can now identify that increasing education from 0 to 1 to 2 has a large impact, while levels 2 through 8 are similar after including language. The concordance is 78%, only slightly better than for the model with language but not education.

We now examine models for the THS data, where the differences are that we only have 6 educational groups, but we have 5 point ordinal scales for language competence. We only have about 8,000 observations in the dataset analysed.

We again start from a baseline model with 19 parameters that fits all the 3 way combinations of five 10 year age groups (20-29,30-39,40-49,50-59,60-69), gender and marital status. All the terms in this model are statistically significant at p<.0001. This baseline model has a concordance of 78.4%, which we can use for reference in our more complex models below (the higher concordance may reflect greater homogeneity, such as limited coverage of non-Chinese in the THS data, compared to the By-census).

The next model we examine adds education level (on a 5 point ordinal scale). This addition is also statistically significant at p<.0001. It shows an increasing chance of being in the labour force as education increases across levels 1-5. The concordance increases slightly to 81.4%.

We now add 5 ordinal variables indicating ability to understand Cantonese, English and Putonghua and ability to read Chinese and English and hence 20 parameters (without Education being included), all of which are statistically significant at $p<.0001$. The concordance increases slightly to 81.8%, showing that language abilities are of similar importance to education in determining labour force participation.

We now include both the education and language variables discussed above. For language, no knowledge of Cantonese is a serious disadvantage in employment. For education, we can identify that education level 1 has a large disadvantage, while levels 2 and 3 have a smaller disadvantage. The concordance is 82.3%, only slightly better than for the models with language and education separately.

We also examine models with ethnicity added (Chinese, (Other) Asian, Whites and Others). Ethnicity is much less important than education, and shows no statistical difference between Chinese and Asians, after accounting for the baseline, education and language variables.

Taking into account the analyses of both the 2016 By-census and 2018 THS datasets, we can conclude that language abilities, especially reading Chinese, are even more important than education in determining employment, although the additional detail on level of language competence in the THS suggests that lack of any knowledge of Cantonese is an important disadvantage for employment. It seems that Asians and Chinese show similar labour force participation, after accounting for education and language competence. These findings are useful for objectives 1,3,4 and 5.

Chapter 7 Language Competence and Education, Occupation, Industry and Ethnicity

We first present the 2016 By-census data for oral and written Chinese and English understanding (essentially only 2 levels of competence) by ethnicity in Table 7.1 and 7.2 as background. Table 7.1 shows that nearly all (98.6%) of those who identify as Chinese understand Cantonese and nearly all of those who identify as White (97.5%) understand English, while about half of those who identify as Chinese understand English (50.7%) and Putonghua (51.8). Amongst non-Chinese who identify as Asian, the majority understand English (81.4%) and about half understand Cantonese (49.1%). Interestingly, we can see that 2.9% of Asians cannot understand any of Cantonese, English or Putonghua. For written comprehension, Table 7.2 shows that in addition to written Chinese, about two thirds of Chinese can understand written English (66.7%), while in addition to written English, about one sixth of Whites can understand written Chinese (15.4%). Interestingly, we can see that 13.7% of Asians cannot understand written Chinese or English.

The detailed analysis for the THS data discussed in Chapter 3 is in Tables 7.3, 7.4, 7.5 and 7.6, which illustrate self-reported oral/written CEP language competence by education, occupation, industry and ethnicity.

For written Chinese, we can see that low levels of competence (Not so good or No knowledge) are relatively rare, but most common in the extremes of education (7.8% for P6 or below, 8.3% for Bachelor degrees and 11.4% for Masters or above). For occupation, low levels of competence are most common for Manager Admin (8.8%), Professional (7.9%), Craft (7.0%) and Elementary (8.7%). For industry, only Finance & Insurance has low competence (9.7%).

For Cantonese, low competence is rare except in the highest educational levels (8.9% for Bachelor degree, 13.4% for Masters or above). For occupation, low competence is less rare for Manager Admin (9.5%) and Professional (8.5%). For industry, only Finance & Insurance has low competence (11.7%).

For Putonghua, there is a general trend of decreasing proportion of low competence with increasing level of education (46.9% for P6 or below, down to 25.1% for Masters or above). For occupation, highest competence (good or very good) is for Manager Admin (42.1%) and Professional (42.6%). For industry, Finance & Insurance has the highest competence (42.3%).

For written English, we can see a strong connection of low competence with low levels of education (52.6% for P6 or below, 64.1% for S1-S3, 30.0% for S4-S7). For occupation, low competence is for Craft (54.6%), Plant Machine (55.0%) and Elementary (69.5%), while high competence is for Professional (71.3%) and Manager Admin (61.7%). For industry, Construction (46.1%) and Hotel Food (48.6%) have the most with low competence, while Finance & Insurance (61.3%) and Information & Communication (54.1%) have the most with high competence.

For spoken English, we can see a similar connection of low competence with low levels of education (55.1% for P6 or below, 66.2% for S1-S3, 30.1% for S4-S7). For occupation, low competence is for Services Sales (73.0%), Craft (67.8%), Plant Machine (76.1%) and

Elementary (66.1%), while high competence is for Professional (71.7%) and Manager Admin (62.3%). For industry, Construction (47.7%) and Hotel Food (49.4%) have the most with low competence, while Finance & Insurance (61.9%) and Information & Communication (53.7%) have the most with high competence.

Table 7.1 Self-reported Oral CEP Language Understanding percentages in 2016 By-census by Ethnicity

Oral languages by Ethnicity	Chinese	Asian	White	Other	Total
None of these	0.4	2.9	1.1	0.9	0.6
Put only	0.5	0.7	0.0	0.6	0.5
Eng only	0.1	45.1	73.7	17.2	3.7
Put & Eng	0.4	2.3	11.3	4.9	0.7
Can only	35.4	14.1	1.2	20.1	33.6
Can & Put	13.0	1.0	0.3	4.9	12.1
Can & Eng	12.3	30.7	8.8	22.4	13.6
Can & Eng & Put	37.8	3.4	3.7	29.1	35.3
Put	51.8	7.4	15.3	39.5	48.6
Eng only	50.7	81.4	97.5	73.6	53.2
Can	98.6	49.1	14.0	76.5	94.6

Table 7.2 Self-reported written CE Language Understanding by Ethnicity in 2016 By-census

Written languages by Ethnicity	Chinese	Asian	White	Other	Total
Chinese & English	66.2%	8.7%	14.5%	57.9%	62.1%
Chinese only	29.5%	1.4%	0.9%	11.6%	27.3%
English only	0.5%	76.3%	84.1%	25.5%	6.2%
Neither	3.8%	13.7%	0.5%	4.9%	4.4%

Table 7.3 Self-reported CEP Language Competence by Level of Education

Language competence						
Written Chinese	**P6-**	**S1-S3**	**S4-S7**	**Diploma**	**Bachelor**	**Masters+**
Very good	29.4	33.7	40.3	45.8	47.5	46.8
Good	35.5	37.8	41.5	41.0	35.9	34.3
Average	27.3	23.6	14.3	10.0	8.3	7.6
Not so good	5.9	3.5	2.0	1.3	2.2	3.3
No knowledge	1.9	1.4	1.9	1.9	6.1	8.1
Written English	**P6-**	**S1-S3**	**S4-S7**	**Diploma**	**Bachelor**	**Masters+**
Very good	2.3	1.4	2.5	4.2	12.9	26.2
Good	12.9	9.2	16.3	33.0	52.8	55.2
Average	32.2	25.3	51.3	50.3	29.6	15.7
Not so good	27.7	44.2	24.8	11.2	4.4	2.9
No knowledge	24.9	19.9	5.2	1.3	0.4	0.0
Cantonese	**P6-**	**S1-S3**	**S4-S7**	**Diploma**	**Bachelor**	**Masters+**
Very good	55.6	58.5	62.5	67.1	64.3	60.7
Good	29.4	28.8	27.6	22.0	21.3	19.9
Average	12.1	9.7	7.3	7.6	5.6	6.1
Not so good	1.6	2.3	1.4	2.0	3.2	5.0
No knowledge	1.3	0.6	1.3	1.3	5.7	8.4
Spoken English	**P6-**	**S1-S3**	**S4-S7**	**Diploma**	**Bachelor**	**Masters+**
Very good	2.3	1.7	2.3	4.1	12.9	27.7
Good	13.1	8.9	17.9	31.5	52.1	52.8
Average	29.5	23.2	49.7	51.0	29.6	15.5

Not so good	27.6	44.1	24.1	11.8	4.9	4.0
No knowledge	27.5	22.1	6.0	1.6	0.5	0.0
Putonghua	**P6-**	**S1-S3**	**S4-S7**	**Diploma**	**Bachelor**	**Masters+**
Very good	3.5	5.1	3.7	5.5	7.8	16.2
Good	17.2	17.1	21.2	25.1	34.0	33.1
Average	32.5	33.6	45.3	47.6	35.9	25.7
Not so good	28.0	31.5	21.7	16.3	13.1	15.4
No knowledge	18.9	12.7	8.1	5.5	9.2	9.7

Table 7.4 Competence by Occupation

Language competence								
Written Chinese	**Man Admin**	**Prof**	**Asso Prof**	**Clerk**	**Serv Sales**	**Craft**	**Plant Machine**	**Element**
Very good	45.4	48.5	44.0	45.5	39.9	46.0	33.2	29.5
Good	37.5	38.0	41.6	38.8	40.1	28.0	41.6	38.4
Average	8.3	5.5	10.1	12.6	16.3	19.0	18.1	23.4
Not so good	0.6	2.8	0.7	1.9	2.0	4.4	5.1	6.4
No knowledge	8.2	5.1	3.5	1.2	1.8	2.6	2.0	2.3
Written English	**Man Admin**	**Prof**	**Asso Prof**	**Clerk**	**Serv Sales**	**Craft**	**Plant Machine**	**Element**
Very good	13.9	19.3	8.6	3.7	2.5	1.1	1.2	0.9
Good	47.8	52.0	40.1	27.0	15.5	9.2	7.8	5.2
Average	30.2	26.7	41.6	53.7	45.8	35.1	36.1	24.3
Not so good	6.5	1.6	8.8	14.5	28.3	37.5	43.8	45.7
No knowledge	1.6	0.5	1.0	1.1	7.9	17.1	11.2	23.8
Cantonese	**Man Admin**	**Prof**	**Asso Prof**	**Clerk**	**Serv Sales**	**Craft**	**Plant Machine**	**Element**
Very good	64.0	67.9	63.2	65.7	62.4	67.1	58.4	54.0
Good	22.8	20.1	26.5	24.1	26.4	20.0	29.0	29.7
Average	3.8	3.6	5.7	7.6	8.7	9.0	9.2	12.9
Not so good	1.7	3.7	0.9	2.0	1.2	2.9	2.8	2.7
No knowledge	7.8	4.8	3.7	0.6	1.3	0.9	0.7	0.7
Spoken English	**Man Admin**	**Prof**	**Asso Prof**	**Clerk**	**Serv Sales**	**Craft**	**Plant Machine**	**Element**
Very good	14.9	19.3	8.2	3.1	2.8	1.6	0.5	0.5
Good	47.4	52.4	40.1	28.5	15.3	9.0	9.5	6.0
Average	29.6	26.3	41.1	52.4	44.0	33.1	37.1	23.6
Not so good	7.2	1.5	9.3	14.7	29.0	34.7	39.0	42.5
No knowledge	0.9	0.5	1.5	1.2	8.9	21.6	13.9	27.5
Putonghua	**Man Admin**	**Prof**	**Asso Prof**	**Clerk**	**Serv Sales**	**Craft**	**Plant Machine**	**Element**
Very good	7.6	9.9	6.2	4.0	4.3	4.8	1.7	2.7
Good	34.5	32.7	27.4	22.6	18.1	16.1	12.9	14.5
Average	36.0	33.0	45.1	48.5	45.6	36.6	38.2	35.9
Not so good	11.2	16.9	15.8	19.0	24.1	26.2	36.7	31.0
No knowledge	10.7	7.5	5.6	6.0	8.0	16.3	10.5	16.0

Table 7.5 Competence by Industry

Language competence	**Industry**											
Written Chinese	**Manu**	**Utility**	**Constr**	**Imp Exp Whole**	**Retail**	**Hotel Food**	**Transp Logist**	**Info Comm**	**Finan Insur**	**Real Est**	**Prof Serv**	**Pub Adm Pers Serv**
Very good	37.7	36.8	44.1	47.7	41.8	34.5	37.2	50.1	45.2	49.3	39.8	40.5
Good	34.0	42.7	33.8	35.0	39.4	40.1	40.4	36.0	37.3	44.9	37.7	43.0
Average	22.3	20.5	16.2	12.2	15.4	18.8	15.6	7.8	7.9	2.3	17.3	11.9
Not so good	5.7	0.0	3.4	1.67	1.5	3.6	4.5	1.1	1.7	3.6	3.3	1.7
No knowledge	0.3	0.0	2.5	3.5	1.9	3.0	2.3	5.0	8.0	0.0	1.9	2.9
Written English	**Manu**	**Utility**	**Constr**	**Imp Exp Whole**	**Retail**	**Hotel Food**	**Transp Logist**	**Info Comm**	**Finan Insur**	**Real Est**	**Prof Serv**	**Pub Adm Pers Serv**
Very good	3.8	0.0	1.9	5.6	3.1	1.3	3.9	9.0	16.4	8.1	8.0	7.5
Good	16.9	38.7	17.3	26.3	14.9	13.3	16.3	45.1	44.9	27.1	26.8	35.5
Average	43.1	36.9	34.8	49.0	50.5	36.8	38.5	38.2	32.0	43.7	32.2	39.0
Not so good	25.5	14.5	31.9	16.7	24.5	35.8	34.8	7.5	5.6	13.5	21.5	13.8
No knowledge	10.7	10.0	14.2	2.3	7.0	12.8	6.6	0.1	1.2	7.6	11.6	4.3
Cantonese	**Manu**	**Utility**	**Constr**	**Imp Exp Whole**	**Retail**	**Hotel Food**	**Transp Logist**	**Info Comm**	**Finan Insur**	**Real Est**	**Prof Serv**	**Pub Adm Pers Serv**
Very good	65.0	63.3	63.8	66.9	63.7	60.5	59.4	66.1	61.6	54.3	63.2	62.7
Good	23.9	32.5	23.2	21.8	24.9	26.2	27.4	24.4	20.5	42.1	24.5	27.7
Average	7.6	3.2	10.0	6.9	8.6	9.5	9.7	3.4	6.3	1.7	8.9	5.5

Not so good	3.3	1.0	2.1	2.3	1.3	2.0	1.6	0.9	3.7	1.9	2.0	1.6
No knowledge	0.3	0.0	0.9	2.2	1.5	1.8	2.0	5.2	8.0	0.0	1.3	2.5
Spoken English	**Manu**	**Utility**	**Constr**	**Imp Exp Whole**	**Retail**	**Hotel Food**	**Transp Logist**	**Info Comm**	**Finan Insur**	**Real Est**	**Prof Serv**	**Pub Adm Pers Serv**
Very good	4.1	0.0	2.0	5.5	3.3	1.4	3.0	10.9	16.7	5.8	7.3	7.5
Good	17.6	31.1	18.1	28.2	14.8	12.8	16.9	42.8	45.2	26.5	28.8	35.3
Average	43.4	38.1	32.2	47.8	48.9	36.5	39.8	38.9	30.7	44.7	29.9	38.2
Not so good	21.0	15.9	29.5	16.4	26.9	35.5	31.6	7.4	6.2	16.5	20.6	13.9
No knowledge	13.9	14.9	18.2	2.1	6.2	13.9	8.7	0.1	1.2	6.6	13.5	5.2
Putonghua	**Manu**	**Utility**	**Constr**	**Imp Exp Whole**	**Retail**	**Hotel Food**	**Transp Logist**	**Info Comm**	**Finan Insur**	**Real Est**	**Prof Serv**	**Pub Adm Pers Serv**
Very good	2.5	0.0	4.5	5.0	4.6	3.9	2.9	6.2	10.7	4.8	4.8	5.4
Good	26.1	21.2	19.3	24.7	18.5	15.2	18.4	31.0	31.6	28.1	24.0	23.3
Average	40.4	43.2	39.6	45.0	45.9	41.2	40.4	42.7	34.4	44.2	37.8	44.6
Not so good	23.5	25.3	24.9	15.7	20.0	31.1	29.8	11.8	12.9	17.5	23.9	19.3
No knowledge	7.5	10.4	11.7	9.6	11.1	8.5	8.6	8.4	10.4	5.4	9.4	7.4

Table 7.6 Competence by Ethnicity

Language competence

Written Chinese	Chinese	Asian	White	Other
Very good	41	0	2	0
Good	40	4	2	0
Average	16	12	3	7
Not so good	2	19	10	29
No knowledge	0	65	83	64
Total	100	100	100	100

Written English	Chinese	Asian	White	Other
Very good	4	31	71	19
Good	23	37	27	46
Average	40	21	0	21
Not so good	24	7	2	0
No knowledge	10	4	0	14
Total	100	100	100	100

Cantonese	Chinese	Asian	White	Other
Very good	64	5	2	0
Good	27	9	1	6
Average	8	11	3	19
Not so good	1	31	17	19
No knowledge	0	43	78	56
Total	100	100	100	100

Spoken English	Chinese	Asian	White	Other
Very good	4	32	78	19
Good	23	40	20	55
Average	39	17	0	12
Not so good	23	7	2	7
No knowledge	11	4	0	6
Total	100	100	100	100

Putonghua	Chinese	Asian	White	Other
Very good	5	2	3	0
Good	24	3	2	6
Average	41	5	1	0
Not so good	22	23	11	19
No knowledge	8	67	84	75
Total	100	100	100	100

In summary, competence in written Chinese is high, with the few exceptions being among the extremes in education (P6 and below, degree and above) and occupations (Craft, Elementary, Manager Admin, Professional) and the Finance Insurance industry. For Cantonese, low competence is rare, with the few exceptions in high levels of education (degree and above) and occupation (Manager Admin, Professional) and the Finance Insurance industry. For Putonghua, highest competence is for Manager Admin, Professional and Finance & Insurance. For written and spoken English, low competence can be found in low education (S7 and below), low occupations (Craft, Plant Machine and Elementary) and high competence in Finance & Insurance and Information & Communication, while Service & Sales shows low competence in spoken, but more competence in written English. While Asians and Whites mainly show competence only in spoken and written English, a substantial proportion of Chinese show competence in spoken and written English and Putonghua, in addition to Cantonese and written Chinese. These findings are useful for all the objectives.

Chapter 8 Language and Personal Income

This analysis is done for both the 2016 By-census data and the 2018 THS data discussed in Chapter 3. This analysis uses ordinal logistic regression to examine how personal income for workers depends on language and education, after controlling for age by gender by marital status.

For the 2016 By-census data, we have grouped personal income for workers into 8 groups using the breaks of $4k, $8k, $10k, $15k, $20k, $30k and $40k. As in Chapter 4, our baseline model includes all the combinations of age group, gender and marital status, all of which are statistically significant at p<.0001. This baseline model has a concordance of 56.7%, which is very good for 8 groups and which we can use for reference in our more complex models below.

The next model we examine adds education level (on a 10-point ordinal scale, using the first digit of the census coding, excluding level 99). This addition is also statistically significant at p<.0001. It shows that each increase in education level, all the way from 0 to 9, has an impact on personal income group, The concordance increases to 74%, highlighting how important an impact education has on personal income.

We now add 5 binary variables indicating ability to understand Cantonese, English and Putonghua and ability to read Chinese and English and the 3 interaction variables for understand and 1 interaction variable for reading, for a total of 10 added variables and hence 10 parameters (without Education being included), all of which are statistically significant at p<.0001 (except the interaction of reading English and Chinese where p=0.0028). The most important elements of these variables are the ability to understand and read English. The concordance increases to 67.7%, showing that education is more important than language abilities in determining personal income among workers.

We now include both the education and language variables discussed above. Reading English remains the most important element of language, followed by reading Chinese while for education, each increase in education level all the way from 0 to 9 still has an impact. The concordance is 75.1%, only slightly better than for the model with education but not language.

If we also examine models with ethnicity added (Chinese, (Other) Asian, Whites and Others), ethnicity shows much stronger effects than shown below for the THS data, likely because we only have binary scales for language competence, so we have not adequately controlled for language competence in these By-census models.

We now examine models for the 2018 THS data, where the differences are that we only have 6 educational groups, but we have 5 point ordinal scales for language competence and the personal income breaks are now $4k, $8k, $10k, $15k, $20k, $30k, $40k and $150k. We have about 5,500 observations in the dataset analysed. We again start from a baseline model with 19 parameters that fits all the 3-way combinations of five 10 year age groups (20-29,30-39,40-49,50-59,60-69), gender and marital status. All the terms in this model are statistically significant at p<.0001. This baseline model has a concordance of 60.1%, which we can use for reference in our more complex models below (the higher concordance may reflect greater

homogeneity, such as limited coverage of non-Chinese in the THS data, compared to the By-census).

The next model we examine adds education level (on a 5-point ordinal scale). This addition is also statistically significant at p<.0001. It shows an increasing personal income as education increases across levels 1-5. The concordance increases considerably to 75%.

We now add 5 ordinal variables indicating ability to understand Cantonese, English and Putonghua and ability to read Chinese and English and hence 20 parameters (without Education being included), all of which are statistically significant at p<.0001. The key disadvantages are no reading of English and weak or no knowledge of spoken English. The concordance increases considerably to 74.4%, showing that language abilities are of similar importance to education in determining personal income.

We now include both the education and language variables discussed above. For language, weak or no knowledge of spoken English is a key disadvantage. It still shows increasing personal income as education increases across levels 1-5. The concordance is 77.6%, better than for the models with language and education separately.

As in Chapter 6, we also examine models with ethnicity added (Chinese, (Other) Asian, Whites and Others). Ethnicity is much less important than education, and shows no statistical difference between Chinese and Asians, after accounting for the baseline, education and language variables.

Combining the analyses of the By-census and THS datasets, we can conclude that education is the most important determining factor for personal income amongst workers, although literacy in English and Chinese are also important, with some evidence from the THS that low levels of spoken English are also a disadvantage. It seems that working Asians and Chinese obtain similar personal income, after accounting for the baseline, education and language variables. These findings are important for all the objectives.

Chapter 9 Language Use in Social Networks

This chapter relies on the qualitative sample of data collected through surveys after initial contact via intermediaries. As data collection was done in tandem with the LWB project, there are relatively more women, older people, members of ethnic minority groups and those from low-income households compared to the general population.

We asked a number of questions about language, but here we focus on languages used and modes of communications in social networks, including family members, friends and other contacts (such as work, shops, churches etc.)

Table 9.1 shows the wide linguistic diversity in our qualitative sample, with 36 different mother languages and dialects. When we expand the scope to cover up to 4 languages that people understand, Table 9.2 shows an amazing 49 languages and dialects. Table 9.3 shows understanding of languages in addition to CEP combinations, with over 2,100 respondents understanding at least one language/dialect other than CEP.

Table 9.1 Mother tongue

Language	Count	Percent
Cantonese - 廣東話	1652	43.74%
Putonghua 普通話	331	8.76%
Nepali - नेपाली	269	7.12%
Urdu - اردو	244	6.46%
English	183	4.85%
Punjabi - ਪੰਜਾਬੀ	173	4.58%
Other Chinese dialects 其他中國方言	145	3.84%
Filipino - Tagalog	139	3.68%
Hakka 客家話	107	2.83%
Hindi - हिन्दी	103	2.73%
Indonesian - Bahasa	66	1.75%
Chiu Chau 潮州話	61	1.62%
Tamil - தமிழ்	59	1.56%
Japanese - 日本語	58	1.54%
Fukien 福建話	47	1.24%
Pashto - پښتو	36	0.95%
Thai - ไทย	30	0.79%
Gujarati - ગુજરાતી	13	0.34%
Bengali - বাংলা	11	0.29%
Sindhi	10	0.27%
Marathi - मराठी	6	0.16%
Shanghainese 上海話	5	0.13%
Malayalam - മലയാളം	5	0.13%
Kannada - ಕನ್ನಡ	4	0.11%
Vietnamese - Tiếng Việt	4	0.11%
Korean - 한국어	3	0.08%
Telugu - తెలుగు	3	0.08%
French - français	2	0.05%
Arabic - العربية	1	0.03%
Sze Yap 四邑話	1	0.03%
Malay - Bahasa Melayu	1	0.03%
Oriya - ଓଡ଼ିଆ	1	0.03%
Persian - فارسی	1	0.03%
Russian - русский	1	0.03%
Swedish - svenska	1	0.03%
Yoruba - Èdè Yorùbá	1	0.03%
Total	3777	100.00%

Table 9.2 Top 4 Languages understood

Language	Count	Percent
Cantonese - 廣東話	3034	78.52%
English	1948	50.41%
Putonghua 普通話	1625	42.05%
Hindi - हिन्दी	479	12.40%
Urdu - اردو	352	9.11%
Nepali - नेपाली	279	7.22%
Punjabi - ਪੰਜਾਬੀ	277	7.17%
Other Chinese dialects 其他中國方言	273	7.07%
Hakka 客家話	214	5.54%
Filipino - Tagalog	181	4.68%
Chiu Chau 潮州話	130	3.36%
Japanese - 日本語	96	2.48%
Fukien 福建話	82	2.12%
Indonesian - Bahasa	82	2.12%
Tamil - தமிழ்	66	1.71%
Pashto - پښتو	50	1.29%
Thai - ไทย	35	0.91%
French - français	40	1.04%
Bengali - বাংলা	21	0.54%
Gujarati - ગુજરાતી	21	0.54%
Sindhi	20	0.52%
Marathi - मराठी	17	0.44%
Korean - 한국어	16	0.41%
Shanghainese 上海話	14	0.36%
Spanish - español	19	0.49%
Malay - Bahasa Melayu	11	0.28%
German - Deutsch	11	0.28%
Arabic - العربية	9	0.23%
Kannada - ಕನ್ನಡ	9	0.23%
Sze Yap 四邑話	8	0.21%
Telugu - తెలుగు	7	0.18%
Vietnamese - Tiếng Việt	6	0.16%
Malayalam - മലയാളം	5	0.13%
Russian - русский	4	0.10%
Dutch - Nederlands	3	0.08%
Oriya - ଓଡ଼ିଆ	3	0.08%
Portuguese - português	2	0.05%
Swedish - svenska	2	0.05%
Afrikaans	1	0.03%
Catalan - català	1	0.03%
Hausa	1	0.03%
Italian - italiano	1	0.03%
Maltese - Malti	1	0.03%
Persian - فارسی	1	0.03%
Sinhala - සිංහල	1	0.03%
Sundanese	1	0.03%
Tatar	1	0.03%
Uyghur	1	0.03%
Yoruba - Èdè Yorùbá	1	0.03%

Total respondents	3864	100.00%

Table 9.3 Combinations of Languages understood (C=Cantonese, E=English, P=Putonghua, O=Other)

Languages	Count	Percent
C only	491	12.97%
E only	11	0.29%
P only	53	1.40%
CE only	153	4.04%
CP only	540	14.26%
EP only	7	0.18%
CEP only	420	11.09%
O	235	6.21%
CO	137	3.62%
EO	651	17.19%
PO	19	0.50%
CEO	494	13.04%
CPO	371	9.80%
EPO	29	0.77%
CEPO	176	4.65%
Total	3787	100.00%

For communication in social networks, we collect data on language used to communicate with the two family members they most often communicate with, as follows:

a) Generational difference with each family member
b) Primary medium (Face to Face, Phone call, text messaging, email)
c) Primary language used

Similarly, for the two friends they most often communicate with, we collected data about primary medium and language.

Lastly, for the two people other than friends or family that they most often communicate with, we collected data about context (religion, education, sports, food, work, shopping or others), primary medium and language.

Table 9.4 shows the primary language (oral or written) used for these three contexts (combining Traditional Chinese with Cantonese and Simplified Chinese with Putonghua and only showing languages with at least 1% share). This table shows the wide variety of languages used with family members, with increasing focus on Cantonese and English as the context changes to friends and to others. Table 9.5 shows the primary medium used in these three contexts. Face to face is the primary medium for family and others, while text message is the primary medium for friends.

Table 9.4 Primary language for family members, friends, others

Family			Friends			Others		
Level	Count	Share	Level	Count	Share	Level	Count	Share
Cantonese - 廣東話	3363	52.2%	Cantonese - 廣東話	3389	54.9%	Cantonese - 廣東話	2893	63.4%
English	666	10.3%	English	811	13.1%	English	977	21.4%
Nepali - नेपाली	450	7.0%	Nepali - नेपाली	438	7.1%	Nepali - नेपाली	167	3.7%
Urdu - اردو	351	5.5%	Putonghua 普通話	306	5.0%	Putonghua 普通話	140	3.1%
Punjabi - ਪੰਜਾਬੀ	286	4.4%	Urdu - اردو	271	4.4%	Urdu - اردو	81	1.8%
Putonghua 普通話	242	3.8%	Filipino - Tagalog	150	2.4%	Hindi - हिन्दी	55	1.2%
Filipino - Tagalog	168	2.6%	Hindi - हिन्दी	135	2.2%	Japanese - 日本語	52	1.1%
Hindi - हिन्दी	147	2.3%	Punjabi - ਪੰਜਾਬੀ	135	2.2%	Punjabi - ਪੰਜਾਬੀ	47	1.0%
Other Chinese dialects 其他中國方言	125	1.9%	Japanese - 日本語	105	1.7%			
Tamil - தமிழ்	100	1.6%	Indonesian - Bahasa	98	1.6%			
Japanese - 日本語	96	1.5%	Other Chinese dialects 其他中國方言	65	1.1%			
Hakka 客家話	82	1.3%	Tamil - தமிழ்	65	1.1%			
Pashto - پښتو	64	1.0%						
Indonesian - Bahasa	62	1.0%						

Table 9.5 Primary medium used for family members, friends, others

Family			Friends			Others		
Level	Count	Share	Level	Count	Share	Level	Count	Share
Face to Face	4468	69.0%	Text message	2417	38.1%	Face to Face	2467	54.1%
Phone call	1018	15.7%	Face to Face	1949	30.8%	Text message	1172	25.7%
Text message	949	14.7%	Phone call	1788	28.2%	Phone call	820	18.0%
Email	11	0.2%	Email	16	0.3%	Email	73	1.6%

Table 9.6 Likelihood Ratio tests for Logistic Regression predicting Employment Status without ethnicity

Source	DF	L-R ChiSquare	Prob>ChiSq
Age x Gender x Marital	144	230.3	<.0001*
Highest educational level attained:	18	71.4	<.0001*
[English] proficiency	12	42.9	<.0001*
[Cantonese] proficiency	12	26.0	0.0109*
[Putonghua] proficiency	12	7.3	0.8378

Table 9.7 Likelihood Ratio tests for Logistic Regression predicting Employment Status including ethnicity

Source	DF	L-R ChiSquare	Prob>ChiSq
Age x Gender x Marital	144	223.0	<.0001*
Highest educational level attained:	18	68.1	<.0001*
[English] proficiency	12	35.8	0.0004*
[Cantonese] proficiency	12	21.9	0.0384*
[Putonghua] proficiency	12	6.1	0.9101
Chinese, EM, or other	6	5.9	0.4355

From these analyses, we can conclude that there is wide linguistic diversity in our qualitative sample, with 49 different languages and dialects understood, greater than reported in the By-census for Hong Kong. There is a wide variety of languages used with family members, with increasing focus on Cantonese and English as the context changes to friends and to others. Face to face is the primary medium for communicating with family and others, while text message is the primary medium for friends.

Interestingly, as seen in Table 9.6, logistic regression of employment status on age, gender, marital status, education and CEP proficiency shows clearly that after accounting for age, gender and marital status; education is the dominant predictor, followed by Cantonese and English proficiency, all of which show strong statistical significance (although this is certainly not a representative sample). This further supports the need for better educational and language learning opportunities for the disadvantaged in Hong Kong. Table 9.7 shows the results from a similar logistic regression, but with ethnicity added, suggesting that education and language are the primary source of disadvantage across ethnic groups.

These findings are relevant for all the objectives as they illustrate not only language diversity, but also how important the two major languages are for the whole community.

Chapter 10 Language use in signs in Yau Tsim Mong (YTM) District

This phase of the research was motivated in part by the growing academic interest in the topic of 'linguistic landscapes' in the international frontline of research in linguistics. Linguistic landscape (LL) research is essentially concerned with '[t]he language of public road signs, advertising billboards, street names, place names, commercial shop signs, and public signs on government buildings' which 'combines to form the linguistic landscape of a given territory, region, or urban agglomeration' (Landry and Bourhis, 1997, p. 25). In the last twenty years or so, LL research has expanded into an important subfield of linguistics with its own methodology and academic interests (Bolton, Botha and Lee, 2020). At the same time, LL research has also been conducted in a wide range of Asian societies (Bolton, Botha and Lee, 2020). In the present project, the inclusion of LL research was motivated by its potential to shed light on patterns of language contact and multilingualism in the Hong Kong community and hence provide useful information to address objective 3.

The research methodology relied on the coding of signs captured by Google Streetview in YTM. It is important to recognize that the Streetview images were all collected before the unrest in 2019 (and indeed before COVID), so reflect a more active street environment than is current in 2021. Because Google uses cameras mounted on cars to collect the images, the images do not cover streets which are fully pedestrianized and does not cover signs inside buildings, as was originally planned. Conversely, we can be sure that the coverage is close to complete for streets that, at least one time in the week, allow vehicles. The only known other weakness is that a small number of images are blocked by double decker buses. We chose images at right angles to the direction of the street and used a vertical angle to cover both ground floor and first floor signs (which are common in Hong Kong). The spacing of images was chosen to minimize overlap and to ensure no shop fronts were missed.

Originally, we planned to cover a sample of four districts with language diversity using research assistants visiting in person, which was not feasible because of protests and then COVID. However, in personal visits by the research team, we found that three of the districts had very few images with scripts other than Traditional Chinese or English (and hence were of little relevance for the study objectives), whereas YTM has much greater variability of scripts across the 19 DCCAs in YTM, so we covered all of YTM instead. This change made it possible for us to derive much more information about the variation in language landscapes relevant to our objectives, as seen below. This resulted in 14,814 images being processed, which yielded a total of 10,756 signs being captured and coded.

For background, Table 10.1 shows the percentages in each DCCA understanding a language, for all languages with at least 4% of the population aged 5 and above understanding that language in at least one DCCA in the district in the 2016 By-census, so we can understand the possible linkages of languages used in signs to the languages understood and read by residents in each DCCA. This table shows clearly the wide linguistic diversity within this single district. Table 10.2 shows the percentages in each DCCA reading the combinations of Chinese and English, illustrating that Chinese/English biliteracy varies greatly, from 38.1% in Jordan North up to 72.1% in East TST and Kings Park, while Chinese literacy varies from 55.3% (Jordan North) to 91.7% (Mongkok North) and English literacy varies from 52.3% (Mongkok West) to 89.0% (East TST and Kings Park). See Table 10.1 overleaf.

Table 10.1 Languages Understood in YTM by DCCA

DCCA	Canton	English	Puton	Nepal	Hindi	Filip	Other C	Japan	Indon	Shang	Fukien	Sze Yap	Hakka	Chiu Chau
MinDCCA	66.5%	39.0%	27.3%	0.0%	0.0%	0.6%	1.3%	0.6%	1.2%	0.5%	0.2%	0.1%	0.7%	0.8%
MaxDCCA	94.9%	80.2%	54.1%	33.3%	13.6%	8.4%	8.3%	6.3%	5.4%	4.6%	4.4%	4.4%	4.2%	4.2%
DCCAMax	Mong Kok East	East TST & King's Park	Olympic	Jordan North	Tsim Sha Tsui Central	TST West	Mong Kok North	East TST & King's Park	TST West	Tsim Sha Tsui Central	TST West	Tai Kok Tsui South	Tai Nan	Tsim Sha Tsui Central
TST West	70.9%	76.5%	49.6%	0.0%	0.5%	8.4%	1.3%	4.7%	5.4%	1.8%	4.4%	0.1%	0.8%	2.0%
Jordan South	79.8%	63.6%	43.4%	3.8%	4.6%	7.9%	4.8%	3.0%	2.5%	1.5%	0.8%	1.7%	1.0%	3.9%
Jordan West	88.1%	50.9%	43.9%	6.9%	2.8%	1.7%	4.0%	1.3%	2.2%	1.4%	1.2%	1.0%	2.4%	3.1%
Yau Ma Tei South	82.9%	58.8%	40.2%	11.5%	7.7%	2.3%	2.1%	2.2%	2.3%	1.0%	1.5%	1.4%	1.1%	1.1%
Charming	94.7%	53.0%	44.8%	2.0%	0.3%	1.3%	2.6%	1.6%	1.8%	0.8%	2.3%	1.4%	2.4%	1.6%
Mong Kok West	93.0%	39.0%	42.9%	1.0%	0.5%	0.6%	6.7%	1.2%	2.3%	0.5%	0.2%	2.3%	0.8%	3.4%
Fu Pak	90.4%	56.3%	52.0%	0.0%	0.2%	3.7%	4.5%	2.0%	2.0%	0.8%	3.7%	3.1%	3.0%	1.9%
Olympic	75.3%	71.8%	54.1%	0.3%	0.9%	6.8%	2.0%	2.7%	3.9%	2.5%	3.9%	0.8%	0.7%	1.5%
Cherry	87.9%	49.4%	53.5%	0.0%	0.6%	3.7%	5.0%	0.7%	1.7%	1.7%	1.0%	3.1%	2.0%	2.0%
Tai Kok Tsui South	92.3%	41.2%	45.0%	0.5%	0.5%	1.4%	3.5%	1.2%	1.9%	0.8%	3.4%	4.4%	1.4%	1.2%
Tai Kok Tsui North	90.9%	55.4%	46.2%	0.1%	0.7%	4.0%	1.4%	1.7%	2.4%	0.7%	0.6%	1.8%	1.0%	1.0%
Tai Nan	89.7%	48.4%	51.0%	0.8%	0.2%	1.1%	4.6%	1.6%	1.6%	1.3%	2.1%	1.8%	4.2%	1.8%
Mong Kok North	94.3%	41.8%	48.3%	0.1%	0.0%	1.0%	8.3%	1.6%	1.2%	0.5%	1.6%	1.0%	3.7%	2.9%
Mong Kok East	94.9%	49.3%	51.4%	0.0%	0.0%	1.1%	5.1%	2.2%	1.8%	1.3%	2.0%	2.7%	3.8%	0.9%
Mong Kok South	92.6%	48.8%	52.0%	0.0%	0.0%	1.2%	6.3%	2.0%	3.6%	0.7%	3.1%	3.1%	1.3%	0.8%
Yau Ma Tei North	87.2%	53.0%	45.5%	6.6%	3.8%	2.6%	2.9%	2.3%	1.6%	0.9%	1.8%	1.4%	1.7%	2.5%
East TST & King's Park	73.1%	80.2%	53.7%	0.2%	2.4%	8.3%	4.8%	6.3%	3.5%	1.9%	3.1%	0.1%	1.8%	1.7%
Tsim Sha Tsui Central	72.4%	63.8%	43.7%	0.9%	13.6%	5.2%	1.6%	2.8%	2.7%	4.6%	3.0%	0.2%	1.4%	4.2%
Jordan North	66.5%	65.7%	27.3%	33.3%	10.7%	3.0%	1.7%	0.6%	3.0%	1.3%	1.1%	1.1%	2.0%	1.1%

Table 10.2 Read Chinese and English in YTM by DCCA

	Chi & Eng	Chi Only	Eng Only	Neither Chi Eng	Chinese	English
Min	38.1%	5.4%	2.5%	1.7%	55.3%	52.3%
DCCA Min	Jordan North	East TST & King's Park	Mong Kok East	Tai Nan	Jordan North	Mong Kok West
Max	72.1%	39.0%	36.2%	7.6%	91.7%	89.0%
DCCA Max	East TST & King's Park	Mong Kok West	Jordan North	Tai Kok Tsui South	Mong Kok North	East TST & King's Park
TST West	63.5%	9.0%	20.3%	2.2%	72.5%	83.8%
Jordan South	53.5%	19.9%	19.9%	2.2%	73.5%	73.5%
Jordan West	51.6%	30.6%	11.1%	3.9%	82.2%	62.7%
Yau Ma Tei South	52.7%	23.3%	16.8%	3.0%	76.0%	69.5%
Charming	61.2%	24.1%	4.3%	7.5%	85.3%	65.5%
Mong Kok West	48.4%	39.0%	3.9%	4.5%	87.4%	52.3%
Fu Pak	62.4%	24.8%	5.6%	4.0%	87.2%	67.9%
Olympic	68.8%	8.5%	13.6%	2.0%	77.3%	82.4%
Cherry	58.8%	29.2%	5.6%	2.7%	87.9%	64.4%
Tai Kok Tsui South	52.1%	33.8%	3.7%	7.6%	85.9%	55.8%
Tai Kok Tsui North	63.6%	20.4%	6.6%	5.0%	84.0%	70.2%
Tai Nan	57.3%	31.2%	4.4%	1.7%	88.5%	61.7%
Mong Kok North	57.7%	34.0%	2.9%	3.0%	91.7%	60.6%
Mong Kok East	62.9%	28.4%	2.5%	3.1%	91.3%	65.4%
Mong Kok South	61.3%	29.8%	5.5%	2.2%	91.1%	66.8%
Yau Ma Tei North	54.1%	27.5%	10.8%	3.5%	81.6%	65.0%
East TST & King's Park	72.1%	5.4%	16.9%	2.0%	77.5%	89.0%
Tsim Sha Tsui Central	50.4%	17.8%	26.0%	2.1%	68.2%	76.4%
Jordan North	38.1%	17.2%	36.2%	5.6%	55.3%	74.2%

Images were coded as regards:

Nature of the sign (street sign, building name, building address, shop name, product/service info, other); Level (G/F or 1/F); Printed or handwritten; Primary script codes (English and Traditional Chinese combinations); Languages included in the English script; Other scripts (Simplified Chinese, Korean, Japanese, Thai, Urdu, Indian, Nepali, Other); Relative position of English and Chinese; Is there similar meaning in the English and Cantonese? Is there a similar sound in the English and Cantonese? Which (of 19 different) DCCA in YTM is the image located in?

We present here tables for the codings, cross-classified by DCCA in YTM, so we can understand the differences across DCCAs.

Table 10.3 shows that the nature of the signs varies considerably across DCCA, with 19.4% of signs being street signs, 4.2% being graffiti and 26.4% being product information in Olympic, compared to only 4.3% being street signs, no graffiti and 10.5% being product information in Jordan North. In most DCCAs, between 80% and 90% of signs were on G/F, with the extremes being 75.9% for Fu Pak and 90.9% for Jordan North.

Table 10.3 Percentages of types and levels for signs in each DCCA

DCCA	Street sign	Build name	Build address	Shop name	Product	Graffiti	G/F
Charming	5.5	11.0	0.6	67.7	15.9	0.0	87.2
Cherry	8.9	11.5	0.7	67.8	10.0	0.0	89.6
East Tsim Sha Tsui & King's Park	17.5	20.0	0.7	39.5	19.3	0.9	84.1
Fu Pak	14.9	23.0	0.0	31.0	23.0	1.2	75.9
Jordan North	4.3	6.4	1.6	80.3	10.5	0.0	90.9
Jordan South	5.7	9.1	1.6	72.9	12.5	0.2	83.8
Jordan West	6.6	7.8	1.2	73.8	10.8	0.2	90.2
Mong Kok East	6.7	6.8	0.5	66.8	17.1	1.8	84.4
Mong Kok North	5.3	6.8	1.8	66.5	20.3	0.5	78.5
Mong Kok South	4.3	7.0	0.6	73.5	14.7	0.6	77.4
Mong Kok West	3.5	4.8	1.0	71.5	18.2	0.8	82.6
Olympic	19.4	13.9	1.4	12.5	26.4	4.2	84.7
Tai Kok Tsui North	6.8	8.2	0.7	70.6	15.1	0.0	91.8
Tai Kok Tsui South	5.3	8.7	0.2	74.7	13.7	0.0	85.6
Tai Nan	7.2	5.6	0.3	71.7	14.4	0.9	87.3
Tsim Sha Tsui Central	5.5	8.5	1.2	74.2	11.0	0.2	91.6
Tsim Sha Tsui West	10.7	12.7	0.0	49.0	21.7	0.0	82.6
Yau Ma Tei North	4.8	7.2	0.7	74.3	13.6	0.2	81.3
Yau Ma Tei South	7.9	7.4	1.0	61.9	20.7	0.0	88.6

Table 10.4 shows less than 2% of handwritten signs, except for 4.6% in Fu Pak and 6.9% in Olympic. The use of English and Traditional Chinese (TC) on signs varies greatly, from 47% English, 42.7% bilingual and 5.9% TC in TST West to 9.8% English, 24% bilingual and 66% TC in Tai Kok Tsui South, reflecting both the different language abilities of residents and the likelihood of targeting shoppers from outside the district.

Table 10.4 Percentages of scripts for signs in each DCCA

DCCA	Handwritten	English	Traditional Chinese	Both	Neither
Charming	0.0	7.9	56.1	34.8	1.2
Cherry	0.4	15.9	52.6	31.5	0.0
East Tsim Sha Tsui & King's Park	1.2	30.6	20.5	48.3	0.7
Fu Pak	4.6	29.9	17.2	49.4	3.5
Jordan North	0.5	15.4	44.2	40.1	0.4
Jordan South	0.2	32.9	27.8	38.3	1.0
Jordan West	0.2	10.0	50.1	39.6	0.2
Mong Kok East	2.0	20.1	44.9	34.9	0.1
Mong Kok North	0.9	10.0	59.4	30.4	0.2
Mong Kok South	1.1	26.1	36.9	36.2	0.8
Mong Kok West	1.1	12.1	52.4	35.2	0.3
Olympic	6.9	11.1	9.7	61.1	18.1
Tai Kok Tsui North	0.4	6.8	63.1	30.1	0.0
Tai Kok Tsui South	0.2	9.8	66.0	24.0	0.2
Tai Nan	1.1	9.8	59.6	30.5	0.1
Tsim Sha Tsui Central	0.4	37.7	24.1	36.8	1.5
Tsim Sha Tsui West	1.2	47.0	5.9	42.7	4.4
Yau Ma Tei North	0.5	16.9	50.1	33.0	0.0
Yau Ma Tei South	1.0	9.8	52.9	37.3	0.0

Table 10.5 shows that Olympic (which has the most speakers of Putonghua) is by far the most likely to have signs with Simplified Chinese script (1.39%), TST Central (which has the most readers of Korean) to have Korean (2.38%) and Japanese (1.29%), while Thai, Urdu, and Devanagari (used by both written Nepalese and Hindi) scripts are quite rare (under 0.6% in all DCCA).

Table 10.5 Percentages using other scripts for signs in each DCCA

DCCA	Simplified Chinese	Korean	Japanese	Thai	Urdu	Devanagari
Charming	0.00	0.00	0.61	0.00	0.00	0.00
Cherry	0.00	0.00	0.37	0.00	0.00	0.00
East Tsim Sha Tsui & King's Park	0.00	0.23	0.00	0.00	0.00	0.00
Fu Pak	0.00	0.00	0.00	0.00	0.00	0.00
Jordan North	0.17	0.00	0.52	0.35	0.00	0.52
Jordan South	0.42	0.32	0.85	0.00	0.11	0.00
Jordan West	0.49	0.24	0.49	0.24	0.24	0.00
Mong Kok East	0.00	0.00	0.27	0.27	0.00	0.00
Mong Kok North	0.00	0.00	0.00	0.00	0.00	0.00
Mong Kok South	0.18	0.09	0.55	0.09	0.00	0.00
Mong Kok West	0.38	0.00	0.38	0.00	0.00	0.00
Olympic	1.39	0.00	0.00	0.00	0.00	0.00
Tai Kok Tsui North	0.00	0.00	0.00	0.00	0.00	0.00
Tai Kok Tsui South	0.00	0.00	0.23	0.00	0.00	0.00
Tai Nan	0.10	0.00	0.63	0.10	0.00	0.00
Tsim Sha Tsui Central	0.10	2.38	1.29	0.10	0.00	0.00
Tsim Sha Tsui West	0.00	0.00	0.00	0.00	0.00	0.00
Yau Ma Tei North	0.00	0.00	0.35	0.18	0.00	0.35
Yau Ma Tei South	0.47	0.32	0.47	0.47	0.32	0.32

Table 10.6 shows that vertical positioning of Chinese and English is most common, with Chinese above being more common in most DCCAs, with Fu Pak, Olympic and TST West the exceptions. Around 60% to 80% of signs have similar meaning for Chinese and English, with the extreme being Cherry, where 92.9% of signs have similar meaning. We also examined the percentage of signs having similar sounds of the English and Chinese, which showed no meaningful difference across DCCAs (the range was 32% to 51% having a similar sound, out of 3,825 relevant signs in total).

Table 10.6 Percentages of Signs by the relative position of English and Chinese and whether the English and Chinese have similar meaning in each DCCA

	Position of C vs E					Similar meaning
DCCA	**C above E**	**E above C**	**C before E**	**E before C**	**Other**	**Yes**
Charming	54.4	28.1	8.8	8.8	0.0	68.4
Cherry	43.5	44.7	4.7	7.1	0.0	92.9
East Tsim Sha Tsui & King's Park	31.9	47.1	10.5	10.5	0.0	72.4
Fu Pak	37.2	51.2	4.7	7.0	0.0	83.7
Jordan North	53.9	26.3	12.9	6.5	0.4	63.8
Jordan South	52.4	25.5	13.9	8.3	0.0	61.2
Jordan West	52.5	29.6	11.7	6.2	0.0	70.4
Mong Kok East	45.5	30.4	13.2	10.9	0.0	72.4
Mong Kok North	49.2	31.2	12.0	7.3	0.3	77.0
Mong Kok South	43.9	21.0	19.7	13.4	2.0	59.6
Mong Kok West	57.4	19.0	14.3	9.0	0.4	75.3
Olympic	18.2	63.6	13.6	4.6	0.0	81.8
Tai Kok Tsui North	40.5	36.9	11.9	9.5	1.2	75.0
Tai Kok Tsui South	44.8	36.2	13.3	5.7	0.0	81.9
Tai Nan	51.9	32.3	8.6	7.2	0.0	80.8
Tsim Sha Tsui Central	42.9	33.4	14.8	8.6	0.3	59.0
Tsim Sha Tsui West	20.4	50.9	20.4	6.5	1.9	72.2
Yau Ma Tei North	54.6	27.8	12.3	5.4	0.0	69.0
Yau Ma Tei South	52.5	36.0	5.5	5.5	0.4	79.2

From these analyses, we can conclude that there wide linguistic diversity within this single district. Biliteracy varies greatly, from 38.1% in Jordan North up to 72.1% in East TST and Kings Park, while Chinese literacy varies from 55.3% (Jordan North) to 91.7% (Mongkok North) and English literacy varies from 52.3% (Mongkok West) to 89.0% (East TST and Kings Park). The nature of the signs varies considerably across DCCA, with 19.4% of signs being street signs, 4.2% being graffiti and 26.4% being product information in Olympic, compared to only 4.3% being street signs, no graffiti and 10.5% being product information in Jordan North. In most DCCAs, between 80% and 90% of signs were on G/F, with the extremes being 75.9% for Fu Pak and 90.9% for Jordan North. Less than 2% of signs were handwritten, except for 4.6% in Fu Pak and 6.9% in Olympic. The use of English and Traditional Chinese (TC) on signs varies greatly, from 47% English, 42.7% bilingual and 5.9% TC in TST West to 9.8% English, 24% bilingual and 66% TC in Tai Kok Tsui South, reflecting both the different language abilities of residents and the likelihood of targeting shoppers from outside the district. Olympic is by far the most likely to have signs with Simplified Chinese script (1.39%), TST Central to have Korean (2.38%) and Japanese (1.29%), while Thai, Urdu, Indian and Nepali scripts are quite rare (under 0.6% in all DCCA). Vertical positioning of Chinese and English in signs is most common, with Chinese above being more common in most DCCAs, with Fu Pak, Olympic and TST West the exceptions. Around 60% to 80% of signs have similar meaning for Chinese and English, with the extreme being Cherry, where 92.9% of signs have similar meaning. We also examined the percentage of signs having similar sounds of the English and Chinese, which showed no meaningful difference across DCCAs (the range was 32% to 51% having a similar sound, out of 3,825 relevant signs in total).

As indicated at the beginning of this chapter, the decision to investigate the linguistic landscape with particular reference to public signage was motivated partly by the keen interest in this topic on the international frontline of linguistic research, but also by our interest in further exploring the linguistic landscape of Hong Kong, and its relevance to issues of language contact, multiculturalism and multilingualism. To our knowledge, our quantitative research on the public signage of the YTM district discussed above is without doubt the most detailed investigation of this topic carried out in Hong Kong. In addition, with reference to the linguistic landscape, the study of signage also provides an important and useful complement to the language maps of the territory discussed in Chapter 4 of this report.

As indicated above, the results of our research indicate very clearly that, even in the linguistically diverse location of YTM, written Chinese using 'traditional' Chinese characters and written English dominate public signage throughout the district, with relatively few streel level signs using other scripts, with Korean (2.4% in TST Central), Simplified Chinese (1.4% in Olympic) and Japanese (1.3% in TST Central) being the only other scripts that appeared in at least 0.6% of signs in any DCCA. Thus language diversity in street signs is much less than the language diversity amongst the residents in YTM. This suggests that further investigation is needed to understand the reasons, such as the need to appeal to tourists and residents from outside the local DCCA, or language diversity only appearing in less public domains (such as signs inside buildings, where private restaurants can be found). This is clearly relevant for objectives 3 and 4. Here, of course, it is worth noting that although the form of most Chinese signage utilises 'full' or 'traditional' Chinese characters, one might imagine that in future years, given the increased convergence of Hong Kong with other cities in the Greater Bay area, the norms of written Chinese in Hong Kong may gradually merge with those of the nation as a whole. In this context, our research may contribute both to the historical record and serve as a benchmark for future studies of this kind. It is also worth pointing out that our research here has been largely confined to the quantitative analysis of signage, and much more might be said from a qualitative perspective in investigating naming practices in both English and Chinese in the Hong Kong context. Such a study would analyse the choice of particular terminology used in naming practices, localised linguistic hierarchies as well as the detailed semiotics of bilingual notices and signage (Scollon & Scollon, 2003). Such a study is outside the remit of the current project, but might well be a useful direction for future research in this area.

Chapter 11 Policy Implications and Recommendations

Context:

- In previous public policy debates there has been a predominant focus on CEP, with little discussion of the benefits of other languages and dialects.
- Public policy debates on ethnicity have largely focused on the deprivation of ethnic minorities rather than aiming for a nuanced understanding of the contributions of different ethnic groups, and the potential positive impacts of multilingual language proficiency in the local context.
- There has been little empirical investigation of employment among those speaking languages other than Cantonese, English, and Putonghua.
- There has been little empirical investigation of the role of local environment among those speaking languages other Cantonese, English, and Putonghua, despite clear spatial patterns of language use – as shown in our earlier work (Bacon-Shone, Bolton, & Luke, 2015).
- There has also been little empirical investigation of the role of written (as well as spoken) languages in education, employment, and local community.

Implications of this study:

11.1 Language diversity over geography and time

In summary, we can see continuing diversity of language across Hong Kong, for both oral and written languages, in particular, in Yau Tsim Mong and Wanchai districts.

As regards diversity across districts, Wong Tai Sin has the highest percentage of those who understand Cantonese (99.0%), Wanchai district has the highest percentage of those who understand English (73.2%) and Tsuen Wan district has the highest percentage of those who understand Putonghua (51.7%), while the highest rate for reading both Chinese and English was 65.9% in Eastern district, for Chinese and not English, 33.9% in Kwun Tong, for English and not Chinese, 18.7% in Wanchai, for neither English nor Chinese, 5.8% in Southern. The highest percentages for understanding other languages are 9.8% for Hakka (in North), 8.7% for Filipino (in Wanchai), 8.3% for Fukien (in Eastern), 5.7% for Chiu Chau (in Wong Tai Sin), 4.1% for Sze Yap (in Sham Shui Po), 4.0% for Indonesian (in Wanchai), 3.8% for Nepali (in Yau Tsim Mong), 3.2% for French (in Central & Western), 2.7% for Japanese (in Wanchai), 2.7% for Hindi (in Yau Tsim Mong), 2.1% for Shanghainese (in Wanchai), 1.1% for Spanish (Central & Western), 1.0% for German (in Central & Western); while for reading, the highest percentages are 7.8% for Filipino (Wanchai), 3.8% for Indonesian (Wanchai), 3.3% for Nepali (in Yau Tsim Mong), 2.9% for French (Central & Western), 2.6% for Japanese (Wanchai), 1.5% for Hindi (Yau Tsim Mong).

As regards diversity across DCCAs, San King in Tuen Mun district has the highest percentage of those who understand Cantonese (99.9%), the Peak in Central & Western district has the highest percentage of those who understand English (92.3%) and Yeung Uk Road in Tsuen Wan has the highest percentage of those who understand Putonghua (65.0%). The highest percentage of the population aged 5+ who read both Chinese and English across DCCAs was

76.8% in Ma On Shan Town Centre of Shatin; while for Chinese and not English, the highest was 45.4% in Sha Kok of Shatin; for English and not Chinese, the highest was 45.7% in Bays Area of Southern; and for neither English nor Chinese, the highest was 22.1% in Ap Lei Chau Estate of Southern (which is an estate where many illiterate fishermen were resettled); while for understanding other languages the highest rates are 34.3% for Nepali (Jordan North in Yau Tsim Mong), 25.1% for Hakka (Sha Ta in North), 24.5% for Filipino (Bays Area in Southern) 23.7% for Fukien (Mount Parker in Eastern), 14.2% for Hindi (Tsim Sha Tsui in Yau Tsim Mong), 12.8% for Sze Yap (Sau Mau Ping South in Kwun Tong), 11.6% for Chiu Chau(Lung Shing in Kowloon City), 11.2% for French (Bays Area in Southern), 8.2% for Indonesian (Fairview Park in Yuen Long), 6.6% for Japanese (East TST in Yau Tsim Mong), 5.0% for Shanghainese (Causeway Bay in Wanchai), 4.2% for Urdu (Sung Wong Toi in Kowloon City), 3.9% for German (Discovery Bay in Islands), 2.9% for Spanish (Peak in Central & Western), 2.5% for Vietnamese (Nam Cheong Central in Sham Shui Po), 2.4% for Dutch (Ping Shan North in Yuen Long), 2.3% Thai (Fort St in Eastern), 2.2% for Bengali (Yau Ma Tei North in Yau Tsim Mong) and and 1.8% for Punjabi (Lai Chi Kok South in Sham Shui Po); while the highest percentages for reading are 31.7% for Nepali (Jordan North of Yau Tsim Mong), 21.9% for Filipino (Bays Area of Southern), 11.1% for Hindi (Tsim Sha Tsui Central of Yau Tsim Mong), 10.7% for French (Bays Area of Southern), 7.3% for Japanese (East TST in Yau Tsim Mong), 7.3% for Indonesian (Fairview Park of Yuen Long), 4.5% for German (Discovery Bay of Islands), 3.4% for Urdu (Sung Wong Toi of Kowloon City), 3.1% for Spanish (Bays Area of Southern), 2.4% for Dutch (Ping Shan North of Yuen Long), 2.3% for Vietnamese (Nam Cheong Central in Sham Shui Po), 2.1% for Thai (Fort Street of Eastern), 2.0% for Bengali (Yau Ma Tei North in Yau Tsim Mong).

The much higher maximum percentages who understand and read many minority languages at DCCA level than district level indicates that minority language communities in Hong Kong are often concentrated in quite small areas.

Overall, we can see change in understanding for only a few languages from 2011 to 2016, with important increases in English (46.1% to 53.1%), Filipino (1.7% to 2.7%), Korean (0.2% to 0.5%) and Bengali (0.03% to 0.06%) and only minor changes in geographical patterns.

We believe that these findings are valuable in understanding the geographic patterns of both oral and written language use in Hong Kong, including how oral languages use has changed from 2011 to 2016, which is relevant for objective 2.

The Hong Kong Language Maps which are found at http://www.ssrc.hku.hk/hklangmaps/ have now been updated to cover the 2016 By-census oral and written languages for all districts and DCCAs, as discussed in this chapter, in addition to the existing 2011 Census results for oral languages. They have also been improved to better show DCCA and district boundaries.

11.2 Language in workplace, employment and personal income

In summary, industry grouping seems to best indicate the general use of language in the workplace although occupation is also important. Cantonese is widely used in oral communication, with spoken English most common in Finance and Insurance. However, while written Chinese is widely used for those industries with an expectation of written emails or reports, written English reports are common in specific industries (especially Information, Communications and Finance Insurance) and higher level occupations (Associate Professionals, Managers and Professionals), but also about half of clerical staff. While Asians and Whites mainly use oral and written English, Chinese often use a combination of English and Chinese. This information is useful in objectives 1, 4 and 5 as we can see the importance of oral and written Chinese and English in the workplace for different ethnicities.

In summary, competence in written Chinese is high, with the few exceptions being among the extremes in education (P6 and below, degree and above) and occupations (Craft, Elementary, Managers, Administrators, Professionals) and the Finance and Insurance industry. For Cantonese, low competence is rare, with the few exceptions in high levels of education (degree and above) and occupation (Managers, Administrators, Professionals) and the Finance and Insurance industry. For Putonghua, highest competence is for Managers, Administrators, Professionals and Finance and Insurance. For written and spoken English, low competence can be found in low education (S7 and below), low occupations (Craft, Plant Machine and Elementary) and high competence in Finance and Insurance and Information and Communications. Service and Sales shows low competence in spoken English, but more competence in written English. While Asians and Whites mainly show competence only in spoken and written English, a substantial proportion of Chinese show competence in spoken and written English and Putonghua, in addition to Cantonese and written Chinese. These findings are useful for objectives 1, 4 and 5.

Taking into account the logistic regression analyses of both the 2016 By-census and 2018 THS datasets, we can conclude that language abilities, especially reading Chinese, are even more important than education in determining employment, although the additional detail on level of language competence in the THS suggests that lack of any knowledge of Cantonese is an important disadvantage for employment. It shows that Asians and Chinese show similar labour force participation, after accounting for education and language competence.

If we now combine the analyses of the 2016 By-census and 2018 THS datasets to examine the determinants of personal income for the employed, we can conclude that education is the most important determining factor for personal income amongst workers, although literacy in English and Chinese are also important, with some evidence from the THS that low levels of spoken English are also a disadvantage. It shows that working Asians and Chinese obtain similar personal income, after accounting for the baseline, education and language variables.

Analysis of the qualitative sample shows that after accounting for age, gender and marital status; education is the dominant predictor, followed by Cantonese and English proficiency, all of which show strong statistical significance (although this is certainly not a representative sample). This further supports the need for better educational and language learning opportunities for the disadvantaged in Hong Kong. The effect of ethnicity is small after

controlling for all these variables, suggesting that education and language are the primary source of disadvantage across ethnic groups. These findings are crucial for the objectives as they illustrate not only language diversity, but also how important the two major languages are for the whole community.

These findings about the determinants of employment and income are important for all the objectives as they make clear the importance of education and language skills in enabling success of all residents in Hong Kong, regardless of age, gender, marital status or ethnicity and regardless of whether we measure success in terms of employment or personal income for the employed.

11.3 Language and domains of use

From the qualitative sample, we can conclude that there is wide linguistic diversity among linguistic minority groups in Hong Kong with 49 different languages and dialects, greater than reported in the By-census for the whole of Hong Kong. There is a wide variety of languages used with family members, with increasing focus on Cantonese and English as the context changes to friends and to others. Face to face is the primary medium for communicating with family and others, while text message is the primary medium for friends.

11.4 Linguistic landscapes

From analysis of the street signs in Yau Tsim Mong (YTM) together with the 2016 by-census data, we can conclude that there wide linguistic diversity within this district. Biliteracy varies greatly, from 38.1% in Jordan North up to 72.1% in East TST and Kings Park, while Chinese literacy varies from 55.3% (Jordan North) to 91.7% (Mongkok North) and English literacy varies from 52.3% (Mongkok West) to 89.0% (East TST and Kings Park). The nature of the signs varies considerably across DCCA, with 19.4% of signs being street signs, 4.2% being graffiti and 26.4% being product information in Olympic, compared to only 4.3% being street signs, no graffiti and 10.5% being product information in Jordan North. In most DCCAs, between 80% and 90% of signs were on G/F, with the extremes being 75.9% for Fu Pak and 90.9% for Jordan North. Less than 2% of signs were handwritten, except for 4.6% in Fu Pak and 6.9% in Olympic. The use of English and Traditional Chinese (TC) on signs varies greatly, from 47% English, 42.7% bilingual and 5.9% TC in TST West to 9.8% English, 24% bilingual and 66% TC in Tai Kok Tsui South, reflecting both the different language abilities of residents and the likelihood of targeting shoppers from outside the district. Olympic is by far the most likely to have signs with Simplified Chinese script (1.39%), TST Central to have Korean (2.38%) and Japanese (1.29%), while Thai, Urdu, Indian and Nepali scripts are quite rare (under 1% in all DCCA). Vertical positioning of Chinese and English in signs is most common, with Chinese above being more common in most DCCAs, with Fu Pak, Olympic and TST West the exceptions. Around 60% to 80% of signs have similar meaning for Chinese and English, with the extreme being Cherry, where 92.9% of signs have similar meaning. We also examined the percentage of signs having similar sounds of the English and Chinese, which showed no meaningful difference across DCCAs (the range was 32% to 51% having a similar sound, out of 3,825 relevant signs in total).

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As indicated at the beginning of this chapter, the decision to investigate the linguistic landscape with particular reference to public signage was motivated partly by the keen interest in this topic on the international frontline of linguistic research, but also by our interest in further exploring the linguistic landscape of Hong Kong, and its relevance to issues of language contact, multiculturalism and multilingualism. To our knowledge, our quantitative research on the public signage of the YTM district discussed above is without doubt the most detailed investigation of this topic carried out in Hong Kong. In addition, with reference to the linguistic landscape, the study of signage also provides an important and useful complement to the language maps of the territory discussed in Chapter 4 of this report.

As indicated above, the results of our research indicate very clearly that, even in the linguistically diverse location of YTM, written Chinese using 'traditional' Chinese characters and written English dominate public signage throughout the district, with relatively few streel level signs using other scripts, with Korean (2.4% in TST Central), Simplified Chinese (1.4% in Olympic) and Japanese (1.3% in TST Central) being the only other scripts that appeared in at least 0.6% of signs in any DCCA. Thus language diversity in street signs is much less than the language diversity amongst the residents in YTM. This suggests that further investigation is needed to understand the reasons, such as the need to appeal to tourists and residents from outside the local DCCA, or language diversity only appearing in less public domains (such as signs inside buildings, where private restaurants can be found). This is clearly relevant for objectives 3 and 4. Here, of course, it is worth noting that although the form of most Chinese signage utilises 'full' or 'traditional' Chinese characters, one might imagine that in future years, given the increased convergence of Hong Kong with other cities in the Greater Bay area, the norms of written Chinese in Hong Kong may gradually merge with those of the nation as a

whole. In this context, our research may contribute both to the historical record and serve as a benchmark for future studies of this kind. It is also worth pointing out that our research here has been largely confined to the quantitative analysis of signage, and much more might be said from a qualitative perspective in investigating naming practices in both English and Chinese in the Hong Kong context. Such a study would analyse the choice of particular terminology used in naming practices, localised linguistic hierarchies as well as the detailed semiotics of bilingual notices and signage (Scollon & Scollon, 2003). Such a study is outside the remit of the current project, but might well be a useful direction for future research in this area.

11.5 Recommendations:

(1) That the government, together with other stakeholders, recognise linguistic diversity as an integral part of Hong Kong culture;

(2) That linguistic diversity should be regarded as an important feature of HKSAR life;

(3) That the government should continue to monitor patterns of Chinese literacy in minority groups, such as speakers of Chinese as a second language;

(4) That the government and other interested parties should recognise the importance of language and education in enabling the integration and contribution of members of such minority groups;

(5) That recent and ongoing initiatives designed to enable members of minority groups, particularly speakers of Chinese as a second language, to gain literacy in written Chinese should be continued and expanded;

(6) That the government continue to monitor and promote literacy in English in the majority population as well as minority groups;

(6) That the government continue to regularly monitor language diversity and multilingualism in Hong Kong society.

The above recommendations in large part reflect the study objectives set out earlier in Chapter 2 of this report, which were essentially concerned with the economic and educational success of minority language speakers; the economic and educational aspirations of members of ethnic minority communities; and the benefits of language proficiencies in the Hong Kong context.

Chapter 12 Details of the Public Dissemination

The research team shared the findings in two webinars:

Current Trends in Linguistics 2021 on Global Dialect Laboratories in Multilingual Ecologies, hosted by University of Hamburg on July 9th, 2021 (our presentation was the plenary talk covering multilingualism in Hong Kong).

2021 Global City Roundtable on 'Multilingualism in Global Cities', hosted by Education University of Hong Kong on August 27th, 2021 (our presentation was the talk covering multilingualism in Hong Kong).

The completed language maps will be made public by the end of October 2021, on the SSRC website.

We will publicise this report, once it is approved, on the SSRC website.

We intend to submit this report as relevant evidence to Labour and Welfare Bureau, as part of a study that JB-S is involved in.

Chapter 13 Conclusion

This research project has set out to investigate the contribution of minority languages to Hong Kong society. A central aim of this project has been to more fully understand the needs of minority language speakers in Hong Kong and to investigate how language and education relate to employment in the community. The data collection for this project has drawn on information from the 2016 By-census as well as the Thematic Household Survey (THS) No. 66, which collected data on language proficiency and language and employment. In addition, the research team also collected visual data, from Google Streetview to investigate the linguistic landscape of the Yau Tsim Mong district.

The analysis of By-census data indicated considerable diversity relating to the knowledge and use of languages throughout various districts in Hong Kong. For example, as noted in Chapter 4, the highest percentage of those understanding Cantonese are found in the Southern District, the highest percentage of those understanding English are found on Peak, and the highest percentage of those understanding Putonghua are found in Sai Kung. We can also identify localities districts with the highest percentages for minority languages, as for Nepali (Jordan North), Hakka (Sha Ta), Filipino (Southern), Fukien (Eastern), Hindi (Tsim Sha Tsui), French (Southern), Japanese (East Tsim Sha Tsui), Indonesian (Fairview Park), German (Discovery Bay), Urdu (Kowloon City), Spanish (Southern), Dutch (Yuen Long), Vietnamese (Sham Shui Po), Thai (Eastern), and Bengali (Yau Ma Tei).

The analysis of language use in the workplace was based on data taken from the Thematic Household Survey No. 66, which was carried out in 2018. The findings of this analysis indicated that Cantonese was widely used in spoken communication, but that English was very frequently used in written communication, particularly by higher-educated members of the workforce, as well as written Chinese. Among higher level managers and professionals, around half often or always use written Chinese, and around two-thirds often use written English.

The analysis of language competence, education and occupation was again carried out using THS data. The results indicated that competence in written Chinese was generally high, as was competence in Cantonese. For Putonghua, the highest competence among members of the Manager Admin, Professional and Finance Insurance groups. The highest competence in spoken English was found among members of the Finance Insurance and Info Comm groups.

Data from the 2016 By-census and 2018 THS was used in the analysis of patterns of language and employment using logistic regression. The results of this analysis indicate that the ability to read Chinese is of key importance in gaining employment, and that while the ability to understand English and Putonghua had some influence, lack of proficiency in Cantonese is a major disadvantage. Asians and Chinese show similar labour force participation, after accounting for education and language competence.

In the investigation of the relationship between language and personal income among the employed, data from both the 2016 By-census and the THS were again analysed, using logistic regression. The results of this analysis for the By-census data indicated that one important factor influencing income was the ability to understand and read English, however, it was also

found that education as a variable had a greater explanatory effect than language abilities. The results for the THS data again indicated the importance of the ability to speak and read English. In summary, the results from both datasets indicated that education was the most important factor, while literacy in English and Chinese were also important, and low levels of English was disadvantageous.

In the study of language use in social networks, the research team utilised a language survey aimed at minority linguistic groups. Interestingly, this stage of the research revealed even wider linguistic diversity than reported in the 2016 By-census, with its total of 27 languages. The survey by the research team actually revealed the use of 45 different languages and dialects in the sample that was surveyed. Education and understanding language are important predictors of employment status in our sample.

Thus analysis of the 2016 by-census, 2018 THS and our 2021 survey of minority linguistic groups all conclude that language (both Chinese and English) and education are crucial for both employment and personal income amongst the employed. This suggests that the findings are robust to methodology and time and highlights the importance of improving education and Chinese and English linguistic skills for minority linguistic groups.

In the study of street signage in Yau Tsim Mong (YTM), the research team utilised visual data extracted from Google Streetview, which resulted in more than ten thousand signs being coded. The results indicated that the use of Traditional Chinese and English varied considerably from DCCA to DCCA. For example, in Tsim Sha Tsui West, around 43% of signs were bilingual, compared to 24% in Tai Kok Tsui South, while certain DCCAs had more signs in Simplified Chinese, Korean and Japanese. Surprisingly, although YTM is one of the most linguistically diverse districts in Hong Kong, as regards signs, the major diversity is in terms of Traditional Chinese and English bilingualism, with relatively few streel level signs using other scripts, with Korean, Simplified Chinese and Japanese being the only other scripts that appeared in at least 0.6% of signs in any DCCA. Thus language diversity in street signs is much less than the language diversity amongst the residents in YTM. This suggests that further investigation is needed to understand the reasons, such as the need to appeal to tourists and residents from outside the local DCCA, or language diversity only appearing in less public domains (such as signs inside buildings, where private restaurants can be found).

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